

# **Transforming Institutions and Question of Forest Conservation: A Historical Documentation of Forest Policies in India**

## **1. Introduction**

The present paper is an attempt to document the changes in forest policies in India in general and Kerala (One of the States in India) in particular in the context of institutional changes and forest conservation. The history of forest legislation in India begins with a memorandum issued by the British in 1855 which was later replaced by Forest Act 1865. During colonial rule in India, the forest policy gave much importance to exploitation of forest resources without concerning conservation. The ownership was assumed by the colonial powers and this period records a march towards centralization and the forests came under the control of the state. Between 1800 and 1947 India witnessed rigorous policy interventions in forest management and there was much debate within the colonial bureaucracy on the subject of forest versus people.

There were mainly three forest policies after Indian independence. Firstly, the Indian Forest Policy, 1952 was a simple extension of colonial forest policy. Indian Forest Policy, 1988 is the second forest policy after independence of India and first forest policy which recognized the role of local people in forest protection and management of forests for achieving improvements in community livelihood. The National Forest Policy in 1988 made a very significant and categorical shift from commercial concerns to focus on the ecological role of the forests and participatory management. Finally, the Forest Rights Act, 2006 to recognise and vest the forest rights and occupation in forest land and in forest dwelling Scheduled Tribes and other traditional forest dwellers that have been residing in such forests for generations but whose right could not be recorded. The Act was suppose to redress the "historical injustice" committed against forest dwellers, while including provisions for making conservation more effective and more transparent. However, the present paper finds that the FRA has failed to make an impact in the specific historical and legal environment of the region.

The forest policies have seen many institutional changes in India from its colonial period to present Forest Right Act (FRA). It is found that even though there are many changes happening in the forest policy at time to time, the fundamental forest policies which implemented in colonial periods have no change which is being highly centralised.

## **2. 1 Forests Policies in India during Colonial Period**

British colonial intervention was an important watershed in the ecological history of India. The history of forest legislation in India begins with a memorandum issued by the British in 1855 which was later replaced by Forest Act 1865. Forest Act 1878 divided the forest into Reserve, Protected and Village Forests (Poddar, 2011). This was a remarkable movement in the forest history of India. Also this act strengthened and gave effect to the dominant ideology of strong centralised powers. The British Government declared its first Forest Policy by a resolution on the 19<sup>th</sup> October 1884 (Chaudhary, 2011). Forest Act of 1927 was enacted to implement the Forest Policy of 1884. Forest policy and management has been a subject of considerable debate and conflict ever since the British established a Forest Department and enacted legislations related to forestry in the 19th century. The Governor - General Dalhousie called in 1862 for the establishment of a department that could ensure the sustained availability of the enormous requirements of timber for different railway companies for sleepers (Stebbing I 1926).

John Bellamy Foster, who extensively studied about the Ecology and imperialism, mentioned that one way of presents of ecological imperialism is the pillage of the resources of some countries by others and the transformation of whole ecosystems upon which states and nations depend (Foster, J.B 2004). The imperial needs dictated the British policy on Indian forest resources, which resulted in the establishment of control over forest resources. Hence in the process, at least two crucial aspects of forest management were ignored. First, the well-established traditional systems of conservation and sustainable use, and second, the critical ecological and social role that forests played (Ashish Kothari 1994). The early days of British rule were characterised by a total indifference to the needs of forest conservancy- indeed, up to the middle of the 19th century (Smythies 1925). The settled political conditions following British rule facilitated the extension of cultivation in order to augment revenue. In the name of providing cultivable lands, there was a policy of encouraging destruction of forests. Thus colonial forest policy was geared towards the creation of a mechanism for the exploitation of India's forest resources.

The critical turning point in the history of Indian forestry was the building of the railway network. The early years of railway expansion saw an unprecedented attack on the more accessible forests. Great chunks of forest were destroyed to meet the demand for railway sleepers. No supervision was exercised over the felling operations and a large number of trees were felled, whose logs could not be utilised (Stebbing I 1926). Before the coalmines of Raniganj became fully operative, railway companies also indulged in widespread use of local timber as fuel

for the locomotives (Guha 1983). Railway expansion continued unabated and the methods by which private enterprise was working in the forests forced the State to step in to safeguard their long term imperial interests (Sagreya 1979). However, Forest policy and its implementation has been criticised even by two British scholars Voelcker and Robert Wallace in which they points out that Forest Department under British rule saw India forests as an important resource to be exploited for the purposes of revenue and exports (Kulkarni, 1987). Also literature says that British forestry in India was based on German system that existed since the end of the 18<sup>th</sup> century (Poddar, 2011).

## **2.2 Forest Policies during Post- Colonial Period**

The period of forty years from 1940 to 1980 is considered as one of turbulence in the history of forest management in India. The major turning point was the Second World War. The period that followed the war witnessed large scale political readjustments and reorganisations starting with the independence of India. More interest groups also had emerged. Planned development under the Five Year Plans helped various sectors of the economy such as, power, agriculture, irrigation and industries which set their own targets of growth without consulting the Forest Department. Several new powerful lobbies / interest groups such as encroachers, owners of large plantations, political parties, engineers of the irrigation Department and the State Electricity Board, come into being (Amruth, 2004). The major difference in the post-1947 situation in the forest sector was the rapid expansion of forest-based industry. Apart from this high growth of population, demand for food and unemployment situation was crucial in this period. The demands of the commercial industrial sector have replaced strategic imperial needs as the cornerstone of forest policy and management. The industrial orientation of the forest policy, since 1947, was evident across the country in different formats (Guha and Gadgil 1992). However, after Independence there was some rethinking on the issue of forest policy. The new national policy was issued as a government of India Resolution in 1952. It was declared that forest policy should be based on national needs. But in actual practise there was not much difference in the forest policy even after independence (Guha, R. 1983).

The destruction of forests for the construction of roads, building of irrigation and hydro-electricity projects, ammunition factories and other projects was justified in the name of national infrastructural development part whereas cultivation of lands shown as forests lands but without any actual tree cover was treated as encroachments (Kulkarni, 1987). Adivasis living near forests were discouraged from using forests. The need for the realisation of 'maximum annual revenue from forests' was considered a vital national need (Gadgil, M, R. Guha, 1992). The scientific

conservation of a forest inevitably involved the regulation of rights and the restriction of privilege of user depending upon the value and importance of the forest (Elwin, 1962 quoted in Narasimha Reddy 1995).

The National Forests Policy of 1952 recommended that the country should aim at coverage of one-third of the total land area under forests. Though the 1952 Forest Policy was formed within the framework of the policy of 1894, literature (Dhebar, U.N 1961) says that it went beyond the latter in infringing on the privileges of the tribes. It was declared that the forest policy should be based on paramount national needs. In a way this was an extension of the colonial British policy and it was laid down that the claims of communities living in around forests should not override national interests (Kulkarni, 1987). This forest policy classified forests into protected forests, National forests, Village forests and tree lands. Another important commission was the 'National Commission on Agriculture' of 1976, which advocated commercialisation of forests at all costs and with disregard to the sustenance of forest people derived from the forests. Based on the recommendations of the NCA a draft forest bill was circulated in 1980. Provisions were made in the bill to reduce people's rights over forestlands and produce (Hiremath et.al 1994).

The Forest Conservation Act of 1980 was enacted with the twin objectives under section 2 of restricting the use of forest land for non-forest purposes, and preventing the de-reservation of forests that have been reserved under the Indian Forest Act, 1927. However, in 1988 the Act was further amended to include two provisions under Section 2, where it sought to restrict leasing of forest land to private individuals, authority, corporations not owned by the Government and to prevent clear felling of naturally grown trees. Another major policy was National Forest Policy, 1988 which was to review and revise the National Forest Policy, 1952 for conserving the forest. Conservation includes preservation, maintenance, sustainable utilisation, restoration and enhancement of natural environment. During this period new concept of forest management was developed i.e. Joint Forest Management (JFM). Managing the forest by both forest department and local people was the fundamental idea behind in this new system of management. Through this, protect the forest and provide better living condition for the forest fringe people especially tribes was the main intention. Studies (Sundar, 2009) based on JFM state that the system was not success in every States and there were many practical difficulties in implementing and monitoring this system.

The Forest Right Act (FRA) 2006 representing a legislative landmark in the history of forest laws in India, to restore the rights of 'forest dwelling scheduled tribes' and 'other traditional forest dwellers' was to control and use natural resources. The main objective of this Act was to

recognise and vest the forest rights and occupation in forest land and in forest dwelling Scheduled Tribes and other traditional forest dwellers that have been residing in such forests for generations but whose right could not be recorded (Bhullar, L 2009). This Act was result of protracted struggle by the marginal and tribal communities of the country to assert their rights over the forestland over which they were traditionally dependent (Sarin, M 2009). Supporters of the Act claim that it will redress the "historical injustice" committed against forest dwellers, while including provisions for making conservation more effective and more transparent. The available literatures say that implementation of FRA created varied outcome across the country. Many scholars and activists in India have praised the Act as a "testimony to the power of people's movements to participate in and push the legislating process" (Sundar, 2011). There are also studies that states that the well-intentioned FRA failed to make an impact in the specific historical and legal environment of the region (Munster, 2012).

### **3.1 Forest Policies in Kerala during Colonial Period**

History of forest policy in Kerala can be dealt with separate regions- Travancore, Cochin and Malabar areas, as these erstwhile geographical and political areas later merged to form the present Kerala State. In the beginning of 19<sup>th</sup> century Mr. Edyve visited South India to explore the possibility of exploiting the teak timber for ship building. In 1820, the government started exploiting timber directly and a timber depot was set up at Alappuzha. Teak came to be viewed as important resource as it was considered the most suitable timber for building mercantile and warships, a key to domination in maritime trade (Amruth, 2004). During the period, timber extraction was confined to teak only, at the rate of 1500log/year. In 1844, rosewood and anjily were also deemed as royal trees. Collection of cardamom and wax was treated as the monopoly of the government. Till 1853, teak had been supplied to temples, churches, *illams* and palaces free of cost (Karunakaran, 1975).

Travancore Forest Act came into force in 1887. The management of forests and yield regulation based on carefully prepared working plan was the hall mark in this Act (Sankar, R 1995). However, the early working plans had the limited objective of regulating the timber extraction. Sankar examines that working plans were meant for how to work the forests for the timber needs. As per this Act, Konni was declared as the first Reserve Forest in 1888 October 9 and more areas were declared as Reserve forests in 1889 (Chundamannil, 1993). In 1896, the Forest Department was totally re-organised on the lines of the British Forest Administration and the State was divided into Divisions and Ranges. In 1906, V K Govinda Menon asked to prepare a report on the management of teak plantations, with special emphasis on thinning regime for the

initial 10 years (Menon, N.N 1952). Agro forestry practices, combining agriculture with forestry, were started as early as in 1905. Forest areas were leased out for cardamom cultivation since 1905 and the rules were modified in 1935 (Moench, 1990). Moench, who done an in-depth study in the Cardamom Hill area examines that the Travancore government viewed the High Range forests primarily as a source of revenue.

The need for conserving the wildlife wealth was felt only during the 1930's. In 1933, the Periyar Lake Reserve was declared as Game sanctuary and this was later declared as the Periyar Wild Life Sanctuary (Karunakaran, 1975). Forest areas were also given to tribes free of cost at the rate of 1.2 ha per family. An extent of 9,600 ha of forest areas were leased out for paddy cultivation in 1942 (Ramakrishnan, 1975). Available Studies says that considerable damage was done to forest land due to this. However, the leasing process was allowed to continue. Later pressure began to mount from the lessees for permanent ownership (patta) of the land. Plantation forestry was started in a systematic manner in 1940s on the basis of carefully prepared working plans. The Government took active interest in starting forest based industries. Punalur Paper Mill was established during 1940 with the government holding one-third of the shares (Chundamannil, 1993). Sankar observes 1940s as period of turbulence and change because it was marked by a phase when the demand for timber exceeded the ability of the forest systems to survive. The Second World War and and political developments are the most important factor which were responsible for this change in the forestry sector as in other spheres (Sankar, R 1995).

### **3.2 Formation of Kerala**

After the colonial period, Kerala State forest policies were based on Forest Policies of India, so every forest policy of Kerala was depended upon Centre policy. Accordingly there were many changes took place in Kerala forest after National Forest Policy of 1952, which was the first forest policy after India's independence. During this period Kerala State was not formed, (the new state of Kerala was formed by merging Princely States i.e. Travancore, Cochin and Malabar areas on 1<sup>st</sup> November 1956) but under the princely states changes were happening in Kerala forest. Large scale structural changes like establishment of Kerala Forest Department had happened after the formation of Kerala State. Kerala Forest Department like other state departments in India has evolved; however, it has by and large inherited the basic institutional framework of the colonial forest administration, with the emphasis on protection and management of government forests with limited involvement of the public (Sivaramakrishnan, 1995). During this changing process period, many controversies were there regarding the functional classification of forests, necessity of classification, claims of neighbouring

communities, relinquishment of forest land for agricultural purposes, land use etc. These changes were continued in Kerala forest up to 1988 National Forest Policy. The pace of expansion of plantations accelerated. Apart from the traditional teak plantations, matchwood, pulpwood, and fuel wood plantations were raised as part of the Five year development Plans (Chundamannil, 1993).

During this period, Kerala State government also had its own Acts and Policies like Kerala Land Reform Act 1963, Kerala Private Forests Act 1971, Tribal Land Act 1975, and Tribal Land Act 1999. The major objectives of Land Reform Act of 1963 were to bestow on tenants ownership of a minimum of 10 cents of land, to end the old feudal relations by legitimizing the right of real peasants to own the land they cultivate and to introduce land ceiling and distribute excess land among the landless agricultural labourers (Oommen 1975; Raj and Tharakan 1983). Kerala Private Forests Act 1971 was to provide for the vesting in the Government of private forests in the State of Kerala and for the assignment thereof to agriculturists and agriculture labourers for cultivation. Tribal Land Act 1975 provided legislative clauses for the restoration of all the lands alienated from Kerala's Tribal households from January 1, 1960 (Sreekumar, Parayil, 2002). All these policies and acts were related to solve issues in Forests land, Private land, agricultural land and tribal land; major issue was with tribes and their land struggle (Steur, 2009; sreerekha, 2010; Bijoy, Ravi 2003). Even now these issues are going on and forest conservation and tribal issues are becoming more complicated. Inefficient and improper implementation of past forest policies may be the reason for this vulnerable situation.

The Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, popularly known as Forest Right Act or Tribal Rights Act, was passed in 2006 but came into force on 1 January 2008, was the another major policy implemented in forest sector of India. This was done to undo the historical injustices' suffered by tribal communities. There are varied opinion about the outcome of FRA in India in general and Kerala in particular. Munster and Suma Vishnudas (2012) who has studied FRA in Wayanad, Kerala argue that well intentioned, national law was not the right means to solve the district's adivasi struggle for land- the majority of the region's scheduled tribes today are landless labourers, not living on forest land. They again argue that Wayanad's diverse adivasi groups have received only a token amount of land under FRA.

#### 4. The Specific Issues in Forest Conservation in Kerala

Kerala maybe one of the most discussed states in India in the academic domain especially in social sciences because of its significant achievements in the field of health, education, governance, social reforms and so on even while per capita incomes were low (Centre for Development Studies, 1975). Kerala's these development achievements were mainly the outcome of public action over many years (Ramachandran, 1996; Ramakumar, 2006). However, there are some marginalised communities viz tribes, dalits and fisher folks where these development experiences haven't reached when compared to other communities of the Kerala society. Kurien (2000) in his study examines Kerala's development experience is an exceptional case for some outliers- communities that seem to have been left out of the domain of public action such as tribes, dalits and fisher folks. From these outliers tribes are most vulnerable communities of Kerala. Another unique feature of Kerala is, this is the State which does not have any PESA (Panchayath Extension to the Scheduled Areas) act. Government of Kerala took a significant step towards the goal of democratic decentralisation in the Annual Plan 1997-98 and transferred functions, functionaries and finance from higher level of government to local level government which remain accountable to people (Issac, T.M, Franke 2000; Oommen, M.A 2008). When it comes to the role of State in the tribal development, the implementation of Tribal Sub Plan (TSP) programme was a major land mark in the history of Kerala State. The main objective of this programme is to address the problems of Scheduled Tribes since the funds of TSP are exclusively for tribal individuals.

The long association of tribes with the forest is very significant across Kerala compared to any other communities of Kerala. So any kind of forest land degradation will adversely affect the livelihood of these poor people. At the same time, survival of settlers<sup>1</sup> who are living in and around hilly areas and forest fringe are also now becoming a question. Various development programmes such as High Range Reclamation Scheme, Grow More Food Campaign in the 1940s lead to massive migration of people from low land to hilly regions to settle there for livelihood (Moench, M 1991). During that period there were several problems in attaining food for self sufficiency due to war, flood and other calamities. Apart from this, the high growing population was big problem in meeting subsistence. So the expansion of cultivation in forests was indeed to meet these problems. Ever increasing land issues between State, settlers and tribes, encroachment and agrarian crisis in these regions are main reason associated with settlers' question. Many Acts, Policies implemented after the Independence related to forest conservation

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<sup>1</sup> Settlers are migrated famers from low land to high land of Kerala for cultivation.

and land issues of tribes. But the issues on forest degradation, tribal development and survival of settlers are increasing day by day. The land issues and development aspects of tribes and survival of settlers who are living in the fringe areas of forest are becoming vital question in the midst of environment crisis period. Hence the foremost important problem of forest in Kerala and its policies were related to the issues of settlers' and tribes' land issues and forest conservation. Compared to other States, PESA is not in Kerala and decentralization and Tribal Sub-Plan (TSP) has major role in protecting the tribal population.

#### **4.1 Forest Land Diversion for Plantations and Agriculture**

The history of forest diversion in Kerala began even before British colonial period, but major changes in the forest land had taken place after the British advent. With the advent of British, there were many changes in the political and administration which led to significant impact on Forest land of Kerala (Chundamannil, 1993). Britishers destroyed forest land by clearing and burning of natural forests and they started to develop plantations which are considered as the main source of revenue. Most of the timber monopolies were established by British foresters appointed to work for the Government (Moench, 1990). British govt. made transportation facilities towards forest area for the easy transport of timber from forest area to coastal area created much more provision for the timber exploitation. So the practise of timber exploitation at a larger scale in that period lead to the emergence of plantations likes Teak. History says that there was full support from the three provinces (Travancore, Cochin and Malabar) to British Govt. for the plantations (Jacob 1933, Menon 1952, Burkill 1965). The small beginnings at Nilambur later grew to become the genesis of a vast net work of teak plantations in India. Teak plantations were initiated in Travancore in 1865-66 and in Cochin in 1872. In Palghat teak planting operations commenced in 1872 but most of these proved a failure. In Wayanad teak plantations were started in 1876 by Logan, the District Collector (Iyppu and Chandrashekharan, 1962, George, 1961).

From the literature it is very clear that, during pre-independence period the plantations were developed only with one intention and it is revenue making. But even after the independence there was no change in this practice. They expanded the plantation area on a larger scale to raise the revenue. Study by Chandrashekharan (1973) points out that, the forest plantations were opened on a small scale in the pre-independence period; the pace of planting accelerated with the implementation of the Five Year Plans. Between 1960 and 1980, the govt has formed many Teak plantation divisions throughout Kerala. After the plantation of Teak they had planted Eucalypts

in the place evergreen forest area (George, 1961). From these it is very clear that there were not many changes in the forest policies even after the independence.

Other than plantations, there were many other factors which led to further degradation of natural forests in Kerala. Policies related to agriculture expansion, livestock development and all other domestic policies that meant for the development of the households living close to the margins of subsistence, especially in the rural areas of tropical forests region, have led to physical destruction in forest areas (Rappetto and Gillis, 1988). Various development programmes such as High Range Reclamation Scheme, Grow More Food, Forest Development Scheme, etc. accelerated the expansion of agriculture in the state, especially in high ranges (Nair et al, 1989, Moench, 1991). Later there was a big shift towards cultivation of cash crops on large scale by encroaching into forest land (Varghese, 1970). To add, the forest policies were highly supporting this kind of practices in the State. There was a steady stream of government programmes encouraging settlements in the forests from early 1940's up to early 1970s so that it was inevitable that a spill over in the nature of 'encroachments' would take place. Various Commodity Boards such as Rubber, Coffee, Tea and Cardamom supported the expansion of these crops traditionally raised in forested areas (Chundamannil, 1991). Due to these policies, Adivasis, the indigenous people, who were the real owners of land, became the refugees in their own land: As the migrants grabbed their lands they lost their livelihoods. Adivasis become landless poor and they were uprooted from their traditional cultures and settlements as their ancestral lands were alienated from them. T.T Sreekumar and Govinda parayil (2002) in their study points out that, new forms of social movements were emerged in favour of Tribes of Kerala on land issue. They states that Development theorists can no longer disregard the reality of the rise and increasing acceptance of new social movement in Kerala as a strategic form of social mobilisation with alternative visions of the polity and the economy.

Contribution of forests to the national economy is also another factor for the forest diversion into agriculture. It is studied by many authors (Sagreiya, 1982, Sahu, 1984) says that, the contribution of forests to the economy is very low ie only one percent; so by the implementation of scientific forestry programme and extraction of potential resources, income from forest land can be increased. There were also many criticisms (Mohan Pant, 1986) towards this study which points out that, it is because of the exclusion of several salient features of the forests' services and their monetary worth in counting the national income.

Another major factor which led to the forest diversion on large scale was the emergence of plantation corporations with the support of State government. This was started with the

intention to earn foreign exchange by exporting crops like rubber, eucalypts, cardamom, tea etc. The first public sector corporation set up to raise commercial plantations in forests was the Plantation Corporation of Kerala in 1962 (Chundamannil, 2004). The capital for this enterprise was obtained from the sale of timber from clear felling natural forests in plantation sites (Budget for the year 1959-60). In this way Government has started many corporations like Rehabilitation Plantations Ltd in 1972 for resettling repatriates from Srilanka, State Farming Corporation of Kerala started in 1972 to grow sugar cane for sugar mill in the co-operative sector, Oil Palm India Ltd in 1977 to raise oil palm, Kerala Forest Development Corporation started in 1975 to raise pulpwood for the public sector Hindustan News print Ltd. (Chundamannil, 1991). Through all these creation and expansion of plantation corporations, Kerala Government considered this as a greatest achievement in the forestry of Kerala.

#### **4.2 Diversion of Forest Land and Displacement for Hydro-Power Projects**

Hydro-power projects of Kerala are another sector after the plantation and agriculture which had seen many controversies over forest land diversion which is still continuing. It is reported that, the large impact of the irrigation and hydro-electric projects on the Western Ghats which includes major part of Kerala has sharply reduced the bio-diversity of this region (Bijoy, C. R., 1999). But to meet the day to day energy requirements, the state have to go for hydro-power projects which is considered as cheapest when compared to other modes of energy. But studies show that, present situation of Kerala forest land will get further degradation when these types of new projects come and some studies suggests just opposite also. It is noticed that environmental studies are always opposing these kinds of projects while other studies are favouring these projects especially studies done by KSEB and other Government bodies.

The Puyamkutty hydroelectric project has generated lot of controversy among the protagonists of development, environmentalists and politically conscious intelligentsia in Kerala. The state government and the Electricity Board view this project as the panacea for the power 'crisis' in the state (Swaminathan, 1990). He argued that, the environment impact statement of KSEB of 1983 was false and unconvincing information on the project area and subsequent effect. He says that Puyamkutty project was not viable and it will create many ecological imbalances and displacement. He further states that the report of KSEB was another attempt to mislead the people about the cost and benefit of dam. In 1985, KFRI has done a socio-economic and environment study which states that, for preserving remaining patches of forest wealth and to support the State economy from further destabilisation, the project should be banned. The KSEB report is a hastily prepared one and most of the arguments put forward are without

scientific basis. For example, the KSEB report says that the magnitude of the impact owing to population pressure would be only negligible. But the KFRI report says that there would be direct and indirect human impacts for the project. Mammen Chundamannil of the KFRI, who has studied the possible human impact of this project as strongly criticised this scheme. "Considering the pace of forest loss during the last five decades and the increasing demands on the forest for different end uses, it is desirable that the Pooyamkutty Hydro Electric Project be abandoned." From the experience of Idukki reservoir, Sankar of KFRI finds that if the proposed project is implemented, then it will attract thousands of land hungry colonisers. This creates human settlements in forests which will further degrade the forest at large scale. Due to the project, there will be loss of 6000 Ha forest in the Pooyamkutty region. Swaminathan concluded his report by stating "the 73.5 MW of power offered by the Pooyamkutty project is not a solution to the 'energy crisis' in Kerala. Meanwhile the social, economic and environmental costs to be borne by the society are too high for the power, which may be available only after 20 years".

Another study by Santhakumar (2003) on Pooyakutty project was totally different to above mentioned. He was analysing the environmental costs and their impact on the net present value of this project. He says that there are many hydro-electric projects in the midst of environmental controversies, in which there is no serious attempt made to carry out the Environmental Cost and Benefit Analysis. Study suggests that, instead of Environmental Impact Assessment studies, it is better to use Environmental Cost and Benefit Analysis for these types of projects. He further points out that, there should be this kind of studies while proposing on a project rather than accepting or rejecting immediately.

#### **4.3 Issues in Non-Timber Forest Products (NTFPs)**

It is widely accepted that forest plays vital role in rural poverty eradication programme due its contribution to employment generation to rural poor and support to development of agriculture. Through the NTFPs, forest plays significant role in poverty eradication to rural poor. A study done in Kerala (Sathyapalan, Reddy, 2010) shows that, 53.56 percent of people are depending up on NTFPs collection and wage labour was secondary source. So it is clear that, forest degradation will adversely affect these local people who are living in and around the forest. In a study by Shylajan reported that there are various variable factors which determine in the collection of NTFPs. These variables are size of land holding, number of women in the family, household income excluding the income from NTFPs etc. Marketing of NTFPs are main issue which the collectors are facing. Recent study (Shylajan, 2001) on this finds that, even after the

implementation of participatory forest management programme there are no changes in the NTFPs marketing system and the major part of the planning and decision making is still centralized. It is widely accepted that over dependence on the extraction of NTFPs will lead to further degradation of forest, so author conclude that alternative income sources would greatly reduce the dependence on the forest of local people and hence ease the conflict between their interests and those of the forest management authorities.

#### **4.4 Eco-tourism and Forest Land**

Kerala the 'Gods own country' is very famous across the globe for tourism. Through the tourism the State is earning a huge amount of revenue. Tourism sector alone contribute 66 percent income to the service sector of the State GDP (Kerala Tourism Dept, 2011). This sector also provides large number of employment opportunities to the State. Even though there are many benefits out of this tourism, it is also reported that there are many adverse impact on environment due to this. So the Government started new kind of tourism which protect environment too i.e. Eco-tourism. But recent statements from the Forest Dept reveal that there are also problems due to Eco-tourism which is mainly affecting the State forest. Recent data from the forest dept shows that there are 56 eco-tourism locations in the state and most of the eco-tourism locations are located in and around the forest of Idukki, Palakkad and Wayanad districts. Forest dept says that this is also one reason for the forest degradation in our State.

There are also studies which favours eco-tourism in the forest area. These studies find that eco-tourism provides many employment opportunities to the rural poor. A study (Rajasenan, Varghese, Abraham, 2012) done in three zones of Kerala, finds that ecotourism has helped to enhance the livelihood of the marginalised community who are living in the fringe of forest. We have seen suggestion from the study of Shylajan which states that alternative income source is very much needed for the forest dwelling community to avoid further forest degradation. So eco-tourism is one alternative livelihood for the rural poor. Another study was 'Local economic benefits of Eco-tourism' (Vinodan, Manalel, 2011) which done in Parambikulan Tiger Reserve in Kerala, states that community intervention in eco-tourism has helped to reduce excessive dependence on forest resources for livelihood. This study further observed that, the Park authorities and communities have made strong foundation for ensuring other dimensions of sustainability like conservation of natural and cultural resources for an enhanced well being. From these studies it is very clear that Eco-tourism is a major means for local revival and development of rural areas.

In the case of proper forest management, there should be a good relation between forest and tribal department. Unfortunately the prevailing situation in Kerala is just opposite. Major share of tribal community of Kerala are living inside the forest and it is part of their culture. But the policies and practices of forest department on tribal community was very cruel. The shocking attack on the adivasis in Muthanga in the Wayanad Wildlife Sanctuary was a historical incident of the Kerala (Bijoy, Raman, 2003). There were many issues between adivasis and State related to land and still the controversies are going on (Raviraman, 2002, 2004).

The recent Forest Right Act of 2006 was not successfully implemented in Kerala (Munster, Suma 2012). The main reason behind in the unsuccessful implementation of FRA was the bad relation of forest department and tribal department. Forest department states that, during the implementation of participatory forest management in 1998, forest department had done a significant role but at the time of FRA the govt has excluded the department from this implementation. They further states that, more than that of tribal department; forest department has worked a lot for the tribal community. A study (Sathyapalan, 2010) found that the implementation process of the Forest Right Act to be slow due to lack of co-ordination between government departments, because, each department tries to take a "standing" that is based on its original mandate and objectives and 'set of rules' in a given 'action arena'. Community rights and conservation duty provisions seem to be completely ignored in the process of Forest Rights Act implementation. No serious attempts were found in solving implementation issues related to critical wildlife habitats.

## **5. Summing up**

The foremost important problem of forest in India in general and Kerala in particular is related to issues between settlers, tribes & forest conservation and forest policies. It is obvious that, the forest policies in India have not much changed from its colonial period and due to this, massive deforestation and encroachment into the forest land is continued from pre-independent period. Various development projects after Independence has accelerated this and large area of forest land has changed into other forms which lead to further forest degradation. The most suffering group due to these policies is tribes who lost their land, livelihood, culture etc. Years back these tribes were the owners of this land and their livelihood was entirely depended upon this land. The encroachment and human interventions in the forest land was very evident in across India. Compared to other states in India, land is very precious in Kerala mainly due to the high density of population and its unique geographical specialties. So to meet developmental activities, Kerala

forest land was widely diverted into other forms like agriculture land, plantation, Hydro power projects etc.

In Kerala due to the degradation of forest, the concern is with livelihood of tribes and settlers who are living in around the forest. There are is big debate going on in Kerala by activists, environmentalists and intellectuals who says that, settlers are the major reason for the degradation of forest in Kerala. There is also argument which says that settlers were come for their subsistence and they protected the forest. Migration of farmers from low land to these high lands was a big land mark in the environment history of Kerala. But, fortunately or unfortunately it leads to an everlasting controversies related to land issues of tribes, settlers and forest conservation. Various development programmes such as High Range Reclamation Scheme, Grow More Food, Forest Development Scheme, etc. accelerated the expansion of agriculture in the state, especially in high ranges. During that period there were several problems in attaining food for self sufficiency due to war, flood and other calamities. Apart from this, the high growing population was big problem in meeting subsistence. So the expansion of cultivation in forest land was very indeed to meet these problems. But now there is a huge shift towards cultivation of cash crops on large scale by encroaching into forest land which is leading to big controversies and conflicts between State, settlers and tribes. Massive social movements experienced in Kerala in favour of tribes who lost their land and livelihood which further lead to conflicts between State, tribes and settlers. The recent Gadgil committee report and Kasturirangan committee report accelerated the tension between the farmers of hill area and the environmental activists of the Kerala State. There are also controversies related to plantation of Teaks in the forest area. Many forest policies were in favor of planting Teaks in forest land instead of Natural forest rejuvenation. All these issues and controversies are may be an outcome of past forest policies and its ineffective implementation.

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