

MAWPHLANG, INDIA'S LARGEST SACRED ECOLOGY: AN OUTPUT OF TRIBE AND PRACTICING ENVIRONMENTAL CULTURE

DR. TAPAS PAL*

*Postdoc (NEHU, Shillong), PhD(Visva-Bharati), Assistant Professor, Dept. of Geography, Raiganj University,
India

ABSTRACT:

Protecting the environment is everyone's responsibility, whatever is the way, the way of science or spiritual faith where the goal is the conservation of Sacred Ecology. Nature is the nurse of all cultures where human-being and their portrait civilizations are the fen of those cultures. The deterministic perception of man is the core of nature oriented culture. Though the nano-science to meta-physics deals with everything in our life, sometimes they fail to fulfil the perception of populace and the restoration of the eco-health of environment. More than dozen of conferences and world summits have held but they have failed to restore the traditional culture as well as the health of environment. Cultural clash and mixed culture have reduced the folk traditions, nature oriented cultures and Tribal worshipping. And in this situation we are losing and have lost most parts of our age-old folk traditional cultures. Thus in this situation we have to conserve our folk-traditions like Sacred Ecology tradition; to maintain our environmental status and to reduce the diseases of the environment. The word 'Sacred' considered to be holy or connected with a Gods and Goddess and the word 'Ecology' means small area of land with trees/tree of particular types grown on it. Sacred Ecology is age-old traditional practices of our geographical territory and it has great ecological and non-ecological value (social, Tribal culture, traditional, economical, and therapeutic) to conserve our environment in fruitful way. With the canopy of Sacred Ecology, the researcher would like to search its geo-environmental appraisal and also try to wake up about the thought of conserving our nature oriented traditional practices, the culture of nature or related Tribal cultures in the geographical territory of Meghalaya. But the present status of Sacred Ecology everywhere is a matter of deep concern as they are gradually being moribund and disappearing from the countryside. Their presence in agricultural lands, grazing, fragmentation of Ecology-owning families, and erosion of cultural and religious beliefs are the major reasons. In view of this, and due to failure of pure legal protective measures in guaranteeing conservation, it has become imperative to search for alternative solutions based on indigenous knowledge of the people. Therefore, there is an urgent need not only to protect Sacred Ecology, but also to revive and reinvent such traditional practices of nature conservation and environmental management.

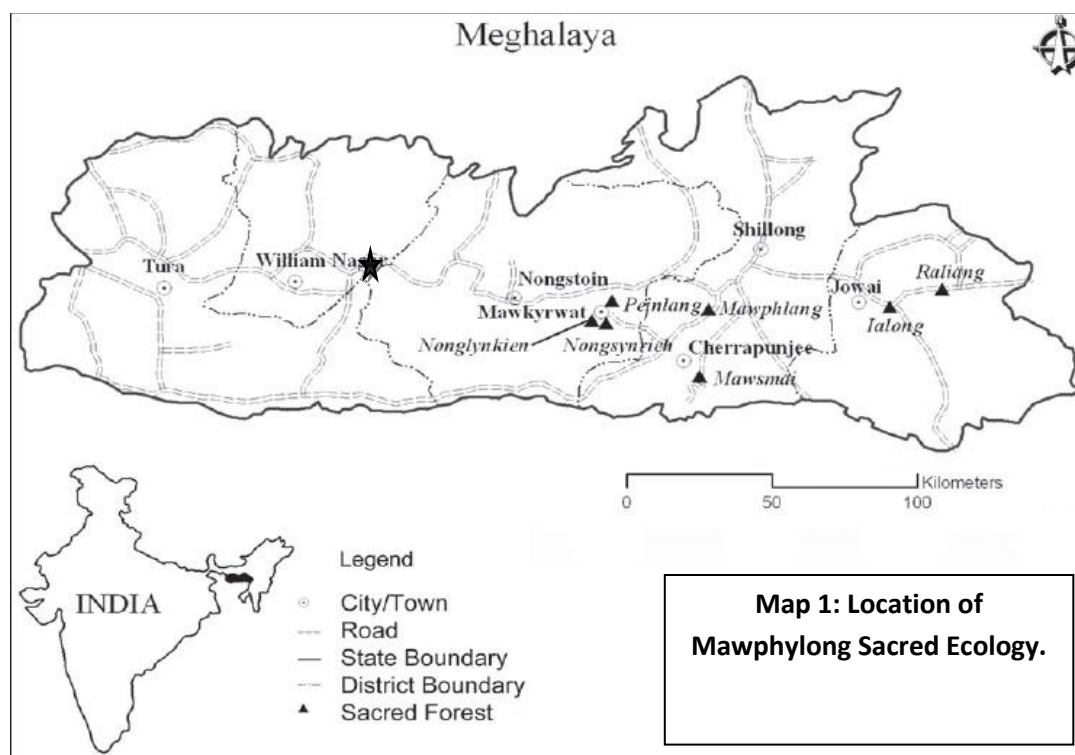
Key words: Ecological, environment, Tribal culture.

INTRODUCTION:

The word *maw* means "stone", *maw phlang* means "grassy stone," and is one of many settlements in the Khasi hills named after monoliths. One of the most remarkable features of the East Khasi Hills is the Mawphlang sacred Ecology, which have been preserved by traditional religious sanction, since the ancient days, about 25 kilometres from Shillong. The climatic type is Wet of Koppen classification. Mawphlang is very windy and gets very chilly in the evenings. A blissful hamlet, Mawphlang is a renowned Ecology preserved by traditional religious sanction since the ancient days and is a haven for eco-lovers. Mawphlang was the centre of Presbyterian Church of Wales missionary and medical activity in the Khasi Hills during the 1890s. A dispensary and then clinic were established in 1878 by Dr. Griffith of Brynmawr Aberdaron who died at Mawphlang, April 22nd, 1892. After Griffiths came William Williams (missionary) who also died at Mawphlang. Khasi heritage village located in the Mawphlang district is considered to be the hub of Khasi culture. As per digital media NewsGram, the village project is in shambles. Mawphlang is known for its 'beery wine'-the berry *Prunus Nepalensis* (Sohang) is cultivated by farmers. The view is excellent; one can see the road to Mosinram. However this model village depicting the huts of the Chief (Hima) require some restoration. The people of the nearby village are very friendly.



Plate 1: Mawphylong Sacred Ecology: (Witness of Nature's own Museum - preserved since time immemorial)



The strength of the breeze can literally push you over the Hill. The sacred Ecology is quiet and peaceful. The preserved sacred Ecology is a monsoon tropical Ecology at roughly 6000 ft., roughly 700 acres of dense Ecology under custody of the Lyngdoh's of Mawphlang. **Mawphlang Sacred Ecology** is a highest park with typical tropical monsoon and known as Nature's own museum. It takes 15-20 minutes from Elephant Falls. **Mawphlang Sacred Ecology** is a monsoon tropical Ecology known as 'Nature's Own Museum' and localities worship and call by different names like Ki Law Adong which means prohibited Ecology, Ki Law Shnong meaning village Ecology and KI Law Kynti means private Ecology and thereby not allowing to destroy the Ecology. It forms the house for deities as per religious belief and tradition.

OBJECTIVE:

- To discuss about the Mawphlang Sacred Ecology and its historical vis-à-vis environmental importance.

RESEARCH QUESTION:

- Why Mawphlang Sacred Ecology is India's largest Sacred Ecology.
- What are the historical and Environmental importance of Mawphlang Sacred Ecology

METHODOLOGY:

This research is related with *literature review* and *field observation* also. To get the historical data specific questionnaires were used. The open ended question and face-face interview has been done.

RESULT AND DISCUSSION:

In Meghalaya, a state once famous for its thick Ecology, dwindling Ecology cover an annual Ecology loss as high as 5.6 percent from 2000-2005 in the East Khasi hills district has spurred Khasi communities to take charge of their own Ecology and their 'sacred' legacy. And since Ecology are largely owned and administered by local communities with their own systems of grassroots governance, revival campaigns have integrated traditional and contemporary practices with astonishing results. Indigenous community institutions like the Mawphlang Lyngdohship (or village government council) have successfully introduced measures such as social fencing, regulating fuel wood harvesting and grazing, using smoke-less *chullahs* or stoves, switching to higher value stall-fed livestock, controlling Ecology fires by laying down fireflies in ten meter patches outside the Ecology and banning mining at nearby quarries. As a result, aided by US-based non-profit environmental organization Community Ecology International or CFI, the Mawphlang community has regenerated their Ecology and set up a federation of *Himas* that will allow them to earn income from carbon credits. This Ecology landscape restoration project that includes the Mawphlang Sacred Ecology and covers 62 villages, is now poised to be India's first REDD pilot. Innovative strategies such as a wildlife corridor, ecotrails and awareness campaigns with schools and colleges are being used to strengthen the intrinsic bond that a Khasi has with the Ecology. Tambor Lyngdoh travels from village to village, organizing 'dorbars' or hamlet discussions, passing on oral traditions of Ecology conservation to the younger generation, the future custodians of these resources keeping the past glory alive through ways that serve present needs. Also known as Law Lyngdoh, it is preserved by the natives since ancient times as a part of their religious beliefs, in which Ecology are considered as a sacred entity. Over the past one decade or so, a considerable amount of interest has been generated in the studies of sacred Ecology among the ecologists, taxonomists, Ecologist, environmentalists and anthropologists. According to traditional beliefs of this region, an Ecology deity resides in the sacred Ecology. For example, *labasa* is the name for the god of the Mawphlang sacred Ecology, described by interviewees as taking the form of a tiger or leopard. There is a strong belief that this deity inhabits the sacred Ecology and offers protection to the community (Nongkynrih 2007 and Shangpliang 2008). Misra and Rangad (2008) also explain that *Basa* or *Ryngkew Basa* is the sacred Ecology deity, which is benevolent and provides for the wellbeing of the people in the village. In general, protecting a sacred Ecology is a form of respect for its deity.



Plate 2: Researcher in gate of Mawphylong sacred Ecology with Khasi guide.

Sacred Ecology is Ecology sites that have cultural or spiritual significance. They exist around the world and represent a long-held tradition of Khasi community management of Ecology. While most sacred sites are not tourist destinations, tourism may represent a method to provide additional protection for sacred sites, including revenue to help with management and conservation. Tourism can celebrate the cultural aspects of the site, in the case of cultural heritage tourism, or ignore them as is often the case with mass tourism. Cultural heritage tourism can be considered a subset of ecotourism, since it may focus more on the cultural dimensions of a site and less on its ecological aspects. Giant stones or megaliths believed to be 500 years old and a repository of the remains of dead ancestors, mark the boundaries of Mawphlang's 75 hectare sacred Ecology. These stones are silent witnesses to numerous traditional beliefs and legends about the sacred Ecology, revered and preserved by local Khasi communities. In this Ecology, you cannot cut any trees or branches; if you do, illness and misfortune will befall you. Fruits, flowers, water used by people (inside the Ecology only) can make them healthy; there are many medicinal herbs that can cure diseases. As secretary of the Federation of 10 *Himas* (comprising 4250 households) that have pledged to protect their Ecology's, leaders has been spear-heading the indigenous movement of Ecology conservation in the area since 2005. It is owned by individuals, clans or communities, and is under direct control of the clan councils or local village Dorbars/Syiemships/Dolloiships/Nokmaships. They show a wide variation in their size and Ecology canopy cover are steeped in spiritual belief and held in great veneration. They also represent some of the earliest representations of preserving the ancient ecosystems. This is a dense Ecology where the Lyngdoh (chief) used to offer sacrifices and prayers. Not a branch should be broken or else a curse may befall on that person. This Ecology is surrounded by a lush green valley and a great variety of plants like orchids, include the carnivorous varieties and ferns grow here. Meghaliths guards this 75-hectare sacred Ecology. Nobody cannot be taken out a twig from this Ecology. The belief is that harm and misery will

befall anyone who attempts to do so. It is also believed that the spirits and deities that reside in the Ecology protect the local peoples from various kinds of calamities, diseases, crop protection etc. Scary, auspicious, religious are the parts of the sacred Ecology. It's very well maintained, and has good number of stories associated with it to get you excited. Boasts of rare and very useful herbs and medicinal plants, and wildlife - but you can't carry anything out of that Ecology - that's the vow you have to make before going in. Will remind of Hogwarts Forbidden Ecology - only that here you are only allowed to go during day time. Ba (brother) Tambor Lyngdoh, a conservationist who has devoted his life to preserving the biodiversity and ecology of the Mawphlang region, the moment we reached the sacred Ecology. Another guide who was a young college pass out, helping his community and village by letting people knows about the Ecology and also protects it.



Plate 3: Sacred Monoliths at the entrance to the Ecology.

There are quite a few monoliths at the entrance to the Ecology and also inside the Ecology. The place was deserted and the monoliths looked like sentinels guarding something sacred. Outside the sacred Ecology are old monoliths erected in the memory of the departed souls of the community members.



Plate 4: More stone structures (also the stone throne, used for 500 years.) within the Ecology where rituals are still conducted by the Khasi people on certain occasions.

Mawphlang sacred Ecology where the spirits of their ancestors are supposed to dwell. The Ecology is undisturbed for centuries; nothing is ever brought in or taken out. Only high priests and chieftains could go into the Ecology to carry out special rites on ancient moss covered monoliths. Rituals are performed in association with the Ecology, although some residents were unaware of the continuing tradition of the rituals and others were unsure of how often the rituals occur. Residents said the rituals are conducted when needed, such as in times of plague or conflict. There is a strong belief that a deity called *labasa*, which takes the form of a tiger or a leopard, inhabits the Ecology and offers protection for the community as the patron god of villages. Protecting the Ecology is a form of respect for the deity, who protects the village and its people from harm. Resource extraction from the Ecology is restricted. It is a common belief that if someone violates a taboo of the Ecology, they will fall ill and even die. The Ecology is under local management by the *lyngdoh* (traditional priest), *myntri* (government minister), and the *rangbah shnong* (headman of the local area). The annual rate of visitation to Mawphlang is estimated to be 600 foreign tourists and 3000 domestic tourists. Tradition told us that, the *Blah* (formerly known as *Iangblah*) migrated from *Pnar* area (Jaintia Hills). The elder of the clan prayed and asked the almighty God to give them permission to move out of the land, and also asked him to show them the way through signs. They got a sign that they should proceed towards the North Western parts to Khasi Hills by passing through territories of u Syiem Shillong. They did so and they reached Lum Shillong (now called as Shillong Peak, a famous tourist spot of Shillong). When they reached there, they followed the river Umiew (Umiam Mawphlang, which now ends at along its downstream. On reaching about 5 miles down from Lum Shillong, they climbed westward and settled at Pdenshnong, Mawphlang. Here in Mawphlang, the *Blah* Clan took the role of a chieftain and everything was under his control. Some times after they identified a hillock on the periphery of the present Mawphlang Sacred Ecology known as *Lait-tyrkhang*, to establish as one of the place for sacrifice/perform rituals to communicate with the almighty to protect them and their territory from external aggression, dreaded diseases through rites and rituals. This area is being regarded sacred and well preserved till date. Time passed, and eventually Mawphlang village became famous and many other clans came to join the *Blah* Clan and settled at Mawphlang under the Chieftain of the *Blah* clan. These clans are: Kharshiing, Kharsohliya, Kharhunai, Kharnarbi, Kharsakhkar, Kharmawphlang, Kharmaram, Khallanguih, Kharphynrap, and Kurkalong, 12 in total to form the Hima Mawphlang. The Blah carried out on their chieftainship until the end of Mawphlang Syiemiong War, in which the Mawphlang were the victors. The Blah Clan thought that they would not rule over their own people who sacrificed along with the rulers during the war and declared the subjects as fellow comrades (What a way to declare democracy during those times). To invoke the deities to know whether this would be a wise move to do so, and when they did, they were given a sign of approval. This step required a leader to be made responsible for the welfare of the people. So the search for another leader (Chief) went on amongst them. But since, all members

of the then Hima, thought the same way, none agreed to take the throne. Finally after much deliberation and discussion, the name of 'Ka Khmah Nongsai' was mentioned, a lady. This lady, wife of Lyhir Sohtun, originated from Baligaon in Assam. At that particular time, she was residing at Laitsohma, overlooking Mawphlang village towards east on the way to Sohra. It is told that Lady Ka Khmah Nongsai was even feared by the Syiem of Shillong for her great wits and statesmanship. But she did not allow her son to take over the throne without the consent of the almighty God (We don't argue as to why she herself did not take the responsibility). She asked time from the former clan to give her to testify the wish of the society as valid. In order to know the will of God, she planted two saplings of Dieng Sohma (*Rhus semialata*) and Dieng sning (*Castanopsis Indica*). Some say that there was a third plant also which ka Diengdoh (ex – *bucklandia populnia*) is. All these saplings were planted at a place called Phiephandi. Her precondition was that three years time, the saplings should be able to survive to testify that her son should assume the throne to be the ruler of Hima Mawphlang. It happened that the trees found to have sprouted well at the end of three years. So it was testified in the son's favor. A crowning ceremony was arranged. The son of Khmah Nongsai chose his Maha Mantris from the Blah clan, the Kharshiing clan, the Kharsohliya clan and the Kharhunai clan. The ceremony was solemnized at Phiephandi where the stone staging with five seats were made. The Chief sat in the middle and the Myntris sat on both sides. These stone staging are preserved till now and are respected as it was during their times. From that onwards, the chosen chief assumed the title of U Lyngdoh and his territory is known as Mawphlang Lyngdohship. Since that time, all the descendants of Khmah Nongsai assume the title of Lyngdoh Mawphlang till this date (the descendants are counted from mother's side, which means it was not Ka Khmah Nongsai's son's children but her daughters' daughters and granddaughters who can transfer this distinction to their next generations and only a son of such a daughter can be a Lyngdoh at any time). The original Clan plays a vital role in Administrative, judiciary and also in the executive positions. They summoned the annual and bi-annual Durbar (Meeting with respected men of the community) and gave directions and suggestions to the Lyngdoh as he was new to the responsibility of rulership. They have their own rituals and sacrifices done collectively with the original clan. The group together with 12 clans in total are now known as "Khad ar Kur" and the Durbar is known as Durbar Khad-Ar-Kur. All administrative things had been decided through this Durbar. As time passed, and the Lyngdoh clan used Phiephandi as the place for doing rituals and sacrifices (the Khasi believe that there can be no Ruler or kingdom without a sacred Ecology or there can be no sacred Ecology without a ruler). Therefore the ancestral mother of Lyngdoh clan sanctifies this particular area into Ka Lawlyngdoh. This core area is around 40 hectares, has been regarded as the most sacred place and alters were erected to perform the rituals and sacrifices, with a bull (brown bull). This sacrifice is done when the case is major or the threat is quite great, as in the time of war, epidemic, and famine. The almighty is prayed to save the people and the Lyngdohs ask for special strength, power, and gifts of wisdom to himself and

the Ministers. At one time, the Lyngdoh asked the Durbar to give some more space around the sacred Ecology space to safeguard the sacred sites from fire or any danger that may harm the place, which the durbar approved. Thereafter, parts of Community Ecology were attached for the sake of safety. The whole area was then sanctified and it became a compact structure of about 76.88 hectares known as Mawphlang Sacred Ecology. In Khasi it is called Law Lyngdoh or Lawkyntang. It was told that, few years after the Anglo-Khasi War ended in 1839, attempts were made by some people to cut down the trees that grow in the sacred Ecology. The Lyngdoh, his Myntri and the elders from different village of the Hima tried hard to prevent this and even sent volunteers at night time to prevent people from doing so. It was told that once those people wanted to cut off all the trees from the Ecology, but one person named 'U Kun Lyngdoh' Mawphlang stood alone to protect the Ecology by saying defiantly that 'who will take away the clothes of my mother, one tree felled, one head will be chopped off.' Due to sporadic attempt to destroy the Sacred Ecology, the Chief and his Myntri of the Hima invoked the deities by offering sacrifices to U Ryngkew U Basa, to punish those who dare to violate the Sacred Ecology by cutting trees, plucking flowers etc. or creating nuisance in and around the Ecology. Actually, all the fruits, nuts, herbs, eatables, honey bees and water can be consumed freely, but not to be taken outside the Ecology or to take home for profit making business purposes. It was after this, that anyone who violates these rules are said to be punished by getting their heads twisted, or becoming weak and feeble and eventually die if prayers are not done for pardoning them. Lots of such stories are told in this regard, and eye witnesses recount this to be happening till about 10 years back. Hopefully, now a day's no one dares to disturb the Ecology against the prohibition. And why should anybody be, because it has become one of the nation's prides because of its rare flora and fauna. We should be as proud as the locales are, of this heritage of theirs! Coming back to the Ecology, the deities act as the guardians of the Ecology, and they protect the Ecology from destruction and anything that may lead to the downfall of Hima Mawphlang. They not only move actively inside the Sacred Ecology, but they come out of the Ecology to help out people. They even come to appear to those who do something wrong by crossing their way, or disturbing them while going inside the sacred Ecology or their works in a form of snakes (Apprehending snakes implies an alarming signal). Sometimes they even appear in their bedroom, to give them a sign that something is being wronged by the person itself or the family members. Many stories are told that in olden times, the deity (Ryngkew –Basa) used to appear in the form of leopards (for good signs) or snakes (bad signals – sign of apprehension). Do feel free to try and talk to the trees which are abode of the deities and be pleasantly surprised by their response in an otherwise quiet place. The leopards accompany anybody from Mawphlang village at the time of danger or odd hours of the night when they have to go out or when they come late from their work places due to unavoidable circumstances. They will accompany till safety, or until sent back by the person they are accompanying. These leopards can be called upon in the times of need. The other deity appears in the form of a snake or a number of

snakes when someone breaks a rule, by plucking leaves, flowers, cutting woods, or doing anything that is thought to be the destruction of the sacred Ecology. They may appear in dreams. They may appear in the form of a big python or any small snakes; all implying the same. Stories of apprehending the snakes are still going on till date. Mawphlang sacred Ecology is the only one among the Sacred Ecology in India and is a world of pristine beauty that has survived the test of time. This aged old Ecology, is also one of the largest sacred Ecology (in area). It has become a house of biotic, and a nature university as a result attracting many researched scholars, scientists, nature lovers and tourists to visit and enjoy the bliss inside the Ecology. There are many types of Orchids, amphibians, reptiles, rodents which are rare in nature. The Khasi Hill Community REDD+ project is an expansion of an earlier PES strategy that CFI supported in the kingdom of Mawphlang Lyngdohship (Hima Mawphlang), one of 10 kingdoms (hima) that comprise the federation (synjuk). This early experience involving two Khasi hamlets provided useful lessons regarding the effectiveness of socio-economic, technical, and institution building interventions that strengthened the capacity of indigenous governments to participate in the program. Key learning emerging from the initial pilot project includes the following: Communities in the project area were aware and concerned about Ecology loss, erosion, changes in stream flows, and shortages of Ecology products but lacked the financial and technical resources to address the problem. When financial and technical assistance was provided, local leaders and community institutions mobilized members to renew and strengthen resource management rules and regulations and implement them through consensus-based community action. Community discussions were held to identify the opportunity costs of conservation and restoration and find mutually agreeable activities to generate alternative income to compensate for lost income. Performance-based conservation award money provided effective incentives for implementation of watershed restoration activities and funded a revolving community bank account that sustained the community resource-management system after the project ended (Poffenberger 2012). In the past, many Khasi communities have been reluctant to map their community Ecology for fear of encroachment on their Ecology lands by the state Ecology department. A process of consultation by the project team has reassured the communities that they can map the Ecology themselves and control their own maps. Based on these agreements, the project area was surveyed by community youth teams using GPS units under the guidance of the local project support team. The mapping process not only identified boundaries of Ecology areas but also the tenure status (community, clan, private, etc.) and biophysical conditions of each Ecology block. Using the maps, the communities and Hima leadership worked with the project team to develop a micro-watershed management plan that identified priority areas for restoration and conservation. Management plan maps were printed on large-format plastic sheets and distributed to the participating communities and Hima government. Micro-watershed maps reflecting longer-term management plans and goals are utilized as a focal point for community discussions in planning management activities that

include assistance with natural regeneration work, fire line maintenance, biodiversity conservation, and watershed restoration.



Plate 5: Monoliths that mark sites of ceremonial sacrifices.



Plate 6: Site/stones for rituals performed inside Mawphlang. Plate 6.1: Rudraksh which is used in religious ceremony.



Plate 7: Megaliths marking the boundaries of the Mawphlang Sacred Ecology.

The remarkable story of the tiny community of Mawphlang in India's north-eastern state of Meghalaya illustrates how indigenous people are protecting their watersheds and biodiversity by revitalizing their traditional institutions and culture. Mawphlang's tribal community is now all set to be the country's first REDD pilot. REDD or Reducing Emissions from Degradation is a mechanism that allows communities to generate income from carbon credits. This Sacred Ecology considered one of the India's "hot-spots" of biodiversity despite alarming levels of Ecology degradation that is an inevitable fall-out of modernization, increased consumerism and population pressures. The sacred Ecology has an amazing life form of plants, flowering trees, orchids and butterflies. It is an ideal destination for nature lovers. The sacred-Ecology which has been preserved since time immemorial is in sharp contrast to their surrounding grasslands. This Ecology are generally rimmed by a dense growth of *Castanopsis kurzii* trees, forming a protective hedge which halts intrusion of *Pinus Kasia* (Khasi pine) which dominates all areas outside the sacred Ecology. . Inside the outer rim, the sacred Ecology are virtually Nature's Own Museum. The heavily covered grounds have a thick cushion of humus accumulated over the centuries. The trees in this sacred Ecology are heavily loaded with epiphytic growth of aroids, pipers, ferns, fern-allies and orchids. The humus-covered grounds likewise harbour myriad varieties of plant life, many of which are found nowhere else. This Ecology has a rich flora that consists of several plants, trees and rare flower species, including orchids. Verdant grasslands are present around this guarded woodland, forming a striking contrast with the vegetation. Over the centuries, the Ecology ground has got a thick cover of humus that supports growth of unique plant life. The Ecology boasts of splendid flora, which is worth capturing in the camera. Colorful orchids, ferns and endemic plants dominate its landscape, making it a wonderful destination for photography enthusiasts. It is extremely rich in floral and faunal elements. The species content in this sacred Ecology is very high. The

information on floristic richness of the sacred Ecology of Mawphlong collected from various primary and secondary sources are present in these sacred Ecology. The sacred Ecology contains several valuable medicinal and other economically important plants. Some of the endangered taxa are to be found only in the sacred Ecology. Apart from trees and shrubs, a wide variety of lianas, orchids, ferns, bryophytes and microbes abound in these sacred Ecology. The sacred Ecology biodiversity compares favourably with the biodiversity in the core area of some of the biosphere reserves in this region (e.g. Nokrek Biosphere Reserve), which are being managed by the state Ecology departments. This bears testimony to the efficacy of the traditional Ecology management systems practiced by the local communities. The sacred Ecology provides a myriad of valuable ecosystem services, and serves as ideal study sites to address many ecological issues related to Ecology ecosystem dynamics and management. The populations of several tree species in the sacred Ecology at Mawphlang comprise relatively higher proportion of older trees as compared to their saplings and seedlings, which is attributable to the regeneration of these trees due to increased shade caused by the dense canopy of the sacred Ecology. The regeneration in the well protected sacred Ecology occurs mostly in the gaps created due to natural tree fall. A detailed analysis of the relationship between tree regeneration and gap size and micro environmental variability has been done by the author and his associates. The studies on the effects of micro sites on germination of *Quercus griffithii*, *Lithocarpus dealbatus* and *Schima khasiana* and micro site characteristics-oak seedling fitness relationship indicate that the primary species which are shade-tolerant, perform better in the undisturbed sacred Ecology than in the disturbed Ecology, which tend to be favorable for the secondary succession species. Declaring a patch of Ecology near the villages as sacred and protecting it on the grounds of religious and cultural beliefs is an age-old practice with the tribal communities in the north-eastern hill region of India. This sacred Ecology in existence in the region since time immemorial and are considered to be the relic of the original Ecology vegetation of the region.

It is maintained by Sustainable Tourism Society. It is not disturbed Ecology patches in the region serving as the original treasure house of biodiversity. It seems reasonable to assume that proper regeneration, growth and perpetuation of such important trees as oaks in the Ecology would be possible only when the cultural disturbances are reduced to the minimal level and adequate protection is afforded to the sacred Ecology. The big trees of these species present in the sacred Ecology can serve as a perennial source of propagates, which may be dispersed to the newer habitats to initiate successful invasion. The religious beliefs and rituals central to the sacred Ecology preservation are being eroded fast, and therefore, these biodiversity-rich Ecology cannot be protected only through religious beliefs. External intervention has become essential for the protection of the sacred Ecology. The suitable packages of conservational and eco-restoration strategies need to be evolved for the protection of sacred

Ecology with the full involvement and participation of the local communities. It may be mentioned that the protection of the sacred Ecology in Meghalaya, could be attributed not only to the religious beliefs and taboos, but also to the wisdom of the people residing in the adjoining areas. For instance, the villagers are fully aware of the importance of the sacred Ecology as perennial source of clean water to them. They also know that sacred Ecology help in reducing loss of top fertile soil due to erosion caused by heavy rain, and some of the medicinal plants they can get only from the sacred Ecology. If the religious beliefs associated with the sacred Ecology, and traditional wisdom contributing to Ecology protection could be suitably integrated with the modern scientific Ecology management practices, these sacred Ecology could become a very useful model for biodiversity conservation in the region. Evidently, there is a strong need to perpetuate and promote the concept of sacred Ecology, and to evolve a mechanism whereby the Ecology departments could provide technical inputs to improve the canopy cover and regeneration of trees in the degraded sacred Ecology of the region. There are pathways, but the entire Ecology is not accessible to visitors. Besides the rituals, the Ecology is also a place where school children gather and are accompanied by elder or village leaders. The walk inside the Ecology feels like a foray into a magic land - of small birds and beasts, ancient beliefs and spirits that take the form of leopard and snake. Walking through the sacred Ecology, crushing the dry orange leaves on the wet ground and carefully stepping over fallen moss-laden timber trees.



Plate 8: The Ecology inside the Ecology is dense and dark, a complete contrast to the surrounding rolling grass-lands.

It's a sacred Ecology with 5 *Rudraksha* tree in it. It is spread over a large area. A guide is must...ask him to take you over through whole Ecology at least 1 hour trip else he would get you back in 20 min. Ecology has a small area where sunlight comes otherwise most of it is densely covered. "Sacred" because the Khasi tribe does not cut any trees here. They believe that the Ecology is source of a diverse flora and fauna which helps in curing various diseases. One has to cross a thin stream to get in the Ecology. As you start walking & trekking through the

roughly visible trodden track all you hear is your breathing accompanied by a background score performance by crickets, birds & the fluttering leaves. We walked just fir 500 mtrs coming across the Cobra plant (fatal for cows), unlimited monoliths, weird mushrooms, surface roots, 500yr old trees and what not. A serene place untouched by mankind (thanks to its sacred value, no Khasi tribe cut its wood). It has several symbolic rendezvous points of earlier Khasi kings. It has amazing plants, nice mushrooms. A very deep and dense Ecology with many medicinal plants & big trees, Sun rays cannot penetrate even at noon. Nobody should pluck any flowers or fruits from these trees. There are some really magnificent shrubs and trees some as old as 500 years. It teems with moss dripping trees, ferns, insects, orchids, butterflies, gigantic mushrooms and the deafening cicadas. Surprisingly there are no leeches and domestic animals never venture into the Ecology.



Plate 9: Different flora in Ecology.



Plate 10: Different flora in Ecology.

Flora includes wide variety of plants like pipers, fern-allies, orchids with a bunch of *Castanopsis kurzii* trees and they are found with epiphytic growth. Mawphlang Sacred Ecology delights botanists with its extensive range of dense and deep Ecology. Fauna includes Mawphlang Sacred Ecology is bounded with fatal fauna which you cannot find.



Plate 11: The trees are laden with a variety of orchids.

A new species of lygosomatine scincid lizard is described from the sacred Ecology of Mawphlang, in Meghalaya, north-eastern India. It has been preserved and protected from any human interference by the local people through traditional religious sanction since ancient times, and it is composed of evergreen broad leaf trees which are more than a hundred years old and usually covered with mosses and other epiphytes.



Plate 11: Different flora in Sacred Ecology.

Mawphlang is a paradise to researcher for its variedly rich concentration of interesting and valuable flora. In the Ecology, especially in lower altitudes, multifarious species of birds can be seen in abundance. Some of the common birds found in Meghalaya include Hoopoe, long tailed Broadbill, Scarlet Minivet, Burmese Roller, Blue

Throated Barbet, red vated Bulbul, Himalayan black Bulbul, Himalayan whistling Thrush, Spotted Forktail, black-breasted Kalij Pheasant, red jungle Fowl, Mynas and Turtle Dove. Besides, Hornbills including the Great Indian Hornbill, Florican, Owl, Black Drongo and many other birds are also found, Indian Cobra, King Cobra, Coral Snake, Vipers, Python, blind Snake, Copperback, red-necked Kulback, and Green tree Racer, Amphibians like frogs, toads etc. And fishes like Rohu, Mrigal, Kalibaus, Puti, ants, flies, bees, beetles, Blue Peacock, the Karserhed, the Orange Oak Leaf, the Dipper, the Bhutan Glory, Cats, Civets, Mongooses, Dogs, Bear, Weasels, Bats, Rodents, Elephants, Gaur, Wild Buffalo, Serow, Deer, Pigs, Pangolins, Monkeys, Lemurs., macaques, Rhesus Macaque, Assamese Macaque, the Golden Langur, Slow Loris, Tiger, Leopard, Clouded Leopard, Golden Cat, Leopard Cat and Jungle Cat, Civets - the large Indian Civets, the small Indian Civets, the Common Palm Civet or Toddy Cat, the Bintuong or Bear Cat, common Mongoose and the small Indian Mongoose, Wolves, Jackals, Foxes, Dogs, Sloth Bear and The Himalayan Black Bear.



Plate 12: Different types of mushrooms are growing in Ecology.

The common trees recorded from the Ecology were Castanopsis sp, Quercus sp., Rhododendron arboreum Smith, Symplocos sp, Viburnum simonsii Hook and Thomson, Myrica sp, Ficus sp, and so forth. The thick canopy allows little amount of sunlight to penetrate inside the Ecology. The photon irradiance measured inside the Ecology ranges from 17 to 51 $\mu\text{mol m}^{-2} \text{s}^{-2}$. The sacred Ecology shares space with epiphytic growths of aroids, pipers, fern-allies and orchids. The primary vegetation of the sacred Ecology consists of trees of Engelhardia spicata, Syzygium macrocarpa, Echinocarpus dasycarpus, Cinnamomum tamala, Clerodendron bracteatum, Daphne cannabina, Debregeasia wallichiana Drimycarpus eacemosus and Elaeodendron lanceaefolius ; with shrubs of Clerodendron nutans, Phlogacanthus curviflorus , Camellia caudate and Boehmeria platyphylla; and

the grasses *Arundinella bengalensis*, *A. khaseana*, *A. nepalensis*, *Chrysopogon gryllus*, *Eulalia trispicata*, *Ischaemum goeblii*, *Paspalum orbiculare* as the common species.

CONCLUSION:

Ecology was a 'sacred science' for the ancients who lived in a world of rich and vivid experience. Ecologists, of late, have come out with studies on the remarkable systems of resource management by many traditional societies, which, while based on simple thumb, in many ways is parallel to the modern ecosystem approach. Such societies existed in more-or-less every country. "Sacred Ecology are one of the finest instances of tradition conservational practices and offer several ecosystems" (Ray et al., 2010, p.295). It is a common practice in India to dedicate a patch of Ecology land (Ecology), to the local God. This Ecology is a heaven for birds and animals and also preserves plants those are on the verge of extinction. Most people follow and are influenced by some kinds of spiritual faiths. We examined two ways in which religious faiths can in turn influence biodiversity conservation in protected areas. First, biodiversity conservation (Wabs Talk, 2011) is influenced through the direct and often effective protection afforded to wild species in sacred natural sites and in semi-natural habitats around religious buildings. Sacred natural sites are almost certainly the world's oldest form of habitat protection. Although some sacred natural sites exist inside official protected areas, many thousands more form a largely unrecognized 'shadow' conservation network in many countries throughout the world, which can be more stringently protected than state-run reserves. Second, faiths have a profound impact on attitudes to protection of the natural world through their philosophy, teachings, investment choices, approaches to land them control, and religious-based management systems. Sacred Ecology serves as repositories of biological diversity for several years. Traditional knowledge is a cumulative body of knowledge and beliefs handed down through generations by cultural transmission. Within traditional knowledge, traditional botanical knowledge is the total information of utilitarian, ecological and cognitive values of both plants and vegetation and their management. "The ecological traditions are the summation of millennia of ecological adaptations of people to their diverse environment" (Kadamban, 1998, p.149). These Ecology-patches played an important role in balancing the village-ecosystem. The strong tradition of the Indians of respecting all forms of life is well known. In the Sacred Ecology, the trees are protected with religious flavor. "The Sacred Ecology is the repositories of biological resources" (Meher-Homji, 1997, p.32-44). "Sacred Ecology is ecologically and genetically very important. They are the abodes of rare, endemic and endangered species" (Nair et al., 1997, p.687-698) and are the basement of future world Ecology. Sacred Ecology "act as natural gene pool preserve and serve as an example of habitat preservation through community participation" (Gadgil and Vartak, 1975, p.623-647). Biodiversity keeps the ecological processes in a balanced state, which is essential for human survival. Therefore, "the biodiversity-rich Sacred

Ecology is of enormous ecological significance” (Biodiversity, 2010, p. 117). They also play a vital role in the conservation of flora and fauna. Besides, several rare and threatened species are found only in Sacred Ecology, which are, perhaps, the last refuge for these vulnerable species. Several ecological studies have been carried out in this sacred Ecology. Different birds and animals are strongly dependent on this Sacred Ecology. The animals found in the Sacred Ecology are of two types, those which inhabits in Ecology like snakes, frogs, lizards and other lower group of organisms and higher group of fauna who nests and dens there and those who visits the Ecology temporarily for food, shelter etc. Sacred Ecology can benefit local agriculture by preserving a habitat for birds that control insect outbreaks in adjacent crop fields and may also serve as seed banks for locally adapted crop varieties and medicinal plants.

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NOTE:

D. Ben Rees *Vehicles of Grace and Hope: Welsh Missionaries in India 1800-1970* Page 54 - 2002 "GRIFFITHS, ANNIE married Mary Gertrude in Edgbaston, Birmingham on 28 June, and they both sailed for ... Their first centre was Mawphlang, and resulting from a combination of missionary and evangelical work, a number of local people of ..."

Shaji Joseph Puykunnel *Christianity and change in Northeast India* Page 208 - 2009 "The child was treated by Dr. Griffiths and healed. To meet the growing needs of the people,

Maurice G. Lyngdoh *Recapture: a collection of articles on the works of the ...* Page 22 - 1992 "Dr.Griffiths built a small dispensary at Mawphlang and also three houses for the accommodation of the patients' relatives and friends. During the outbreak of Cholera at Shillong in 1879, Dr. Griffiths assisted by Rev. Thomas Jerman Jones."