CHAPTER 5

Tribes of Idukki District – Observations, Analysis and Findings

5.1 Ethno-social aspects

The tribal population of Idukki number 11516, according to 2011 Census report. They belong to 9 specific tribes namely Mannan, Muthuvan, Malayarayan, Malapandaram, Oorali, Paliyan, Hilpulaya, Ullatan, and Malayan (Nettor, 1974; Nag, 1958). Most of the tribals living in the district occupy hilly and forested areas. Each tribe has its distinct cultural practices and ways of life. They live mostly in tribal settlements or hamlets and each hamlet is known as ‘Kudi’ (Sukumaran, 1981, Ayyappan, 1965). The hamlets are mostly untouched by modern means of transport, communication, education and health care. They mostly subsist on food gathering, hunting and shifting cultivation (Bakshi, 2000). They are also provided rice and wheat by state government at subsidised rates. Their livelihood strategies are generally regulated by the terrain and the nature of forests that surround them. Most of them have very little contact with other communities and hold firmly to their tribal identity (Mathur, 1972).

5.1.1 Historical background of the study on tribal population of Travancore.

The tribal areas of Idukki District where this study was conducted formed a part of the High Range division of the erstwhile Travancore Kingdom. The kings of Travancore paid special attention to the welfare of the tribals and treated them giving respect to their culture and traditions. The census report of Travancore for 1931 has described elaborately the measures and policies adopted for welfare and development of tribals by Travancore Monarchy (Iyer, 1981).

The explicit policy of the Government of Travancore was that the development of Tribals should be taken by the government directly and that, it should not be delegated to agencies such as the missionaries. The objective of all such development
programmes was to ensure that the tribes are able to control their own destiny. The entire approach to tribal development was embedded on the traditions and experiences of the native past, and through native institutions (Ayyappan, 1965; Bose, 1997). The policy of the government insisted that all programmes should be looked at as the natives versioned them themselves. The Government of Travancore adopted several measures to improve the conditions of hill tribes and to bring them to the mainstream of national life despite the fact that they remained scattered over the hilly and forested areas (Radclif, 1964; Desai, 1961).

5.1.2 Rules for treatment and management of hill tribes of Travancore

Special attention was paid by the Government of Travancore in framing rules for the treatment of hill tribes (hillmen). The intention of the Government was to ensure the welfare of the hill tribes through regulations to ensure livelihood and safety from exploitation of outsiders (Mamata, 1977; Doshi, 1990). The Census Report of 1931 in its Appendix has listed a set of eighteen rules for the treatment and management of hillmen. The Hillmen living in the reserve forests were placed under the care of forest department (Datta, 1996). Each settlement was to have a headman (‘Kani’), who attained that position through hereditary right or by election or by selection. A divisional forest officer had the authority to depose a headman if he was found to be failing in his duties. This was to be done by consent of the adult male members of the settlement. Each hillman was given an identification number by the forest divisional office through the Kani who was bound to report to the forest range officer once a year (Dhakur, 1986; Nadeem, 1983). Hillmen were not permitted to leave the settlement or to migrate to another place without the permission of the headman. Appeals to headman’s decision could be made to Divisional Forest Officer whose decision was final. Settlements were fixed and hillmen could shift only with permission of the District Forest Officer under such circumstances as scarcity of water or outbreak or diseases like smallpox (Luiz, 1962; Mathur, 1972).
Special rules also were sufficient to ensure the livelihood of hillmen by providing sufficient land to follow tribal agriculture. For each settlement, a block of land comprising seven times the total area required by the settlement in a year was demarcated by the forest officers. They were permitted to cultivate one seventh area of the land every year so that cultivation could be carried out in each piece of land on a rotation of seven years. Travancore Government did not issue patta or permanent titles to the hill men living in the forest (moench, 1991).
The tribals were permitted to sell all their agricultural products except tobacco and food-grains which required permission of divisional forest officer. The hillmen were permitted to sell and use any timber except royal or reserved trees, bamboos, reeds and canes free of charge for their bona fide domestic and agricultural purposes. They could use reeds, cane and bamboos to manufacture petty articles for sale. They could also collect and sell forest minor produces not collected or auctioned by government (Mathur, 1974). They were permitted to shoot game animals only in wet weather from 15th Vyakshi to 30th Karthigai. They also were permitted to catch fish without poisoning water and without using explosives (Iyer, 1981). Government permitted one gun in each settlement under the charge of the headman. Licenses to trade with Hillmen were granted to respectable traders through formal agreements by divisional forest officer. But traders were not permitted to enter into credit transactions or lend money (Doshi, 1990). They were not permitted to sell liquors or drugs to hillmen. The Licensed traders had to keep all clear accounts of all transactions with hillmen. Hillmen also were paid for items like ivory, elephant teeth, cardamom and wax collected by them form forest and handed over to forest department (Pandey, 1997; Majumdar, 1978).

5.1.3 Steps for educating tribes

The Government of Travancore considered the spread of education to be the most important step for the regeneration of the hill-tribes. Education should be such as will be of practical use to them and will at the same time enable them to preserve their heritage and develop their racial qualities. Education should be vocational; agriculture and cottage industries being taught to boys and domestic science to girls. The only way to save the hillman is to make him work and improve his economic condition. The Government should shoulder this responsibility instead of leaving it to private agencies (Census Report, 1931).

5.1.4 Measures taken by the Travancore Government for welfare of depressed and backward classes.

The various measures taken by the Travancore Government in the early years of the 20th Century for the welfare of depressed and backward classes have been recorded.
in the Census Report of 1931. Forty four classes, from Adi-Dravida to yadavan, ten Hindu Caste from Chetti to Virasaivar. Thirteen hill tribes from (Table 5.1) were enlisted for special welfare schemes by the Government of Travancore.

| 1.  | Kanikkaran            |
| 2.  | Malankuravan (Malayadiyar) |
| 3.  | Malapantaram          |
| 4.  | Malapulayan           |
| 5.  | Mala Urali            |
| 6.  | Malavetan             |
| 7.  | Malayarayan           |
| 8.  | Mannan                |
| 9.  | Muthuvan              |
| 10. | Paliyan               |
| 11. | Ullatan               |
| 12. | Vettuvan              |
| 13. | Vizhavan (Malankudi)  |

(Source: Census Report, 1931)
sale or purchase of Kuravas, Pulayas, Parayas and other low casts was prohibited except in places where it was allowed by local customs for agricultural purposes (Luiz, 1962). By yet another proclamation of that year the taboo imposed on Ilavas and other low casts in carrying umbrellas, lights and knives inlaid with gold and in wearing ear-rings, was removed. The lower castes were permitted to wear gold and silver ornaments in the same manner as the higher castes through a proclamation in 1818. The markets and bazaars were thrown open to all classes of people through another proclamation in the same year (Singh, 1994). By two proclamations issued in 1853 and 1855 the Government of Travancore abolished all kinds of slavery in the state. Grant-in-aid Education code of 1895 provided, for the first time, funds for the establishment of schools for Backward Classes. Members of the depressed communities and backward classes were assigned land on concessional terms (Census of India, 1931).

5.1.5 Tribe of Idukki and the environment

The hill tribes of Idukki have been living in the forests for the past several centuries. They have a very intimate relationship with nature. Most of the tribes of Idukki have had a glorious past as a people before they got isolated in the forests and formed themselves into tribes. Even as tribes all over the world, including Anglo Saxons of England, the Francs of France, Spaniels of Spain have developed themselves into modern advanced societies, the reverse also would have happened where, advanced societies of the past transformed into tribes (Rajan and Rajan, 2000). For example the Malappulayas of Idukki and Palakkad are tribals. But these Malapulayas are the Pulayas of Tamil Nadu which is a scheduled caste. There is much in common among the Malapulayas of Idukki-Palakkad and the Pulayas of Tamil Nadu with regard to songs, rituals, belief systems and death rites. But the tribal characteristics were acquired by these people after they got isolated in the Marayoor forest areas (Tharakan, 1978; Joshy, 1987).
Similar transformation also occurred in the case of Malayarayans. They have much similarity with the middle class Kerala society of older times. The methods of worship, the concept of temples, house building, family ties, ceremonies after death, deities, literary traditions, language etc. are evidences pointing towards the possibilities of these people having got isolated in the hills and developing tribal characteristics. The Malapulayas have ‘Kudi’ system and they reside in the forests close to midlands. The tribal characters evident in Malapulayas are thus to be attributed to the forests in which they got isolated. The Muthuva tribes also have a relationship with Tamil culture. Their Siva-Vaishnava outlook and the traditions relating to the Epics of Mahabharatha and Ramayana also point that they would have migrated from somewhere near Madura to the hills under some political pressure (Rajan and Rajan, 2000).

5.1.6. Origin of tribal settlements in Idukki forests.

Tribals of Idukki occupy the long chains of wooded hills of the Western Ghats. It is still a mystery as to how most of these hill tribes came to occupy these areas. Some of the hill tribes claim to be autochthonous (Mathur, 1977; Datav, 2002).

Malampandarams and Ullatans claim that they originated in the hills of the Western Ghats. But Mannans and Muthuvans hold traditions of having come from adjoining districts of Madura or Tirunelvely in Tamil Nadu. Each tribes has some tradition relating to its origin which is handed down from generation to generation through popular songs, stories and dance forms (king, 1995; Kumar, 1999).
**Muthuvans** of the Cardamom Hills believe that they came from Madura on account of internal dissensions in their native land. It might possibly have been at the time when the Telugu Naickans took possession of Bodinaickanur in the fourteenth century A. D. The Muthuvans who came to the High Range in Travancore along Bodinaickanur carried their children on their back when they climbed up the Ghats, and hence they have come to be known as Muthuvans (‘Muthuku’ means ‘the back’). Another version is that, when they left Madura, they carried on their back Goddess Minakshi and are, therefore, called Muthuvans. Their males even now carry loads and their females carry their babies on their back (Fuchs, 1994; Dube, 1990).

![Fig. 5.6 A Homestead](image1)

![Fig. 5.7 A rice field](image2)

![Fig. 5.8 Farming on tribal lands](image3)
There are several other myths related to the origin of Muthuva tribe. One such story is related to the Tamil Classic “Chilapathikaram”. Muthuvans claim that they accompanied Kannagi as she fled to the hills of the Western Ghats after burning down Madurai. The devotion that Muthuva tribes still hold for Madurai Meenakshi Temple justifies this story. They firmly believe that it was their forefathers who stood guard for Sita while she was living in the forest for twelve years. The protection they give to their women folk and the high value they give to morality and chastity of women points to this belief. There is also a myth related to the Poonjar Royal Family. The belief is that they were the dependents of the Poonjar Raja. Although these traditional legends about the origin may have some fragments of the imaginations of primitive tribal mind, these are closely linked to their ways of life and their faith and rituals and they also justify certain historical facts. The forefathers of Poonjar Royal family were originally from Madurai. The stories of exodus also may have links to situation in which local kings and people had to flee to the hill and forests in the event of invasion by foreign rulers. The king of Poonjar and later the monarchs of Travancore have made use of the services of these tribals to collect forest produces and for protection and development of these forests and hill tracts (Dube, 1977).

Fig.5.9 Newly wed couple coming to the kudi just after marriage
Mannans also claim to have come from Madura. Being fond of animal food, they thought that they could live comfortably on the Travancore hills which abounded in sambur, black monkey, and other wild animals. The quest for food is, therefore, said to be the cause of their immigration. Another version is that they were formerly dependants of the king of Madura. Owing to internecine dissensions, they were obliged to leave Madura under the leadership of a chief known as Punjar Raja. They entered the hills along Cumbummettu and settled in various parts of the Cardamom Hills. They also installed their deity, Chokkanadar, on the Chokkanad peak, and Chanthiyat Amma at Ayyappancoil. It is said that they once owned a small tract of land near Cumbum. It was leased to the people of that place and the produce realized was used for temple service. This land was later lost through litigation. Tradition has it that one of the former Rajas of Punjar nominated three Mannans as his agents for the management of his dominion. One of them was installed at Talliaramalai with a silver sword as his badge; the second, Gopura Mannan was installed at Mannankandam with a silver bracelet as his badge; and the third, the Talamala Mannan, who had a silver cane as badge, was installed at Udumbanchola. After the Government of Travancore have took possession of the Cardamom Hills, Mannans owe only a nominal allegiance to the Punjar Chief who is still held in veneration by them (Kumar, 1999).

Mannans are also considered to have reached the cardamom hills from Madura through Marayoor, Kanthalloor, Bodimettu and Kambammettu. There are several stories related to their migration to this area. It is accepted by many that, in the fight between Chola and Pandya Kings, the Mannans helped the Pandya King, and in return for their assistance, they were assigned the special title of ‘Vanathipathi’ which means “The Rulers of the Forests”. The Mannan Tribes are also believed to have reached the forests to collect cane and other forest products for the king, but they stayed back in the forests, having overcome by the enchanting forests. The fact may be that under some special circumstances including war and famine, these people took refuge in the forests to escape from the adversities back home. However, it is evident that the Mannans got settled in the hills due to the availability of forest resources for their sustenance (Dube, 1990).
Uralis believe that they were dependants of the king of Madura. Their duty was to carry umbrellas during State procession. "In ancient times many of the parts now included in the Thodupuzha Taluk belonged to the king of Madura. Once when the king came to Neriamangalam, the ancestors of Uralis are said to have accompanied him and were probably left there to rule that locality. (‘Ur’ means ‘locality’ and ‘ali’ means to rule). Mannans are said to have held sway over Uralis in former times. They were a source of terror to the Uralis, and any Urali who remained in a tree-house on the arrival of the Raja Mannan was caught and chastised. The Raja Mannan used to be the arbiter of their disputes, and they paid him four chackrams and one para of paddy annually (Davidar, 2007).

Paliyans claim to have originated from Madurai. They say that when they were living in Madura, a Pantaram told them that they would find it congenial to go and live on the Cardamom Hills in Travancore which were uninhabited and that accordingly they came and settled at Vandanmet. Another tradition currently prevailing among Paliyans is that a Kallar of Madura had two wives, and that when some dissensions arose, his children by the second wife fled to Sankurandamalai, fearing molestation. Those who did not fall a victim to the marauders came to be known as Paliyans. They came to the Cardamom Hills via Bodinaickannur. In memory of this connection, the Kallars of Madura refrain from doing any harm to the Paliyans. These two tribes interdine but do not intermarry. A Kallar will not allow a Paliyan guest to depart without being fed. The Paliyans pride themselves in being called Kattukallars. The Kallars proper are known as Nattukallars (Davies, 2009).

Another story prevalent among Paliyans is that their ancestors came from Koodalloor in Tamil Nadu in order to escape from the ritual of sacrificing humans. The word ‘Palliyan’ also means, one who does not like sacrificial offerings (Ghurye, 1995).
Malyarayans are a peculiar tribe having prominent distinctions from other tribal communities. Their traditions point out that they might have migrated into the forests from urban areas in the Palany. They have several cultural traits that justify such a notice. They occupy the wooded hills lying between the midland areas and the high hills. They do not consume beef. They believe that they were once the trusted sentinels of the Raja of Karikkotu, and fled to the forests to escape the wrath of the king. Another story of their origin is related to the Raja of Pandalam. The queen of Palandalam had come to visit the shrine at Koottickal, and on her return, the women lined up to greet her. When she had just passed, one of the Malyaraya women after chewing betel spat on the dress of the queen. The king took revenge for this act of disrespect. The present day Malyarayans are the descendents of those who fled to the forests to escape the wrath of the king. Although there is no conclusive evidence as to their origin, they seem to have lived in the forest for centuries. Their songs also have links to the Mahabharatha and Ramayana stories which indicate that they had in the past been a more advanced community (Guptha, 1996; Kalathil, 2006).
The Malapulaya Tribe also claim to have come from Madura through the Kodaikanal hills. The reason for their migration to this area is still not very clear. Some say that they had fled Madura to escape royal wrath, while some others hold that they had came searching food and better living conditions in the hills. They seem to have come with the Tamil population who settled down in Anjunadu area of Devikulam. The Tamils in this area are Vellaiappilla Community (Larsen, 2007).

The malappulayas would have accompanied these Tamils and one group would have travelled towards the north and so a few of their settlement are found in Chittoor Block of Palakkad District. There is a probability that these were Pulayas in Tamil Nadu and got transformed into a hill tribe through their long settled life in the hills here (Kumar, 1999).

Fig.5.11 A kudi

Fig.5.12 A muthuvan home – nearing completion

Fig.5.13 the only shop catering to over a dozens kudis – No sign of consumerism
**Ullatan** is a tribe that claims to have lineage of the descendants of Valmiki, and who had originated in the hills of Idukki. They live in the interior forests.

**Malavetan** is a small tribal forest community which had sustained on minor game in the past. They are distinct from other tribes on account of their traditions, customs and ways of life. They now have little land and depend on daily labour for sustenance.

**Malapandarams** are a small tribal community of less than fifteen families having nomadic traits. They depend entirely on forests and more from place to place. They live on minor produces collected from forests.

The Epic and the Puranic legends contain traditions relating to the physical characters of the aborigines (Nishadas). “The Bhagavatha Purana describes Nishada as black, like crows, very low-statured, short-armed, having high cheek bones, low topped nose, red eyes, and copper coloured hair”. His descendants are distributed over the hills and forests. The Anamalai hills in Southern India form the refuge of a whole series of broken tribes. They are characterized by dark hair, short stature, and broad nose.

![Fig.5.14 The diety in the forest](image1)

![Fig.5.15 Oil lamps in Karthigai festival](image2)

**5.1.7. Environmental considerations in raising tribal hamlets**

Extensive field visits were carried out during the period of study to gather information on specific aspects of tribes through direct interactions, observations and confirmation. A tribal hamlet is commonly known as a ‘Kudi’. A typical kudi
has ten to twenty-five huts, with one family occupying each hut. Each ‘Kudi’ is more or less independent. The families in a Kudi are bound together by the idea of self protection. Each Kudi has a headman, known by different titles depending on the particular tribe that makes up the Kudi. Normally one ‘kudi’ will have only one tribe. Tribal hamlets are established in various parts of Idukki District. Each tribe has a set of unique standards for selecting an area to set up a tribal hamlet. Muthuva tribes start searching for a new location to establish a ‘Kudi’ when they find that the fertility of their agricultural land has dwindled or when the forest around their kudi has lost its vigour. The increase in population of a Kudi above a certain limit also prompts the elders in a Kudi to go out searching for a suitable location for a new settlement in the forest. They used to set up a new kudi whenever the number of houses in one kudi exceeded about 25 (Singh, 1998; Sharma, 2005).

Major considerations while selecting a particular location for establishing a Kudi are availability of water, vigour of surrounding forests and safety from wild animals. Muthuvans are found in the high elevation regions of Idukki. They normally select either the crests or mid regions of hills. Immediately after selecting a location, they first build the temple and then the Chavadi. The Chavadi is the public place which is used as a common assembly hall and as the guest house as well as the bachelor hall in a Kudi. It is in the Chavadi, that the unmarried males above five years of age are lodged under the care of elders of the Kudi. The size of the Chavadi depends on the number of households to be settled in the Kudy. All the houses are built nearly in the same design as the temple. The land is levelled and pillars with wild logs are
planted at the corners. Then the outer walls are made with mud and small pieces of stones packed from other side on to a mesh made of reeds. The huts are small, rectangular and one-roomed with a single door in front. There is no furniture except a mat or two woven out of reeds. The most precious luxury in the hut is a fire that burns in one corner. The temples now have the pictures of Gods and deities. But in earlier times they had neither images of Gods nor pictures in the temple. They would worship a deity whose presence is accepted as real by the tribals of the ‘Kudi’. Before a ‘kudi’ is occupied a hut for the women in their menses is constructed. This hut is called the ‘Valappura’. It is in the Valappura that pregnant women are lodged for delivery. Separate areas in the forest will be marked out for men and women for use as toilets. Split bamboo will be arranged to carry drinking water from a nearby stream to the ‘Kudi’ by the gravity flow. The ‘Kudi’ will be made safe from wild animals by digging trenches around it, or by fencing using sturdy logs. Domestic animals also will be given places inside the fenced area. The families will move into new kudi so set up only on an auspicious day. Normally it is done in ‘Karthigai’ or ‘thai’ months. The ceremony is normally held after a new moon before noon. Special ceremonies on such occasions will be held to please the ancestors by offerings of food in front of a lighted lamp (Srivasthava, 1996).

**Fig.5.18** Displaying a notice  
**Fig.5.19** ‘Valappura’ – The women’s seclusion home.

**Mannans** form the single largest tribe in Idukki District. They number over 25,000 and live in 46 ‘Kudis’ and are found in all the four Taluks of Idukki District viz, Udumbanchola, Devikulam, Peermade and Thodupuzha. They are found mostly in Cardamom Hills to the south of Panniyar river, up to the south of the tract of low land close to Periyar reservoir. This area has a salubrious climate and enjoy the
benefit of both monsoons. The hamlets of Mannans are situated on high grounds where there is a perennial supply of water and plenty of land for cultivation. Each hamlet has five to fifteen huts. The headman alone is privileged to sit and sleep on a bamboo thatty – a miniature cot. All the rest sit and sleep on the floor (Pillai, 1932).

Malayarayans are found in all blocks of Idukki District except Devikulam. As the name suggested, they were once the lords of the hills. They claim superiority over all the other tribes. Ullatans used to call them Valianmars (those who rule), which evidently points to their former greatness (Pillai, 1932). Malayarayas are found in Kottayam District also. They had settled down in the hill areas close to midlands. They are dependent on agriculture. Rice is the major crop they cultivate. Up to early periods of the last century they had only barter system. Now they cultivate other crops such as tapioca, pepper, coconut and rubber. Malayarayans are the most educated tribe in Idukki. Many families have their members employed in Government services. Their houses are built with cement and bricks. The floors of the house are normally raised from ground level up to about five feet, and roof of the houses are built a little low, so that normally a person entering the house will have to bend his head (Mathur, 1974).

Malappulayas are found in the sandal wood tracts of Marayoor and Kanthalloor Gramapanchayats of Devikulam Block. They are believed to have migrated from the Tamil lands along with Tamil Villagers who came and settled down in Anjunad, and got isolated in the forests. Each ‘kudi’ has above twenty to thirty houses. There are a

Fig. 5.20  Dependance on the stream  
Fig. 5.21  Bridge over the river – to be used when the river is in spate

A study on certain tribal communities of Idukki District in Kerala in an environmental perspective
total of 21 Malapulaya kudis in Devikulam Taluk. Malapulayas are divided into three endogamous sects, namely, Kurumbapulaya, Karavalipulaya, and pamb aupulaya, in the descending order of their social status. The higher sects do not intermarry or interdine with lower ones. Kurumbapulayas are nomadic agriculturist. Karavalipulayas are dependent on vellalas who had settled down in Anjunadu from Tamil Villages in the plains. Ragi is the staple food of the Karumbapulayas and rice that of Karuvalipulayas (Bose, 1997).

Paliyans are traditionally nomadic agriculturists and practice shifting cultivation. They worship the crests of hills which are supposed to be haunted by evil spirits. Paliyans believe that they migrated from Kudallor area in Tamil Nadu. Now they are found in Chakkupallam, Puliyanmala, Annyartholu, Anakkara, Padmpillakkudy and pathammile of Kattappana Block, in Kumily of Azhutha Block, and in Painavu of Idukki Block. Currently the paliyans subsit on collection and sale of minor forest products and daily labour besides their traditional shifting cultivation. The forest department also employs them for maintaining fire belts, and other forestry activities. Forests play a key role in all day to day activities of the Paliyans (Kattakkayan, 1983). They worship “Karuppuswamy” who is the forest God. In order to propitiate Karuppuswamy and seven other deities, they celebrate annual festival called “Swamykumbidal” which means ‘bowing to God’. All celebrations are in the temple premises inside the forest at a distance of over two miles from the...
Kudy. The dead are also buried in the interior forest and the area is called ‘Idukadu’ (Doshi, 1990). The entire paliyans hamlet would celebrate with dance and music, when they caught a good game. They would sit around the animal and make fire and roast the meat and eat with the accompaniment of dance and music. All the furniture in the hut is made of bamboo, reeds and the poles of wild trees. They store grains and other valuables in big baskets made of bamboos. They used to make fire by rubbing stones and using dried grass and twigs. They do not offer cooked food to outsiders. They have special prayers before sowing seeds for cultivation. After the seeds are spread, all join to dig the soil. The children in the Kudi would be assigned the task of driving away birds and other wildlife that would destroy the seedlings and the crops. Harvesting is also a very happy occasion when all join in singing and dancing (Carpenter, 2001).

Uralis number over six thousand and live in 33 kudis. They are found in Mullaringadu, Kozhippally, Nadukani, Karukkanad, Koovakkandam and Kannampady. They don’t have any traditions relating to migration from either Tamil Nadu or from the plains of the Kerala side. They claim to have originated in the hills of Idukki. Uralis believe that they were a powerful people in olden times (Dube, 1990; Sukumaran, 1981). They had kings and extensive kingdom in the forested hills. But they were defeated in battles and thus lost all their power, and their kingdom. In the recent past they consider themselves to have been the kings of Poonjar. They subsist on hunting, fishing and agriculture. They cultivate rice, raggi and tapioca. They used to live in tree houses perched atop bamboo clusters. The tree huts are beautifully designed and made out of bamboo and reeds only. They used to wear the bark of trees for cloths. They would hunt for animals using bows and arrows as well as sling and stones. Hunting was a part of their day to day life and it was done by groups of men who would first flush out all the animals from the forests, and then round them up and kill (Atran, 1991; Bhat, 1981).
Ullatans are tribals found extensively in the district of Ernakulam, Trissur, Kottayam, Pathanamthitta and Idukki. In Idukki District they live in Korangatty, Muthangady, Kannampady, Mazhuvady, Pattayakkudy, Venmany and Pazhayirikkandam areas. They are considered to have reached the forests of Idukki from Thodupuzha. They were the dependants of the king of Koickal and their duty was to collect forest produces for the king. Gradually they got settled in the forests and become a tribe. Ullatans maintain good relations with Uralis. The two tribes also intermarry. Each kudy had a separate temple. Siva, Bhadrakali and the hill Gods are worshiped in the temples (Segal, 2005; Sundar, 1997).

Malampandarams are found only in Muzhikkal and Vallakkadavu area in Idukki District. Their numbers are also few. Their major population live in Kollam and Pathanamthitta districts. Their presence in Idukki may be considered to be insignificant. Malavetans in Idukki are also few in numbers. They are found in small numbers in Nedumkandam and Karimkunnam Grama Panchayats only. This study does not cover Malapandaram and Malavetan tribes of Idukki on account of their negligible presence in study area (Baradwaj, 1985).
5.1.8 Environmental aspects of tribal health and welfare with reference to biodiversity of the forest ecosystem.

Human life being closely dependent on the natural resource base for its survival, conservation and exploitation of natural resources has been an age-old phenomenon. However, the quality and magnitude of this exploitation is derivative of factors such as the level of contemporary technology, population, demand pattern and socio-cultural attitudes of the society towards nature at different points of time (Rao, 2008; Attarchand, 1989). Biodiversity provides building blocks for sustainable food, health and livelihood security system (Swaminathan, 2010). Biodiversity loss is predominantly due to exploitation, developmental activities such as road-building. Invasive alien spices and unsustainable development cause genetic erosion (Swaminathan, 2010). Tribal communities living in forest ecosystems do have traditional modes of living which promote biodiversity conservation even though their economic-well being in entirely dependent on these forests. MSSRT (M.S Swaminathan Research Foundation) has initiated programmes to create economic stakes in conservation thereby ensuring conservation and commercialization of biodiversity resources of tribal habitats. The programme is indented to harness biodiversity for poverty alleviation in tribal hamlets. The foundation has set up bio-valleys, wherein the conservation and enhancement of natural resources become priority tasks (Basu, 1994).
The Muthuvan Tribes cultivate cereals, tubers, vegetables, spices and fruits on their lands (Manithottam, 2006) and also collect a number of edible roots and other plant species from the forest for food and medicinal uses. A pudding like dish called ‘Katti’ prepared from finger millet which they call Keppa forms their most cherished diet. They also cultivate ‘Tenay’, maize, sweet potato and tapioca. Fish caught from the river forms the main side-dish almost throughout the year. They also consume various types of wild yams and tubers found in the forest. They have herbal remedies for common diseases and disorders. The “Medicineman” in the kudi goes to the forests and brings the herbs when the need for treatment arises, but does not store the herbs because they believe that on storage the efficacy of the treatment would be lost.

### 5.1.9 Megalithic traces of tribal culture

Respect for the dead appears to have been a prominent characteristic of man during Paleolithic and Neolithic epochs. It implied a belief in after-life. In Neolithic period the observance of rituals for the dead was a common phenomenon. The primitive people believed that the spirit of the dead should be given a habitation like living men, that the chamber for the dead should be similar to that of the living, and that the grave should be the prototype of the home (Desai, 1961). They apprehended
"that, unless the departed spirit had a home and other things as in life, it would hover restless and troublesome around its old abode doing thereby harm to the living," and to accommodate the spirit they constructed various megalithic monuments, which were rude structures built of large pieces of stones. They consisted of single upright stones fixed in the ground, or of rows of such stones, or of large flat stones supported on a number of smaller uprights. Megaliths belong to the Neolithic period and also to a part of the Copper and Bronze Ages. These also are thought to be the burial places of the mighty chiefs or places for worship (Iyer, 1981).

Dolmens are rude structures consisting of a large unhewn stone resting on two or more others placed erect. They are found scattered on the long chain of wooded hills in the study area. The people of Anjanad alone call them Valividus or abodes of monkeys. Uralis call them Pandukulies, pits made by the Pandus or Pandavas, to whom ancient mysterious structures all over India are generally ascribed. They are looked upon by the credulous as sacred and dangerous. It is said that peasants will not take shelter under them nor go near them at night, but the Vellalas and the Malapulayas of Anjanad have no such fear. They sit under them when they graze their cattle (Nag, 1958).

The earliest record of dolmens in Travancore was by Ward and Conner (1852). They stated that "the Pandukulies or burrows, those remains of primaeval customs so common throughout the Penninsula are also found here, though they are not so numerous. Uralis believe that dolmens are places where treasure is hidden, but no
such treasure has been found in any of the dolmens excavated (Sukumaran, 1981). Dolmens are chambers in which people of late Neolithic times buried the dead bodies of important persons. In the study area they are invariably found on the crests of hills. They are built of unhewn blocks of stone. In the erection of the dolmens, the ancients observed certain architectural methods and principles. By the use of orthostatic block, the maximum of wall area was provided with the minimum of thickness. With the upright wall-technique went hand in hand the roofing of narrow spaces by means of horizontal slabs laid across on the top of the uprights. The second feature of megalithic architecture was coarse masonry, without the use of mortar, each block of stone placed on its side and not on its edge. The Muthuvan worships the sun both in the morning and in the evening. The same prayer is made at night before going to bed. Uralis recognize the sun as the creator of the universe and the father of all souls, and the moon as the mother (Majumdar, 1978, Mamata, 1977).

5.1.10 Environmental consideration in construction of tribal houses

The present study revealed that tribal communities have well set modes of house construction. There are some tribes who do not make houses but take shelter under rocks or protect themselves from sun and rain by shielding themselves with leaves or twigs. Some mimic wild animals and birds in making shelter (Kattakkayan, 1983). All tribal communities make shelter by making use of articles which are readily available in their surroundings and cause little permanent harm to the environment. They do not use anything that is non-degradable. The houses are designed to give maximum comfort and the best protection from the cold climate prevalent in the highranges of Idukki.

Muthuva houses are made with reeds and mud and thatched with leaves of reeds or with grass. The walls are either made of plaited bamboo or made of mud reinforced with a mesh of split bamboo inside. Even the doors and door frames are made of bamboo. Occasionally they use cane to make beautiful patterns on the doors (kunhaman, 1989).
The construction of a house takes two to three months for completion. The work on a house starts on an auspicious day with pooja to “Earth Goddess”. Normally this is done on a full moon day which is considered to be most auspicious. Any day between the newmoon and full moon, when the moon is in the ‘State of Growth’ is considered auspicious. The days immediately after full moon are called Sattam, and these days considered to be inauspicious. Pillars needed for houses are selected from the forests (Mohapatra, 1972). The trees used for the purpose are ‘Kara’, Mulla, Njaval and Edali. Before the Pillar is fixed in to the hole dug for the purpose, salt and water are poured in. this prevents the attack termites and lengthens the life span of the Pillar. The beams used are also trees, such as ‘Perimaram’, ‘Konary’ and ‘Chanthamaram’. The walls are first made by tieing up reeds, bamboo, and wild sticks using wild vines or cane and then covered with well softened mud. They also make walls by making two meshes and filling the gap with wet mud and small stones. Such walls are called ‘Thettal’. Most of the houses in a Kudi will have the same dimensions. Normally they are 20 to 25 feet long and 10 to 15 feet wide. On either side of the main door, small raised platform is constructed outside the house.
A Muthuva house will have only two rooms. The main door called ‘Thalavassal’ opens into the room which is called ‘kidakkatha veedu’. The other room called ‘Samayal Veedu’ is the kitchen. The door that leads out from the kitchen is called ‘Puravassal’. The fireplace will be slightly raised from the Kitchen floor. The floor is smoothened with cowdung or by using termite mud (Pearce, 2001). House warming ceremony is performed before a house is occupied for permanent living. A lamp is lighted and offering and poojas are made to ‘Ganapathy’, Murugan, Parameswaran, Vishnu, Kali, Mairamman, as well as the forest Gods, and the ancestors. Toilet is never built close to the houses. Normally a separate area in the forest is set apart for open air defecation (Pieroni, 2005). Separate areas will be earmarked for men and women. No separate rooms are made for bathing also. The jungle stream not very far from the Kudi is the bathing place. An arrangement of stones for dry grinding grains is made close to the house. This is called a ‘Thirikallu’. Another flattened stone used for wet grining grains is ‘Arakallu also will be there in most houses. Till recent times, grinding of grains was done on a flattened rock near the stream. Earthen pots and the vessels for eating and drinking made of bamboo are the major kitchen utentials. Cooking in former days was not in the Kitchen. All food to be cooked was placed in a hole on a rock which is heated by making fore on it. Meat and all other food items were cooked likewise by covering
with leaves and placing it along with some heated white pebbles. Cooking and roasting on the rock is still cherished by the older generation (Pfefer, 1997; Presler, 1971). Fire used to be made by using sparking stones and using wild cotton, which is blown to make fire. The stone used for the purpose are called “Theekathikallu” or firestones and these are still found in some Kudies. Cot in the house is made by firmly fixing four short wooden poles on the floor as legs and then paving thinner branches over it. They would make beds using grass and the barks of certain trees. Their blankets also used to be made of barks. Cots made of wood are also founded in the homes. Bows and arrows used for hunting are also found in the houses (Rajan, 2000).

5.1.11 Biodiversity and tribal life

Many of the areas inhabited by indigenous peoples coincide with some of the world’s remaining major concentrations of biodiversity. Traditional indigenous territories encompass up to 22 percent of world’s land surface and they coincide with areas that hold 80 percent of the planets biodiversity (Sodhi 2006; Kusters, 2006). Also the greatest diversity of indigenous groups coincides with the world’s largest tropical forest wilderness areas in the Americas, Africa and Asia, and 11 percent of world forest lands are legally owned by Indigenous peoples and communities. Recent efforts to map countries of biodiversity in the Brazilian Amazon reveal a high degree of overlap between indigenous territories and areas of exceptionally high biodiversity (Sobrevila, 2008).

It is a global feature that the traditional inhabitants occupy areas which are untouched by the effects of modern development activities and so these areas still remain pristine. Hence, biodiversity conservation efforts in tribal areas have a special significance (Murali, 1996). Even after several centuries of occupation by the tribals, these ancestral lands remain pristine and continue to hold the original biodiversity because of the peculiar life style of the people which conserves nature (Panayatoc, 1992). A recently produced map of the Brazilian Amazon shows that when natural ecosystems from the Brazilian Institute for Environment and Renewable Nature Research and the World Wild life Fund overlaid indigenous
territories on to a map showing forest cover, the result revealed a strong correlation of the two ecosystems. It is logical to assume that intact habitats support greater biodiversity, and environmentalists have long pointed to a link between cultural and biological diversity (Haimes, 1987; Corpuz, 2010). The late geographer Bernard Nietschmann called it “the rule of indigenous environment—where there are Indigenous Peoples with homeland, there are still biologically rich environments” (Sobrevila, 2008).

Women in the ‘Kudi’ engage in making various articles using reeds and bamboo for use in the ‘kudi’ and occasionally for sale. ‘Kannadippaya’ a thin mat made by the women of Muthuvan tribes has caught public attention on account of the perfection in its craftsmanship. They also make doors, windows and even the walls for the huts by crafting ornamentally with bamboo. Extraction of other non-timber forest produces also contribute significantly to household income (Godoy, 2002; Maheswari, 1997).

All the tribal communities in the study area are found to depend on resource collection from forests for subsistence. Ethnobotanical studies and ethnomedical studies have been conducted with respect to the utilization of bioresources by the tribals in the study area(Ajesh ,2013, Ajesh,2012, Simon 2000). The Muthuvans make use of a number of plants for making houses, household articles, tools, weapons, cosmetics and medicine (murthy, 2003; Acharya, 2008). The Muthuvan men normally wander through the forest during the day and collect whatever is necessary for them. They are trained by their elders to identify the plants as well as the animals and birds in the forest. A number of forest produces collected from the forests give them income. Honey, wild fruits, various gums, medicinal plants, cones etc., are collected and sold in the markets. There are a number of leafy vegetable that are collected and which forms a part of their diet. Lemon grass oil is extracted in many of the Muthuva kudis and sold in the market. Certain Lichens collected from the bark of trees are sold in the market for use as ingredients in the spice products.
The tribal regions in the study area have rich biological diversity. The habits, the lifestyle and the subsistence activities of the tribals are well tuned as to reinforce the biodiversity and to conserve the natural environment (Naduna, 1983). For the tribal people, the forests are not separate compartments for nature conservation. They have a wholesome outlook on the environment, and they see the entire landscape as their living space and all activities are directed towards their sustenance and environmental safety (Narayanan, 2001). So conservation is a part of their life activities. All the land and the natural resources and their living environment are linked to their culture and their tribal identities (Kumar, 2006). Hence the restrictions imposed on the tribals in accessing their ancestral forests have not only impoverished them, but also have had a negative impact on the health of the environment (Bernard, 1999; Rath, 2006).

5.1.12 Implementing indigenous participation in biodiversity conservation

Engaging the tribals in biodiversity conservation in forest and tribal lands is cost effective and an efficient management method. Indigenous peoples are the forgotten partners in biodiversity conservation (Adger, 2000; Meyers, 1999). Creating a sustainable future for biodiversity conservation would critically depend on the active and effective engagement of indigenous peoples. Without their full engagement, major conservation initiatives undertaken today – both public and private – will be compromised and all citizens of the world will lose as a result. (Sobrevila, 2008). The extensive study undertaken by the World Bank across the globe, identified various measures that would improve indigenous participation in biodiversity projects. Empowering indigenous peoples to manage their own territories has been identified as a cost effective and sustainable means of protecting biodiversity (Wantrap, 1975; Turner, 1990). Indigenous land claims had to be addressed in favor of the tribal and the World Bank experience has proved that the chances of conflict are much lower in areas where ancestral lands had been assigned to tribal communities. Thus assigning rights over ancestral lands has a key role in conservation of biodiversity. Mapping of tribal land and community assets has also been identified to have a key role in of biodiversity conservation (Bromley, 1991). This could be done by providing training and participatory workshops to tribals which would empower them to claim their rights over all their community assets such as hunting grounds, places of worship, farmlands, water
bodies, burial sites etc. From the World Bank experiences in countries such as Central America and Venezuela, it is pointed out that through prior consultation, consent procedures designed to be acceptable to them and measures which are culturally appropriate, full participation of the tribal communities can be ensured (Sha, 2009; Sabharwal, 2009).

As far as the tribals are concerned, it is important to have certain degree of flexibility while imposing rules on them. The time frame for implementation should be longer compared to similar projects in non-tribal areas (Zimmerman, 1989; Johnson, 1989). All conservation efforts can be effective only if the spiritual and cultural heritage as well as the sense of historical continuity of the tribal is respected. Development benefits in conservation efforts can be effective only through programs that would generate income to the community (Sodhi, 2006; Arjunan 2005). It has also been noted that the value being attached to conservation activity by the conservationists and economists may not be always same as that of the tribals. Hence culturally appropriate indicators are to be used while communicating with the tribals in implementing projects and programs (Davasis, 1994).

5.1.13 Socio environmental perspectives of tribal life

A study on the various tribal communities of the Southern Western Ghats, India by Amruth and Gurukkal (2007) have reported that Muthuva Tribe is distinct from other tribes in its relation to the environment. According to them a socio-ecological crisis exists amongst most of the adivasi settlements of the area except in the settlements of Muthuvan and Mannan. People in other communities are not largely knitted together by institutions, customs, rituals and ceremonies of the adivasi social organization. Nonetheless, traditional ceremonies of Muthuvans such as those conducted during childbirth, christening, puberty, marriage, pregnancy and death are still in vogue. The family organization and kingship structure make them different from others (Majumdar, 1973; Narayanan, 2001).

The Muthuva tribe is distinguished from most other tribes in its aloofness and near isolation inside the forest ecosystems of the Anamalai and Sooryanelli hill areas. They still hold on to the customs and traditions (Manithottam, 2006).
5.1.14 Tribal medicines and treatments

Man has been using plants for preparing medicines from the very beginning of civilization. The tribal people and ethnic races throughout the world have developed their own cultures, customs, cults, religious rites, taboos, legends and myths, folk tales, medicinal plants etc. (Savyasaachi, 2001). Numerous wild and cultivated plants play a very important and vital role among these cultures and this interdependence has evolved over generations of experience and practice (Pearce, 2001). Numerous ethno botanical studies have documented various plant species which are of much medicinal value. Tribals are dependent on numerous plants for their requirements of nutrition and medicines. The biodiversity of the forest ecosystems thus assumes importance in tribal lives. For the tribals living in the interior areas with little facilities for transport and communication, traditional medical practices remain most accessible and affordable (Nichtr, 1992; Pieroni, 2005).

Medicinal properties of plants have been recognized and practiced by tribal communities as a tradition for thousands of years. The Urali healers are well accepted for their use of herbal medicines for a number of health problems gynaecological disorders, anaemia, stomach disorders, persistent headaches, skin disease diabetes etc. Uralis are found to use 29 plants belonging to 22 families for medical purposes life abortion, anaemia, antifertility, lactation, contraction of uterus and cleaning uterus after delivery, easy delivery, excessive bleeding on pregnancy, excessive menopause bleeding, excessive menstrual bleeding and to regulate menstrual cycle (Ajesh, 2012). The medical practices of the tribes are considered as folk medicine and these are considered to be effective with little side effects at treatment (Bhat, 1981).

However, the elderly members possess a great deal of knowledge of medicinal plants as well as on medicines curing certain life-threatening diseases (Jain, 1991). Tribal people use plants solely or in combination. Same plant may be used for different disorders; for example, Calotropis gigantea is used as vermicide and for chest pain, Centella asiatica used for gynecological problems and for jaundice, Dodonaeaviscosa used for headache, stomach pain and piles, Wrightia tinctoria for treating mumps and as lactogogne. In certain cases a combination of different plants

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are used in treatment, for example, *Albizia lebbec* together with *Cassia fistula* and *Euphorbia hirta* is used for urinary disorders, and *Capparis Zeylanica* with *pongamia pinnata*, *Cissus quadrangularis* and *Toddalia asiatica* is used for venereal disease. Each tribe has its own method of collecting the plants as well as preparation of medicines. Dosage and duration of medication depends on the age of the patient and the intensity of disease. The tribes collect the plant parts used for medicine at a particular time like either before flowering or fruiting, or in a particular season (Ravisankar, 2003).

This study has revealed the use of numerous medicinal plants by tribes in Idukki. The discussions with elders in the kudi have brought about valuable information regarding the various plants, the methods of their extraction and the mode of administering them. Mannans use the bark of the tree ‘Analivega’ for snake bites as effective antivenom. The bark is separated from a standing tree using sharp stone and the juice prepared with it is administered to the snake bite victim. They also have effective herbal treatment for gynecological disorders; some species of plants are being used by Mannan as abortifacients (Ajesh, Krishnaraj et al. 2012). The sustainable use of forest resources by the tribal population thus gives valuable knowledge on the treatment of illness by using forest plants (Chaudhari, 2005).

**5.1.15 The clash of different cultures.**

Culture is that complex whole which includes knowledge, art, morals, law, custom and any other capabilities and habits acquired by man as a member of society (Majumdar, 1973.) Environment played an important role in the cultural traits of very early and pre-literate peoples. The pre-literate peoples of Travancore are found in the recesses of hills. Isolation, according to Swamy (2010) and Sachidananda (1996) is the cause of the backwardness of such people in the race for advancement. Excessive heat in the summer burns out the energy of Kanikkar, Malayarayan, Ullatan, Malavetan and others who live in forests of low elevation, and makes them slothful. In fact, the debilitating effect of heat and humidity, aided by diseases, has reduced them to the dead level of economic inefficiency (Majumdar, 1973; Dube, 1990). These conditions have been aggravated by another important factor. Kanikkar, Malayarayans, Ullatans, and Malavetans have been
dispossessed of their former lands which were fertile and healthy and driven to more inhospitable regions. They could not compete with the organized capitalists, and were forced into the background in most unconvivial areas (Chaudari 2005; Singh, 2006). In spite of their receding into the interior forests the hill-tribes have been brought into contact with the people of higher culture, firstly on account of the improvement of communications and method of travelling, secondly through the influence of markets, and thirdly through the work of the missionaries (Nair, 2003). In the markets representatives of different groups meet to exchange their wares. This kind of trade is advantageous to all of them and they become hospitable to one another (Singh, 1994; Borain, 2003).

5.1.16 Food self sufficiency and environment

The quality and diversity of food eaten by the tribals also have undergone much simplification. The forests no longer meet the food requirements of the tribals completely. The roots, fruits and the honey collected from the forests were once capable of meeting their requirements. The menace of wild animals including elephant and the wild boars make the cultivation of rice and other short term tuber crops impossible in the kudis.

As a result, every household has to depend on the low-quality grains given at subsidy rate by the state government through public distribution system. So they now eat rice and sambar nearly three times a day. Although they would prefer their traditional preparation of ‘raggi’, they have to satisfy themselves with much inferior food made of rice. The forests also used to provide wild tubers and numerous leafy vegetables which had been a part of their traditional diet. But since the extent of forest land under the tribal communities have decreased and deep forests are out of reach for them, these no longer form a regular component of their food items in many cases (Redclift, 1993).

5.1.17 Subsistence strategies of tribes

Each of the tribal communities have own unique subsistence strategies. Tribals such as Muthuvan, Malapulayas, and a majority of Mannans live in interior forest where
they depend entirely on traditional agriculture and forests produces. Malayarayan, Malapulayas, Paliyans, Uralis and Ullatans have access to other advanced communities for whom they occasionally work as labourers to earn a living apart from the meager income from forest produces and traditional crafts such as making bamboo articles. A small percentage of tribals are provided employment by the forest department. In some places, a considerable income is earned by the tribals through various undertakings of Eco Development clubs. The concept of JFM (Joint Forest Management) also has benefited the tribals in some places.

5.1.18 Tribal agriculture and environment

With limited access to forests and forest resources, agriculture forms the mainstay for tribal economy. Tribals are dependent on traditional methods of agriculture. Agricultural productivity, value addition and marketing are still major issues faced by tribal agriculture. The local self government institutions fail to provide support for sustainable agricultural practices in tribal areas.

The primitive peoples of Travancore had a clear conception of tribal lands. The idea is of very early origin and came out of the association of a group with its habitat whose food-supply they regard as their monopoly. Malapantarams are a small nomadic hunting tribe. They generally live in families of two or three for a week in one locality and move on to another when the food-supply is exhausted. There is an understanding among them that the groups living at Achencoil shall not roam over the domain of those at Thalapara in quest of food. Each group has its own tract for its food-supply, and, on an average, it comes to about two square miles of land per head.

Muthuvans, Mannans, Paliyansm and Uralis clear the land by burning the jungle, sow the seed, rake up the soil, and reap a fairly good harvest. Shifting cultivation is the common practice, and each group takes possession of roughly three times the area required for food production and cultivates one third of it every year. Kanikkar, Malayarayans, and Ullatans follow a slightly different system of cultivation. They cultivate a block of land for two or three years, and then take up another block, but do not change their habitation. Sedentary life adds stability to the occupation of the
land. Agriculture alone enables them to live together in one place and collect the necessaries of life.

Muthuvans of Anjanad Valley are the only primitive people who have resorted to terraced agriculture from remote times. The Anjanad Valley is about five miles long and two to three miles broad. Ward and Conner (1860) speaks of “numberless little glades; some adapted to rice cultivation, scattered along the hilly table that overlooks the valley, whose inhabitants are never tempted to settle within this space.” Mountain environment often occasions a forced development in the form of agriculture among people who otherwise still linger on the outskirts of civilization. This is true of the Muthuvans of Anjanad Valley who have been there from the second century A. D. Mountain agriculture is necessarily labourious and the paucity of arable land precludes the possibility of allowing fields to lie fallow. Soil fertility depleted by denudation is replenished by the addition of cow-dung. In Anjanad the rainfall is low and the soil clayey, so that the soil wash is not appreciable and parallel walls of stone have not been found necessary. At Marayur and Nachivayal, there is a vast expanse of terraced cultivation of rice. Hill slopes are cut down and made into terraces, from 10 to 30 feet broad. The terraces are irrigated by channels which carry water from the Pambanar over a distance of several miles. The terraces are so arranged that the water flows from terrace to terrace. The terraced fields are owned by individuals. The Muthuvans of Kudakad divert the waters of the Manalar to irrigate their fields. The Government have extended the scope of terraced cultivation in this area by constructing a channel called the Thalayar right-bank channel, about 4 miles long, along the slope of the hill, thus ensuring a regular supply of water to about 1,000 acres of this area (Census, 1931).

5.1.19 Biodiversity utilisation in tribal hamlets

Biological diversity that is seen today is the result of millions of years of evolutionary process. Diversity is measured in terms of genetic diversity, species diversity and ecosystem diversity. Conservation of biological diversity is essential in order to sustain the life of human beings as well as other forms of life. Human race has been dependent on plants both for their material needs and emotional needs
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since its evolution (Brechin, 2003; Thanas, 1996). All over the world people have developed intimate relationship with surrounding vegetation. Such a close interaction prevails among various tribal communities throughout the world even today (Rist, 2006; Cheng, 2011). The interaction has enabled to evolve unique system of knowledge on the utilization and conservation of plant generic resources. Cultural diversity in terms of ethnic groups gives us knowledge on the value of plant sources (UNEP, 1999). The knowledge held by ethnic groups on the cultural, spiritual, social and economic values of plants can be of immense use for developing better crop plants (Posey, 2007). We have examples from throughout the world where the ethnic knowledge has contributed for the betterment of the modern world (Ravisankar, 2003). Close observation of the tribal lives in the forests shows that the biodiversity of the forest ecosystem has a significant bearing on each of the communities. The modes of utilisation of the natural resources at the disposal of the tribes points to their inherent attitudes towards nature and nature conservation. Conservation and protection of the environment for the ordinary tribal is a way of life and not an activity to be undertaken for some particular outcome at a certain day or a period as done by other modern communities. The Muthuva and Mannan tribes depend on the biodiversity of the forest ecosystem for food, medicine and sustenance. The fish, crab as well as the minor game animals available in the surroundings provide their nutrition along with the tubers, fruits, honey and vegetables collected from the forests. Different types of berries and medicinal plants are also collected by them.

5.1.20 Hunting and trapping of wild animals

The tribals in the interior forests regularly trap small animals and birds and also catch fish for their direct consumption. The Muthuvans normally go for hunting only just before the ‘Karthigai’ festival at which they eat meat. They also have expertise in trapping animals. Even now they use the bows and arrows to hunt small animals and jungle fowls. A number of indigenous traps are used in various kudis for trapping different animals. The Muthuva eat meat only once in a year and so they go for hunting only just before the ‘Karthigai’ festival. But they regularly take fish caught from the river or the streams nearby. Being more dependent on the
vegetarian diet, they are free from many of the illness that trouble modern society. This life style and the terrain also influence their body constitution. Not even a single man or woman in the muthuva community is found to have over weight.

5.1.21 Sanitation in tribal hamlets

Sanitation is highly needed in the hamlets of the hill-tribes. Mannans, Muthuvans and Paliyans do not raise the floor of the huts above the ground level. But they keep the huts and premises rather clean. Since the floor and walls are made with good workmanship, the houses are livable and healthy. In this respect Malayarayans, Ullatans and Malapulayas have the floor of their huts raised above the surrounding ground. Malayarayans bury their dead only about a hundred yards from their huts, but Muthuvans, Mannans, and Paliyans, do it far away from their habitations.

5.1.22 Dress

Each tribe has its mode of wearing dress. Most of them were scantily clad till about four decades back, but now they have taken fascination for dress worn by the other communities in the district. The girls and boys sent to residential schools outside the tribal hamlets introduce new fashions and cosmetic items. Hence the use of modern dress and cosmetics is slowly catching up in the kudis. There are also a few traders who carry small items from one kudi to another for sale. The men wear shirts, lungis and head band made of towel and women wear sari in the traditional way.

5.1.23 Tribal utensils and implements

The tribals have been using earthen utensils and crude implements. Wooden hoe and digging spades were formerly used to dig out wild tubers and for other farming activities. Now they have discarded these and have began to use factory made implements such as the axe, pick axe and hoe. They also have started using kitchen utensils made of steel, brass and cast iron. Formerly they used reed torch but now they have started using kerosene lamps, battery torches and in some kudis, houses are electrified using solar power. A marked advancement has taken place in all kudis with regard to the use of advanced implements and utensils.
5.1.24 Diet

The traditional diet for the tribals is regulated by the particular environment they live in. Muthuvans and Uralis do not drink milk because they do not keep cattle or goat in their kudis. Even the children are not fed animal milk. Mannans and Paliyans also have no fascination for milk. They are happy to live on the coarse grains grown in their kudy and the edible roots and fruits collected from the forest. Muthuvans eat meat only once a year but take fish regularly depending on its availability from the streams. Some have now taken to the habit of eating dry fish brought from markets outside the tribal areas. Muthuvans normally eat only two times a day – in the morning and at night fall. During the day, the men would be wandering in the forest and women would be engaged in such house hold activities as washing, cooking and in farming.

5.1.25 Tribal dwelling places

Much information was gathered on the dwelling places of the tribes during the present study. The rectangular type of hut is the most common among most of the tribes. Malapantarams make the simplest of dwellings. They live either in rock-shelters, or under breakwinds resting on jungle wood posts and thatched with wild plantain leaves, which will accommodate two or three persons. Children over ten years of age sleep in separate dormitories. The huts are almost circular in shape.

Muthuvan’s huts are neater in appearance, but are huddled together. The floor is on a level with the ground. The huts are made of jungle wood and reeds, and are thatched with grass. In Anjanddd region, the walls are made of plaited bamboo and plastered with clay. Each hut has only one door in the front and is not provided with windows, as a protection against cold. The dwellings of Malayarayans and Ullatans are of an improved pattern. They are built wider apart with jungle wood, bamboos and reeds and are thatched with grass. They have invariably a verandah in the front. The walls are made of plaited bamboo. The floor is about 2.5 feet above the ground.

Malapulayan’s huts are 15 feet length and 12 feet breadth in dimensions and are two roomed without windows. They are made of jungle wood, bamboos and potha grass.
Bamboo mesh forms the wall which is plastered with mud. The floor is raised, and the huts face east. The dwellings of Uralis are of the same pattern as those of Muthuvans, but, as they live in deep jungle, they have also tree-houses where they spend the night for fear of wild animals. They are built upon trees at a height of about 50 feet from the ground. A bamboo side shoots of which have been cut off serves as a ladder. The roof is thatched with reed leaves and the walls are made of bamboo. Houses are being built by the government but personal interaction with the tribals revealed that they do not feel comfortable in such houses as they feel that traditional houses are more livable.

5.1.26 Education among tribes

Traditional system of educating children in the Muthuva families was centered around the bachelor hall (Chavady) where children stay at night. All boys above 10 years of age get training under the watchful eyes of the elders until they get married and move out to settle in a new hut along with the bride. On the other hand, the girls remain under eyes of the father and mother and learn all normal activities at home and get trained in household matters.

In the bachelor hall, the boys are woken up before sunrise and assigned duties by the elders. They will go out to the forest and collect the birds and small animals for which trap had been laid on the previous evening. They also collect honey and other forest products and get proper training in all these through the elders. The knowledge and wisdom handed over through generations is transferred to the boys in these interactions. As the children grow, they acquire the tactics of forest life and get acquainted with the matters of tracking animals, finding and collecting honey, herbs and other marketable and consumable forest products. They also learn to keep themselves safe from attacks of wild animals, harmful insects, and irritating wild plants. They are trained to move about in the forest stealthily, without being noticed by wild animals. They also learn to sense the presence of animals from scent as well as by observing the behaviour of the other small animals and birds. The boys also would learn fishing and other skills. They join the elders in making huts and
preparing the soil for cultivation. Harvesting is an activity which the entire community joins in a festive mood.

Thus the girls and boys grew up separated from each other after the age of 10 and trained in the tribal ways of life and living. The introduction of modern education through the single teacher schools established in some of the hamlets have helped to provide basic education to the tribal education. Elders have a complaint that as the children spend their time in the school, they are losing opportunities for the traditional education they would otherwise be given.

Interaction with the children, parents and the teachers of the tribal schools reveal that the children are not very keen to learn science, mathematics, or any other subjects taught to them. They are also not keen to attend the schools regularly. The parents also have a feeling that sending children to school outside the kudi is not of much benefit. This is particularly evident in discussion with them because even the children sent to model residential schools far away from their hamlets return after their 8th or 10th class. The elders feel that through modern education, children are removed from their traditional ways of life and at the same time, they do not get any benefit of modern education in their lives.

Having control over the educational responsiveness and the economic resources is the only way to maintain the welfare and the living standards of tribal communities (Motes, 2006; bindu, 2008). The role of information and communication technologies can be made to suit tribal aspirations and well being (Panda, 2006). All inputs for transforming and modernizing the tribal communities are to be built up on the foundations of their skill sets, capacities, traditional knowledge and wisdom (Swamy 2010; Chaudari, 2005).

5.1.27 Involving tribals in Joint Forest Management

The tribals in the study area have been living in the forests for generations and the forests are considered by them to be their natural name. The British Policies have had the effect of isolating and alienating the tribals from the forests on account of their perceived compulsions for environmental conservation (Rao, 2008). The
British Policy was to consider forests as a source of revenue and they always tried to increase revenue from forests giving scant regard to the indirect values of forest ecosystems (Zimmerman, 1989). This led to large tracts of land being given away for large scale plantation and agricultural activities (Stebbing, 1926). On the other hand presence of the tribals inside the forests was considered to be detrimental to the interests of the government. No recognition was given for the land rights of the tribal population inside the jungles (Stebbing 1926).

The acceptance of the principles of joint forest management by the governments at the centre and the states in India is a marked deviation from the former exclusionist policies of command and control followed from the time of British rule (Ostram et al.1999). Broad guidelines for managing the forests with the participation of local people was issued by the central government in pursuance of the new forest policy of 1999, according to which the state governments formulated their own programmes of action to implement it.

It is observed that JFM is able to tackle the problem of deforestation through participatory means. The eco development committees (EDC) established in the tribal hamlets have been able to give a sense of ownership of forests to the tribals and at the same time, the participatory approach has benefited the tribals and also the forest conservation efforts in these areas.

### 5.2 Analysis, Findings and Discussion

The study involved comprehensive field visits for five years and gathered first hand information on life style, traditions, customs, cultural expressions, health and other social aspects of tribals for the study, with an aim to generate an insight into their interaction with environment that would help to evaluate their role in nature conservation and protection. Survey studies carried out helped to reveal the specific demographic aspects. It may be noted that Muthuvans form the dominant forest dwelling tribal community of the region and hence the observations made are mainly about them, but relevant details of other tribal communities in the region have also been looked into in the present study.
Of the nine tribal communities in Idukki district seven are estimated to have migrated from other areas in Tamilnadu and Kerala. The remaining two seem to be original dwellers of this area from time immemorial. This is with reference to the reports of various workers (Aiyappan, 1948; Mathur, 1977; Basu, 1994; Menon, 1996; Adgar, 2000). This also has been traced by comparing available literature on their dialects, legends, customs, religious practices and traditions with related communities in the neighbouring regions of the south Indian Peninsula (Nadum, 1983; Anuratha, 1995; Muthy, 2003). Megalithic traces of tribal culture in this region is comparable to the same that existed in other parts of the world (Man, 1981; Atran, 1991; Menon, 1996).

The ecosystem benefits which include resources like food, fire wood, medicinal herbs, building materials for housing, minor forest produces etc. form integral components of tribal life and existence. They are thus intimately linked to the environment which they inhabit and there evolved an inherent trend in them to safeguard and conserve the forest resources. It may be noted that the contributions of tribals to safeguard biodiversity and environmental health has been well documented and realised all over the world (Pandey, 1998; Ravisankar, 2003; Rath, 2006).

In the present study it is seen that tribal food habits and herbal medicines are healthy practices which suit their mode of life. This is in contrast to the same existing in other modern communities where most of the health and social problems are related to life style practices relating to food, medicine and consumerist trends (Singh, 1986; Nichtr, 1992; Pandya, 1993; Rout, 2010).

The study also revealed some of the healthy practices like avoiding the use of oil for cooking, eating meat only once a year, avoiding milk, and using coarse grains like raggi, eating mostly twice a day and leading a physically active life in the forest. Though tribals in the hamlets resort to open defecation they are found to maintain certain standards of hygiene. Most of the hamlets do not have modern toilet facilities and even in those few places where some toilets have been provided by the government the tribals are averse to using these because of the lack of provisions for
proper water availability. The neatness of the interiors of the houses and premises and their insistence on personal cleanliness are characteristic of tribal life.

It was found that they use very limited consumer items in daily life. But the influx of modernity is sensed in the kudis which are in the periphery of the forests. They use a minimum quantity of soap for bathing and washing but do not use cosmetic items and most of them are barefoot.

Cultural activities of the tribals are well known. It was found that festivals are conducted in each kudi and each member of the kudi participates in them whole heartedly. Cultural expressions like tribal folklore, dance, music and ceremonies connected to birth, marriage, and death and other ethnic traditions stand testimony to healthy social life. Diversity of tribal cultural expressions are wider and internationally acclaimed and documented (Fuchs, 1974; Gadgil, 1993; Davidar, 2007).
Table 5.2 Edamalakudy: Zonation based on remoteness of kudis

<table>
<thead>
<tr>
<th>Zone</th>
<th>Education</th>
<th>Age</th>
<th>Working</th>
<th>Not working</th>
<th>Physically handicapped</th>
<th>Mentally handicapped</th>
<th>Interested</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
<td>Illiterate</td>
<td>Neo literate</td>
<td>Below 4</td>
<td>Below 7</td>
<td>Below 10</td>
</tr>
<tr>
<td>Zone 1</td>
<td>Meenkuttykudy</td>
<td>37</td>
<td>33</td>
<td>70</td>
<td>10</td>
<td>19</td>
<td>10</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Chappukudy</td>
<td>19</td>
<td>16</td>
<td>35</td>
<td>3</td>
<td>6</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Koodaliarkudy</td>
<td>18</td>
<td>15</td>
<td>33</td>
<td>8</td>
<td>8</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Keezhupatham</td>
<td>28</td>
<td>30</td>
<td>58</td>
<td>17</td>
<td>12</td>
<td>15</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Nooradykudy</td>
<td>64</td>
<td>64</td>
<td>128</td>
<td>68</td>
<td>17</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Parappayarkudy</td>
<td>65</td>
<td>63</td>
<td>128</td>
<td>47</td>
<td>20</td>
<td>43</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Thenparakudy</td>
<td>17</td>
<td>17</td>
<td>34</td>
<td>21</td>
<td>2</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Andavankudy</td>
<td>62</td>
<td>66</td>
<td>188</td>
<td>56</td>
<td>15</td>
<td>27</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Puthukudy</td>
<td>33</td>
<td>31</td>
<td>64</td>
<td>23</td>
<td>25</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Kandathikkudy</td>
<td>32</td>
<td>39</td>
<td>71</td>
<td>26</td>
<td>5</td>
<td>21</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Ambalapparaku</td>
<td>16</td>
<td>17</td>
<td>33</td>
<td>15</td>
<td>10</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Zone 2</td>
<td>Nenmanalkudy</td>
<td>34</td>
<td>28</td>
<td>62</td>
<td>25</td>
<td>13</td>
<td>19</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Vazhakuthu</td>
<td>17</td>
<td>11</td>
<td>28</td>
<td>9</td>
<td>2</td>
<td>13</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Mulakuthara</td>
<td>43</td>
<td>41</td>
<td>84</td>
<td>29</td>
<td>12</td>
<td>28</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Erippukallukudy</td>
<td>35</td>
<td>31</td>
<td>66</td>
<td>19</td>
<td>17</td>
<td>18</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Patham</td>
<td>15</td>
<td>9</td>
<td>24</td>
<td>5</td>
<td>1</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Shedukudy</td>
<td>80</td>
<td>84</td>
<td>164</td>
<td>5</td>
<td>77</td>
<td>33</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Chennaiapparukudy</td>
<td>15</td>
<td>20</td>
<td>35</td>
<td>10</td>
<td>19</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Vellavarakudy</td>
<td>45</td>
<td>46</td>
<td>91</td>
<td>34</td>
<td>8</td>
<td>20</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Thekke Edalippara</td>
<td>49</td>
<td>50</td>
<td>99</td>
<td>24</td>
<td>9</td>
<td>40</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Vadake Edalippara</td>
<td>56</td>
<td>49</td>
<td>105</td>
<td>33</td>
<td>5</td>
<td>27</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Thavakkattukudy</td>
<td>25</td>
<td>20</td>
<td>45</td>
<td>9</td>
<td>3</td>
<td>20</td>
<td>7</td>
</tr>
<tr>
<td>Zone 3</td>
<td>Keezhuvallayampara</td>
<td>18</td>
<td>23</td>
<td>41</td>
<td>14</td>
<td>6</td>
<td>17</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Nadukudy</td>
<td>15</td>
<td>19</td>
<td>34</td>
<td>8</td>
<td>12</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Ambalappadykudy</td>
<td>13</td>
<td>19</td>
<td>32</td>
<td>6</td>
<td>5</td>
<td>9</td>
<td>8</td>
</tr>
</tbody>
</table>
The detailed survey conducted during the study helped to expose the existing demographic and other related aspects of the tribal population in the study area (Edamalakkudy) which was portioned into three zones (Zone 1, 2, and 3) based on the extent of remoteness (Table 5.2) for effective comparison and assessment.

Figs. 5.34, 5.35, 5.36 and 5.37 depict the sex ratio of the tribal population in Idukki district and the three study zones. The overall male – female ratio was found to be 50:50. Though slight variation was observed in zone 2 and zone 3; zone 1 followed the same general pattern with equal number of male and female, and in zone 2 female population was lesser than male, while in zone three it was the reverse.

**Table 5.3 Male-female status in different zones**

<table>
<thead>
<tr>
<th>Zone</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>Male %</th>
<th>Female %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone 1</td>
<td>391</td>
<td>391</td>
<td>782</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Zone 2</td>
<td>414</td>
<td>389</td>
<td>803</td>
<td>51.56</td>
<td>48.44</td>
</tr>
<tr>
<td>Zone 3</td>
<td>46</td>
<td>61</td>
<td>107</td>
<td>42.99</td>
<td>57.01</td>
</tr>
<tr>
<td>Total</td>
<td>851</td>
<td>841</td>
<td>1692</td>
<td>144.55</td>
<td>155.45</td>
</tr>
</tbody>
</table>

**Fig. 5.34** Overall Male female status  
**Fig. 5.35** Male female status in Zone 2
With regard to literacy, it was seen that 69% of the overall population in the study area were literate and the remaining 31% illiterate (Fig. 5.38). Zone wise distribution shows that illiteracy rate is higher than the overall rate in zone 1, but in other two zones it is lower. The observation that the peripheral areas (zone 2 and 3) are more literate indicates a better access to basic education. It may be noted that multigrade learning centers (MGLC) are mostly located in areas coming under zone 2 and 3.

**Table 5.4**  Literacy rate in different zones

<table>
<thead>
<tr>
<th>Zone</th>
<th>illiterate</th>
<th>Literate</th>
<th>Total</th>
<th>Illiterate %</th>
<th>Literate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone 1</td>
<td>294</td>
<td>488</td>
<td>782</td>
<td>37.60</td>
<td>62.40</td>
</tr>
<tr>
<td>Zone 2</td>
<td>202</td>
<td>599</td>
<td>801</td>
<td>25.22</td>
<td>74.78</td>
</tr>
<tr>
<td>Zone 3</td>
<td>28</td>
<td>79</td>
<td>107</td>
<td>26.17</td>
<td>73.83</td>
</tr>
<tr>
<td>Total</td>
<td>524</td>
<td>1166</td>
<td>1690</td>
<td>31.01</td>
<td>68.99</td>
</tr>
</tbody>
</table>
The work status of tribals in the study area showed that 92% are engaged in various subsistence activities requiring physical labour. All the three zones indicated almost the same pattern of work status (Fig. 5.42, 5.43, 5.44, 5.45).

### Table 5.5 Employment status in different zones

<table>
<thead>
<tr>
<th>Zone</th>
<th>Working</th>
<th>Not working</th>
<th>Total</th>
<th>Working %</th>
<th>Not working %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone 1</td>
<td>652</td>
<td>64</td>
<td>716</td>
<td>91.06</td>
<td>8.94</td>
</tr>
<tr>
<td>Zone 2</td>
<td>642</td>
<td>46</td>
<td>688</td>
<td>93.31</td>
<td>6.69</td>
</tr>
<tr>
<td>Zone 3</td>
<td>87</td>
<td>10</td>
<td>97</td>
<td>89.69</td>
<td>10.31</td>
</tr>
<tr>
<td>Total</td>
<td>1381</td>
<td>120</td>
<td>1501</td>
<td>92.01</td>
<td>7.99</td>
</tr>
</tbody>
</table>
Chapter 5: Tribes of Idukki District – Observations, Analysis and Findings

The tribal inhabitants resort to various livelihood activities like agriculture, collection of forest produces, small scale fishing, trapping animals and minor game. They also engage in works related MGNREGP (Mahatma Gandhi National Rural Employment Guarantee Programme) and the various forest conservation activities of the forest department. Only the aged and some of the handicapped are not potential work force in the Kudis who came under the ‘not working group’, that forms only 8 percent of the population (Fig. 5.42).

Study on the food habits indicated that eight percent take food only once a day, 62 % twice daily, 26% thrice daily and 4% resort to irregular eating (Fig. 5.46). Meat eating habit among adult Muthuvans is found to be limited (Fig 5.48). It may be noted that 58 percent of them eat meat only, once a year, and that too at their ‘Karthigai’ festival. As a part of the festival celebrations they cook and eat the chicken raised in their kudis. 18% eat meat when available and 24% are not meat

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A study on certain tribal communities of Idukki District in Kerala in an environmental perspective
eating. Habit of using oil for cooking (Fig. 5.47) was also noted and found that only 6% are using oil regularly and 26% are not using any oil while 68% use it rarely.

Fig. 5.46 Food habits

Fig. 5.47 Oil use for cooking

Fig. 5.48 Meat-eating habit (Adults)

Information gathered as part of the study showed the absence of diabetic patients among tribals (Fig. 5.49). But as indicated in the Fig. 5.50, 4% of the population showed the occurrence of high blood pressure. The absence of diabetics in the tribal community may be attributed to their food and work habits.
A study on certain tribal communities of Idukki District in Kerala in an environmental perspective

**Fig. 5.49 Health status – Diabetes**

Their attitude towards environment was found to be very positive as their life is intimately linked to and dependent on the forest environment (Fig. 5.51).

**Fig. 5.50 Health status – High blood pressure**

Survey on the political awareness among adults revealed that 66% lack political awareness while 22% have basic awareness and only 12% are politically well conscious (Fig 5.52). Tribals are mostly (80%) unaware of their rights. It is found that only 4% are properly conscious of tribal rights, and 16% have medium awareness (Fig. 5.53).
The study revealed that the forest is providing most of their needs and 12% of the population are self-sufficient in that respect, while 88% are not fully self-sufficient with the forest resources and their agricultural output, and hence they are partly dependent on the public distribution system for food (Fig. 5.54, 5.55).

As shown in the Figure 5.56, 86% of the households resort to tribal agriculture and the rest (14%) are not involved in agricultural practices in the kudis. The agricultural practices in the kudis and premises are characteristic to all tribal groups. The farm practices handed down from past generations include traditional methods of cultivation using indigenous crop varieties without using any chemical fertilizers or pesticides and hence highly eco-friendly.
Sanitation facilities in the kudis are scarce (Fig. 5.57). It is found that only 6% of the households use modern toilets, and the rest resort to open defecation. It was found that most of the toilets constructed by the government in the kudis are in disuse and left abandoned, as they mostly stick to their traditional habit of open defecation. The unavailability of water supply in the toilets may be an added reason for not using them.