

## Chapter 2

### Understanding Nature: Forest, Water and Society

This chapter looks into aspects of nature and its uses. It will focus on the interaction between society and ecology in a wider perspective and also from the situation of the people of Manipur. It will look especially into the use of forest resources for livelihood, the management of forest, and the consequence of human intervention on forest ecology. It will also look into the use of water resources in their daily lives, how water was managed by the people at large and also by the people of Manipur. Overall, this chapter will discuss on the interaction between nature and society. The word 'ecology' is a Greek words '*Oikos*' and '*Logos*' and spelt it Oecology. '*Oikos*' means house and '*Logos*' study of. It's termed, by Ernst Haeckel a German zoologist. Ecology' thus means the study the house, or the habit of an organism, a living animal or plant. Forest ecology is merely the application of general ecology to a specific type of ecosystem, the forest. Here, the study tries to say how ecological research (Applied Sciences subject) was introduced in social sciences research (Social Sciences subjects) and the importance to trace the development of ecology. History is defined in one nineteenth century as 'the record of what one age finds worthy in another'. However, contrary to the above definition (with regard to environmental history), it might well be defined as 'the record of what one age finds unworthy in another'. Hence, the overwhelming emphasis of many environmental historians on processes of ecological degradation and on the identification of the human agents behind these processes. While the characterization of past ecological crimes remains the primary task, a secondary activity more closely approximates the conventional nineteenth definition of history. This is the study of currents of resistance to environmental abuse- on the part of marginalized social groups or individuals with an ecological conscience well ahead of their times- which some environmental historians do indeed find worthy of celebrating in another age. Different scholars gave their view on environmental history as follows:

According to Smout, environmental history is always about human interaction with the natural world or, to put it in another way, it studies the interaction between culture and nature. The principal goal of environmental history is to deepen our understanding of how humans has been affected by the natural environment in the past and also how they have affected that environment and with what results. This is called the bilateral approach of environmental history.<sup>1</sup> The most common definition of environmental history is as follows: environmental history is studying the interaction between humans and the environment in the past. To study the relationships between humans and the surrounding world, we must try to understand how the interaction between the two works.<sup>2</sup> Donald Worster has recognised three clusters of issues to be addressed by environmental historians. The first cluster deals with the human intellectual realm consisting of perceptions, ethics, laws, myth and the other mental constructions related to the natural world. Ideas about the world around us influence the way we deal with the natural environment. Here we enter the second level of issues to be studied: the level of the socio-economic realm. Ideas have an impact on politics, policies and the economy through which ideas materialise in the natural world.

According to Thoen, environmental history is a rather new discipline that came into being during the 1960's and 1970's. It was a direct consequence of the growing awareness of worldwide environmental problems such as pollution of water and air by pesticides, depletion of the ozone layer and the enhanced greenhouse effect caused by human activity. In this, development historians started to look for the origins of the contemporary problems, drawing upon the knowledge of a whole field of scientific disciplines and specialisms, which had been developed during the preceding century.<sup>3</sup> We can distinguish two important 19th century origins of environmental history: ecology and geography. In modern environmental history, ecological concepts are used to analyse past environments and geography used to study the ever-changing face of the earth. The surface of the earth is constantly changing and reshaping under geological, climatic, biological and human forces. At the

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<sup>1</sup> <https://www.eh-resource.org>. (Accessed on 12/03/16 )

<sup>2</sup> <https://www.eh-resource.org>.

<sup>3</sup> <https://www.eh-resource.org>.

beginning of the twentieth century, geographers stressed the influence of the physical environment on the development of human society. The idea of the impact of the physical environment on civilisations was first adapted by historians of the Annales School to describe the long term developments that shape human history.

Environmental history is about human interaction with the natural world or the interaction between culture and nature. The principle goal of environmental history is to study the interaction between humans and the environment in the past and the surrounding world; understanding the how the interaction between the two works. Donald Worster's definition states; "Environment history is the interaction between humans and the environment in the past and relationships between humans and the surrounding world and also the mutual relations between humankind and the rest of nature". Natural resource management is the concept of sustainable development, a scientific principle that forms a basis for sustainable global land management and environmental governance to conserve and preserve natural resources.<sup>4</sup> Historical ecology means the changes and transformation in the ecosystem of a geographical region or a biosphere over a length of time or centuries. Historical ecology deals with time and space. It includes the human and social environment, man's continuous communion with the geographical and tectonic history of an ecosystem mountain, river system and forests in term of classification and topology and man's encroachment on the ecosystem for filling his needs for survival and to be prosperous by exploiting the environment for which men built up social, economic and political structure. Environmental history investigates the interactions between society and its physical environment, on symbolic, material and organizational levels. It opens new perspectives for deciphering contemporary issues related to modifications of landscape, for understanding reoccurring conflicts over the allocation and protection of natural resources, as well as for grasping the

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<sup>4</sup> <https://www.eh-resource.org>.

complexity and historicity of the social representations and uses of the environment.<sup>5</sup>

### **Nature and its Relationship**

Environmental resource management is the management of the interaction and impact of human societies on the environment. It involves the management of all components of the biophysical environment, both living (biotic) and non-living (abiotic). The interconnected and network of relationships amongst all living species and their habitats involves the relationships of the human environment (social, cultural and economic environment) with the biophysical environment. Environmental resource management strategies are intrinsically driven by conceptions of human-nature relationships. All human activities take place in the context of certain types of relationships between society and the bio-physical world (the rest of nature). It also refer to the management of resources such as land, water, soil, plants and animals with a particular focus on how management affects the quality of life for both present and future generations. It deals with managing the way in which people and natural landscapes interact.

The entire forests of Manipur are included in the Himalayan system. There are different criteria of classification of forest. It is suggested that altitude is an ecological factor in classifying the various vegetation zone, namely, Sub-Montane or Temperate zone, Sub-Alpine zone and alpine zone. S.C. Sinha classifies the forests of Manipur in the major groups, i.e., Tropical and Montane Temperate. Classification can be made on the basis of forest species. The forests of Manipur are great natural resources of the state. In this connection it is seen from the R. B. Pemberton (1835) account that he was amazed by the riches of Manipur forests, he wrote: The surrounding mountains in most instances, covered with the noblest varieties of trees common to both tropical and colder climate. I know no spot in India, which products of the forests are more varied and magnificent but their utility is entirely local, as the nature of the country precludes the possibility of transporting to foreign markets. The valley itself is practically free of forests

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<sup>5</sup> Kamei, Gangmumei, *History of Manipur Pre-Colonial Period*, Vol.1, 1991, p.7.

through every village is surrounding by a grove of forest trees. Further E. W. Dun in 1886 recorded almost the same plentiful forests. He described the forests thus: “the whole of the hill ranges lying between the valley of Cachar and valley of Manipur are densely clothed to their summits with tree jungles. Almost the only except to this been slopes facing Manipur valley.”<sup>6</sup> The tribal of North East India when it observed closer of the traditional practices of the hill dwellers particularly of North East India in respect of forests would be able to cite innumerable instances of how the hill dwelling communities not only protect their forests but also nurture the same. Some scholars go further and say that there is a symbiotic relationship between the tribal and their forests. What this means is that their relationship is not unilateral but that the tribal depend on the forest and the forest in its turn depends on them for its preservation and continuity.

There is a general framework within which it is possible to find the answers. Anthropologists and social activists have observed that tribal and other forest dwellers generally protect not only individual trees but also forests, and even their entire ecosystems because they have deep rooted vested interests in doing so. Such vested interests are institutionalized in the form of well-established practices enforced by various social control mechanisms. This is because, for the tribal and many other forest dwellers, their forests are essential for their very survival. The view expressed in following words. All the data at our disposal showed that traditionally the tribal had a vested interest in preservation of forests. They had therefore, developed a culture that ensured a proper balance between human and ecological needs. Forests were treated as a renewable resource and as a life support system that had to be preserved. In order to achieve this, in some cases they preserved entire ecosystems. In other instances, they banned use of other useful species through social controlled mechanisms, and ensure equal distribution of varieties that could be cut without restriction. The eco-system and the banned species were linked with the continuity of the tribe through totem and creation myths, thus making the preservation of forests coinciding with the conservation of their village or tribe.

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<sup>6</sup> E. W. Dun, *Gazetteer of Manipur*, p. 6.

This view applicable to every homogenous group that controlled a land area its community property a close observer of the traditional practices of the hill dwellers particularly of North East India in respect of forests would be able to cite innumerable instances of how hill dwelling communities can protect not only their forests but also nurture the same. "Some scholars go further saying that there is a symbolic relationship between the tribal and their forests. What does this mean is that their relationship is not unilateral but that the tribal depend on the forest and the forest in turn, depends on them for its preservation and continuity. This view must be within the broader context of the relationship between the tribal and their land, the extreme value, both materially and religiously, attached to the land and forest by them (Elwin 1988:66). Such attachment arises out of the intimate relationship between indigenous and tribal people and their land, a relationship. The indigenous people (ancestral territories) are not just their economic base, the land are intimately bound up with their cosmologies and identities as communities and as people.

Besides, they have a close affinity with the forests, which encompasses a wide spectrum of life including food, shelter, housing, agriculture implements, musical instruments besides having strong culturally linked as forest is the treasures of a large variety of food. Mostly for the hill people the forest is a well cherished home, a game sanctuary and also an abode of worship, around which his social, livelihood, medicine, and relax at leisure and their religious activities revolved. As said, they live with the nature and nature sustains them. The strong bond between the tribal and the environment (nature) also lead one to believe that the forest, which is a vital component of the environment, is the very source of life. The tribal customarily believes that the earth with all its bounty is referred to (land, forest and rivers) and do not separate these elements of the mother and the earth as separate entities. It believes for sure, every food items consumed by the tribal were from the forest produces. The vicissitudes and the changes that had taken place in the forests and other natural system around them were understood by the people. They utilize their knowledge and experience to operate locally rather try to overcome the

natural processes with the year around growing season and rapid succession that result from the high rainfall and high temperature of the region.

They need forest and preserve them not only for future field but also to gather food, hunting game and collect medicinal plants, etc. In many instances, indigenous knowledge is a blend of locally rooted and exogenous knowledge to suite local situations (this will be detailed in chapter i.e. chapter 4<sup>th</sup>). The ecological wisdom of the hill people is solidly based on "experience" and they depend on this knowledge to fulfill most of their day-to-day needs (their economy). The following examples throw light on the use of such forest knowledge in understanding what happens in the natural surroundings e.g. the flowering of bamboo is a sign that famine is close at hand because it would attract rats that would then be detrimental to farming and cultivation. When tender leaves start growing on trees, it is indicative that fishes are multiplying in rivers and seas. Nature endowed the people of Manipur from the distant past with the quality of soil and climate suitable for a wide variety of crops, fruits and vegetables. The traditional economy has essentially remained a forest based economy till today. A majority of industries in Manipur were the forest based. Forest products such as timbers, bamboo shoots, fruits and mushrooms have provided the villagers with an alternative source of economic activity besides supplementing their basic requirements of food, which also provides employment opportunities to a large section of the rural people who work in the forests.

## **Manipur State Economy and Forest**

### *Agriculture (Food, Drinks and Smoking)*

Agriculture is the backbone economy of Manipur State. About 84% of the total population of Manipur depends on agriculture (National Geographical Society of India, A Regional Geography, Varanasi: 1971). A major portion of the State's domestic product is contributed by agricultural sector and provides employment to about 63.95 percent of the working force in Manipur<sup>7</sup> and agriculture constitutes a main occupation of the people of Manipur State.

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<sup>7</sup> *Report on Economic Census 1998*, Government of Manipur Imphal, Directorate of Economic and Statistics, 2001, p. 37.

They depend more or less upon natural (forest) resources of various types from which they extract their livelihood. Forest and agriculture are the major resources of the tribes, in which resources of agriculture form the key parts for their livelihood as well as for commercial activities. Forests of hill enriching natural resource are the mainstay of economy of the people.<sup>8</sup>

Both wet and of *Jhum* cultivation otherwise called *Pamlou* in Manipur were widely found practised. The practiced of wet cultivation is found in both valley and the hill districts of Manipur. Besides, *jhum* agricultural system is found practised only in the hill districts. That, since time immemorial, the natural forest resources nursed the tribal of the hills. Hitherto, the forest lands were utilised for cultivation of various crops such as paddy, millets, chilies, beans, cottons, indigenous fruits and vegetables.<sup>9</sup> Seasoned and dried hollowed guards were widely used as water pot and bamboo cylinder and wooden pot for keeping drinking. The staple food of Manipur is rice, which is cooked in earthen pots or in bamboo tubes, a fashion of great popularity. Apart from the edible that jungle products found plenty in variety are commonly used as indigenous vegetables throughout the season in Manipur. The young shoots of the bamboo were consumed as staple food which possesses a crisp and delicate flavour, a ground orchid which is rather devoid of flavour but is harmless, and the wild tomato, the fruit of which is quite small with excellence. The small bamboo-tube containers were used for drinking juice, tea, rice beer, etc.<sup>10</sup> A large variety of non-timber-forest (minor forest) products is used habitually by the people in Manipur to supplement their daily food requirements. These include tubers, fruits, roots, wild edible plants, mushroom, bamboo shoot, creepers, spices, etc. Many people especially of the rural hill areas were survived depending solely on food items found from the forest. Also a particular bark of trees (yeast/leaven) locally called *Khai* (in Rongmei) were used as an ingredient of wine locally prepared mostly by the hill people. Betel leaves were also used for chewing *paan* with tobacco. And different kinds of nut found from the forest were also used as

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<sup>8</sup> Charenamei, Mani, *Forest Resources which is the Zeliangrong Country*, Souvenir North-East India Zeliangrong Naga Festival cum Souvenir, Imphal, 1995, p. 80.

<sup>9</sup> Charenamei, Mani, *Forest Resources which is the Zeliangrong Country*, p. 80.

<sup>10</sup> T.C. Hodson, *The Naga Tribes of Manipur*, p. 61.



food item and intoxication. Jungle herbs were used for flavouring, the leaves of datura plant, stramonium, that amounts the strength of their brew. The tobacco juice is prepared in a kind of hookah filled with water, made of bamboo among the Nagas and of clay or bamboo among the Kookies.<sup>11</sup>

### *Household Utility*

The plaited bamboo and cane mats as bed for sleeping spreading on the bare boards of the house. A conical shape tapering at the bottom is also generally used to store the paddy with a bamboo cover to protect the contents of the basket from rain. Paddy is husked in a wooden mortar by means of a heavy wooden pestle. A bamboo sieve is used for sifting the husked rice, a winnowing fan being applied to separate the husk. A large carpet made up of a bamboo is widely in use to expose to the sun for drying up. The neatly plaited cane baskets jar and of wooden were carefully kept for storing even the costly treasures. Firewood is the main source of energy in the rural areas and considered to be the most important resource for every household of the people of Manipur. The forests of the hill traditionally recognized as tribal property and were left free for their use since time immemorial. Since a long time ago the hill people in Manipur got their food cooked only by depending on firewood. Fodder is another important forest product on which the households are dependent. The twigs, branches of most of the forest species and the bushes and other wastes are collected from the forest and used for fuel purpose by the household in and near the forests. Firewood and charcoal are indispensable sources of energy used in every household for cooking, heating and drying purposes. The un-burnt trees from the *jhum* (slash and burn) fields are generally used for preparation of charcoal.

And the other non-timber forest product like broomshrubs, bamboo-shoots, wild plants and herbs, fruits, cinnamon, pepper, ginger etc. were collected from the forest.

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<sup>11</sup> T.C. Hodson, *The Naga Tribes of Manipur*, p. 61.

### *Herbs Medicine and Its Treatment*

Since time immemorial, the people of Manipur are known for their unique knowledge about plants wealth and herbals drugs in curing diseases. The nature itself provides for the people in the forest a considerable resource of medicinal plants and herbs on which how traditionally depending for treating of various diseases. Forest wisdom has enabled them to live in harmony with nature and learnt thing from the sighs of nature much from the forest to treat from various diseases though the system of medicine was very primitive (even the simplest allopathic drug was almost unknown). The treatments of diseases were done by *Maibas* (a person who practice a treatment of sick person, based on herbal medicine).<sup>12</sup> There are old kinds of medicinal treatment on the subject available and they are:<sup>13</sup>

- (i) *Maibalon* (Diagnosis of diseases) and
- (ii) *Hidaklon* (Treatment of diseases with herbal medicines).

The *maibas* were described, as a doctor and magician in one. He (*maiba*) interprets dreams and omens.<sup>14</sup> However, treatment of diseases among the tribes differs from one to another also not resemble with the modern scientific method as prevalent in western medicine. Some suggests that ‘Treatment, naturally would be influenced by cause of sickness perceived by the group. It has been observed that however primitive a group is, it has some scientific knowledge, which it is gathered/learnt through traditional experience. The tribal people do have some scientific knowledge which they have learnt through trial and error method. But this knowledge does not exist in isolation, rather is a part of their entire socio-cultural-religious system. Besides, magic is a part of tribal religion’. It also opined that this traditional methods of treating diseases mostly by the tribal rather moves in a way which covers not only a scientific principle, but also involves the society at large to overcome the catastrophe. It involved accuracy, which it gathered/learnt through

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<sup>12</sup> However, Maxwell ambiguously stated, “the Maibas are demon-worshippers and the priests of the sect”. See also, Maxwell, *Diary*, Political Agent of Manipur state, Manipur state Achieve, Imphal, 1891, p. 6.

<sup>13</sup> *Guide to the Records of the Manipur Political Agency (1635-1836)*, vol. 1, Manipur State Archives, Imphal, 1987, p. 18.

<sup>14</sup> But much of this has been reduced almost to the level of an exact science.

traditional experience of trial and error method. Hodson in this connection states the *maibas*:<sup>15</sup>

He is an empiric scientist, and has made useful discoveries, especially of the medicinal virtues of jungle herbs and roots. He is on the way to learn that man must stoop to conquer the forces of nature.

The ancient lore of herbal medicine, which found to be very effective remedies for various sicknesses, jungle herb was used for curing, dysentery and in order to procure abortion.<sup>16</sup> Mostly the rural folk of hilly people have long practised this aged herbal lore and developed the system of folk medicine into a tradition, which continues even today. And their land are abounding a large varieties of medicinal value plants that cured by drinking the tree leaves, roots, barks of tree etc. they used medicinally the bark of tree, which from its taste they name 'bitter tree' and all of them cure their wounds and bruises, by application of the leaves of plants having healing properties.<sup>17</sup>

Hodson further remarked:<sup>18</sup>

Sacrifices are used as remedial measures for treating a sickness by the maiba (a true magicians, he can declare that the omens is favourable or not, during the performance, it may have been a case of faith-healing, but the man was decidedly better in a short while. They possess a knowledge of the astringent properties of certain jungle herbs, of which they make use both in cases of dysentery and in order to procure abortion. Among the tribe people enjoys good health, he has little anxiety, but if struck by sickness for any length of time, the chances are he is ruined.

Their remarkable traits, ability to predict diseases from elements of nature and to differentiate between edible and wild plants is notable. Much of this ancient wisdom is today the result of oral tradition. They endorsed the knowledge and wisdom which unveiled the mysteries of life through their oral tradition handed down from generation to another. The involvement of accuracy,

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<sup>15</sup> T.C. Hodson, *The Naga Tribes of Manipur*, p. 140.

<sup>16</sup> T.C. Hodson, *The Naga Tribes of Manipur*, p. 136.

<sup>17</sup> W. McCulloch, *An Account of the Valley of Manipoor and of the Hill Tribes*, p. 58.

<sup>18</sup> T.C. Hodson, *The Naga Tribes of Manipur*, p. 135.

though this gathered through traditional experience of trial and error method, made useful discoveries. Therefore, total ignoring of these practices will be wrong to assume that it has no science.

#### *Forest Industry and Manufacture (Clothing and Dyeing)*

The tribal made their cloth from tree-bark by removing the skins of the plants and made a cloth of a plant, which they use for bedding and as blankets. With the process of thrashing them gently and leave it in water for a partial fermentation. It is finally thrashed against a stone slab to remove the organic fleshes out of the fibrous tissue of the bark. The vascular bundles with their tissues in all these plants have a good network, which looks like a woven cloth indeed. They manufacture the implements of dyeing clothes though of a simple and primitive from natural produce. T.C. Hodson described on this practice as:

The juice of the wild indigo is used to give a black or dark blue dye, and they purchase from the plains a bark which gives a red colour shading to terracotta. Lampblack is also used for the black dye, but the better black shades are obtained from a strong decoction of indigo. The green and yellow or orange shades are produced from the barks of jungle trees, but because they suspect an enquirer of ulterior motives and cannot understand his curiosity.<sup>19</sup>

Brown further noted 'dyeing the yellow dye was common which they got from the barks of jungle trees'.<sup>20</sup>

#### *Hunting and Fishing*

Most of the hills tribes of Manipur take much time in hunting in the hills occupied by them. The hunting of animals was performed in the luxuriant jungles of lofty ranges among the comparatively open hills of the valley of Manipur. Different kind of wild animals were hunt which endowed for them by the nature for their food items mostly of hill jungle. This game of hunting has been performed mostly in the dry season, but rarely managed to happen in the rainy season too. Hunting were done in large numbers by men turning out

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<sup>19</sup> T.C. Hodson, *The Naga Tribes of Manipur*, p. 45.

<sup>20</sup> R. Brown, *Statistical Account of Manipur*, Mittal Publications, New Delhi, 1873, p. 90.

to drive from ravines into more open space or less thick jungle where it can be chased by the dogs and speared or shot.<sup>21</sup> They also set traps for game. Besides, fishing were undergone in the lower reaches of the hill rivers, for the upper waters are too shallow and the current too swift for much to be done there.<sup>22</sup> Generally, fishing were done in a specific season (prohibits during the cultivating season i.e. from the time of sowing to the harvest home). They employed various methods and techniques of fishing. The most popular method is diluting the water by roots or stems of some poisonous plants, which found abundantly in the jungle. In many occasion they use poison, especially in a smaller streams. The tribal knew the art of fishing by net<sup>23</sup> and so also by poisoning in rare occasion, however, this poison that he used is harmless to consume (poisoned fish) by them. In this connection Hodson noted:<sup>24</sup>

The Quoirengs, Kabuis, and Marrings use poison, especially in the smaller streams. The poison used is identical with that used on the arrows, and stupefies the fish so that they float on the top of the water. There are no ill effects on those who eat the fish thus captured.

The poisonous creepers are thrashed in the water. When the water is polluted, the fish died constantly floated up on the water and collected by the fisherman. Another popular method practised by many hill tribal people is, the water in the river were diverted the course of river and wait to lessen the water volume by draining the water. And also apply the long bamboos (of twenty to twenty-five feet in length), were caught by hand or taken in small nets by waded down the pool in an echelon formation, driving the fish into the shallows.<sup>25</sup> Baskets of different sizes were also made which served the purpose for catching fish.<sup>26</sup>

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<sup>21</sup> T.C. Hodson, *The Naga Tribes of Manipur*, p. 56.

<sup>22</sup> T.C. Hodson, *The Naga Tribes of Manipur*, p. 58.

<sup>23</sup> The nets were made of twine, woven of bark fibre, which is very strong and resists the water.

<sup>24</sup> T.C. Hodson, *The Naga Tribes of Manipur*, p. 58.

<sup>25</sup> T.C. Hodson, *The Naga Tribes of Manipur*, p. 58.

<sup>26</sup> R. Brown, *Statistical Document of Manipur*, p. 30.

### *Forest: Religion and Musical Instruments*

The earth is honoured and worshiped as mother goddess by the Manipur people. They believed God is present in nature, on the hills, mountains, rivers, lakes, forests, etc. (believed mostly by the Meiteis) man forms an integral part of this natural environment. Thus, there is an inseparable relationship between God and Man and the objects of Nature. The shrine *Eechoom Lairembi* lies in a small "island" of forest. In this connection, Louise Lightfoot stated, the *lai* means god present in the forest as *Uhmang Lai* means Forest Spirit ("Uh" means "Tree"). "In ancient Scripts only the term "Lai" was used, but now they are called "Forest Spirits" probably because their original environment, the forest, is preserved around them Ancient trees grow at the shrines, and new ones grow up untouched."<sup>27</sup> Especially the tribal believe, they sanctify nature and all its elements as gifts from God. As Hutton exactly states in the case of Aos: 'the idea as it now exists be the result of an association between the trees as the abode of jungle spirits and the prosperity of the rich'.<sup>28</sup> Preservation of forests as sacred groves has been existent since time immemorial amongst the tribal. People are mostly governed by their belief systems in conserving these forests. The existence of the guardian spirit in these forests is a belief that has existed since time immemorial. Bamboos play a very important role in the socio-economics. And, it was used by the people to protect them from all pains and sorrows which may occur due to attack of evil spirits and devils. The people used to make some offerings to the bamboos as customary rite on the New Year day with a belief that the bamboos can substitute the members of the family to bear all the sorrows and calamity that may come during the year to come Thadou-Kuki.<sup>29</sup> Amongst the tribal community believes, when an aged bamboo started acquiring a diverging bunch of leaves at the tip instead of the usual arrangement, it was considered as a sign of the death of a member in the family and the four are to be used in the customary funeral rites

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<sup>27</sup> Louise Lightfoot, *Dance Ritual of Manipur*, Ministry of Scientific Research and Cultural Affairs, New Delhi, 1950, p. 14.

<sup>28</sup> J. H. Hutton, *The Sema Naga*, Oxford University Press, 1968, p.60.

<sup>29</sup> S. Singsit, *Traditional Forest Management Profile of Thadou-Kukis*, Akansha Publication, Imphal, 2010, pp. 106-107.

of the dead body.<sup>30</sup> When a bamboo flowers in the residential area, it is believed that the head of the family may die. Hence, the people used to clear these flowering bamboos. For making house gate, poles with five internodes are employed, while the transverse structure is made of seven internodes. The belief is that the structure so made would prevent the bad effects of the evil spirits, inside the house campus.

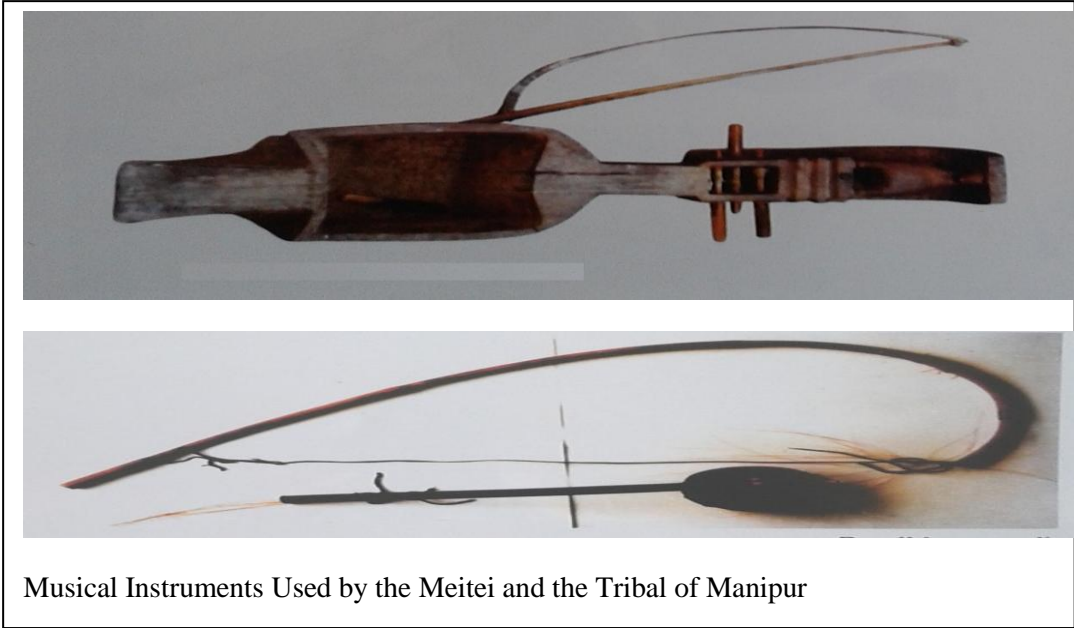
Manipur state studded with a number of long standing Tirthas (sacred places) such as Nongmaiching, Hiyang-thang, Nungjeng and Mondum, Ingourok and Koubru where people go for worshipping the local deities.<sup>31</sup> Mostly among the communities they believe as some spirits from the forests have been the site of rituals, taboos and ceremonies, where social moral values were passed on to the younger generation. They also believe that the guardian spirit which is present in these forests suggests the spirit take care and protects the people from sickness, pain and invasion by enemies. There are some common rituals held every year in the groves and forest which bring to light the deep sense of reverence that the people have had towards the forests. Offerings of animals or birds, fruits and other items were offered to the Goddess. Besides timber, forest provides for the people for making musical instruments drum, and blowing instruments like flute and some stringed Musical Instruments made of bamboo, wood, etc. It is from the reign of Khuyoi Tompok the maharaja the drum was first introduced in Manipur, which made out of a hollowed log with cattle's skin which produced sound of a drum. Some of the musical instruments (used by the Meitei and the Tribal of Manipur) were which were of forest resource were shown in the following tables:

**Figure: 2.A**

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<sup>30</sup> S. Singait, *Traditional Forest Management Profile of Thadou-Kukis*, pp. 106-107.

<sup>31</sup> Singh, M. Jhulon, *History of Manipuri Literature*, Author Publication, Imphal, 1950, p. 26.



**Figure: 2. B**





**Figure: 2.C**



Musical Instruments Used by the Meitei and the Tribal of Manipur

### *Bamboos and its Management*

Bamboo jungle is everywhere plentiful and its usage in Manipur. Bamboos have been very closely associated with the socio-cultural and economic life of the people. The young tender shoots are edible and locally known as *Uh-soi* (Manipuri). The fermented shoots locally known as *Soi-bum* also made for pickle. It also used for cooking pot mostly by the hill tribal (curry of the bamboo gives much more taste than the iron pot). The bamboos were used in constructing houses with bamboo [Brown]. The house walls are usually reeds plastered over with mud and cow dung.<sup>32</sup> The bamboo craft 'Sangbai' for basket for measuring paddy was famous. *Phaklen*, a big mat on which paddy and other grains are threshed out from their plants; *La* and *Kharai*, on which things are spread out for exposing to the sun; *Yangkok*, a round and flat type of basket for winnowing grains etc. The *Shilluk* and *Phigaruk* used as container of precious goods which were given to the bride as gift in the marriage.<sup>33</sup> Bamboo used as food, fodder, fibre, medicines, knife to cut as well and as for various social and religious functions. Bamboos were extensively used in place of timber. The bamboo is used in multi-purposes. It's used in the construction of houses, thatching, flooring, roofing, making walls of native huts, mats, baskets, ladders, bridge, poles, flag posts, frames, fencing, walking sticks, handle of tools, brushes, fan, toys, sport goods, musical instruments, spears, arrows, bows, boats and rafts, fishing implements, ropes, caps, flower pots, storage containers, combs, weaving implements, brooms, pipes etc. Since time immemorial the bamboos were extensively used of bamboos for spoons, bamboo *daba* (container) for carrying and storage of water etc.<sup>34</sup>

### **Water and Political Power**

Mostly the valley water management had been taken as special task of state officers besides, (irrigation and drinking purposes) for the enhancement of power and control. Water played vital role in agriculture sector also for

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<sup>32</sup> R. Brown, *Statistical Account of Manipur*, p. 10.

<sup>33</sup> Ali, Ashraf, *Economic History of Manipur*, PhD Thesis Manipur University, Canchipur, 1988, p. 106.

<sup>34</sup> R. Brown, *Statistical Account of Manipur*, p. 10.

realizing the full potential of India's development. Optimum development and efficient utilization of our water resources, therefore, assume great significance. Water is a complex natural resource. Around the globe, the scarcity of natural resources caused to compete for land, water, and other important resources certainly triggered to rival and warfare became more frequent in larger scale. Taking the advantage, here the king and the elite class designed and prepared to control the farmers by denying water to those who resisted their authority. At some point of stage of ancient civilization, the pre-industrial agricultural society, many of the state actors were in their turn organised the irrigation for his subjects. When irrigation became more a factors in the larger scale and an elaborate irrigation systems required a leadership, to organised the labour. Therefore, the state actor made water a factor to their subjects, though factor may not be of an ecological concern and population pressure.

### **Forests and Environment**

Forest played the most important roles which fewer were being visible to the common man of ecological role. Besides, wood for cooking, timber for construction, cellulose and pulp for the production of paper, vegetables, etc. The forest influenced the wind, temperature, humidity, soil and water. It's the most chief living resources of the human being and living being. It's said that forests are the greatest achievement of ecological evolution, the largest most complex and most self-perpetuating of all eco-system. It is in the forests that natural regulatory processor excel, producing the most stable of all eco-systems. The fact of releasing water vapour from their exposed surfaces (transpiration), the plants increased humidity of the atmosphere. The increased in the atmospheric temperature increased the rate of transpiration and hence latter acts as a shackle upon the former. Further, forests in the hilly areas keep soils of river banks intact by their extensive root systems. Ground flora and the thick layer of litter and humus in the forest at a sponge and retain the water received in the form of rains which prevents floods in the plain. By decreasing the velocity of water coming down the hills, forests helps in greater absorption of water by soils in the plains preventing droughts. The extensive root systems of forest plants not only keep the soil particles intact but also endure structure

development in the soil. Forest and water resources have a profound influence on the economy and as well the environment of Manipur.<sup>35</sup> The socio-economic activities of man are greatly influenced by forest and forest resources. It is said that trees mean water, water means bread and bread is life. The prime necessities of life<sup>36</sup> and other useful and valuable products are derived from forests even the animals having economic and commercial significance depended upon forest. The human economy without plants is the same with impossible to life. Forestry, particularly wood and fuel, play an important role mostly for the hill districts tribal people, for, they depended on, as their living. And forest occupies a central position in the tribal and hill people of the state. Sometime, uncontrolled burning of fire spread into adjoining forests when the dried vegetations caught fire and spread fires in the nearby surrounding standing virgin forests led to damage the surrounding valuable forests and great damage occurred to the premature burning of the newly-felled jungle). At different intervals depending on the multiplicity of factors since the time of Homo sapiens in the natural world and this has been a continuous activity, though scales have been different. The British had inherited a mixed landscape upon their arrival in India. The British conquest of India encouraged deforestation. Economic development brought harmed to the environment in one aspect that expansion of permanent system of agricultural land and constructing of dams start clearing the forest the colonial encouraged forest clearance instead of putting stop to further devastation.

The modern technology, produced by the developed countries has resulted, in an environment more conducive to the physical and mental well being of man by escalating level of pollution associated with deterioration of the environment polluting the air that we breathes, the water that we drank the food that we ate. The impact of ecological imbalances directly affects the ecosystem of the environment and also speaks of the significant of the fishes mostly of the north-eastern part of India. Since time immemorial fish has been the important items of food protein particularly for the rural poor. As on today the people of eastern and north-eastern region of the country depend solely on

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<sup>35</sup> Direct impacts on rain wind, heat, cold, moisture, vegetation, industry, income, employment, etc.

<sup>36</sup> Food, Water, Clothing and Shelter.

fish as a source of protein in their regular meals, the availability of which in the market is rather scarce particularly the quality fish. The dearth of inland water (the low lying depressed areas) with accumulated water and low lying depressed area which gets connected with some rivers in the rainy seasons couldn't produce the fishes abundantly in the market and meet the demand in low price. Thus, forest is known as 'green gold'.

The lack of forest resources will lead to losing of potentialities particularly due to ecological degradation and lack of proper management from the past to this century.