

## Means of Livelihood in a Simple Society: Owes due to the Shifts from Self Sufficiency to Dependency

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**Abstract:** Relationship between livelihoods and the immediate habitat are very significant for the tribal populations in India and more specifically with regards to simple societies like the particularly vulnerable tribal groups (PVTG). The resourcefulness and dynamics of the ecosystem usually of the forest, in many cases have a very direct impact on the sustainability of livelihood of the tribe in question. This may be attributed to the degrading ecosystem and continuous loss of biodiversity, which may in turn is referred to both internal and external factors. Compared to the internal, external factors are potentially detrimental to the environment equilibrium as the non-tribal populations exploit the forest recourses indiscriminately for various purposes using advanced technology, disrupting the biodiversity. The forest biodiversity and livelihood practices are very directly related as tribals rely on it not only for food, but also for their shelter, medicine, and religious and emotional leanings. With these drastic changes taking place at ecological level the owes of securing livelihoods have increased, making the Chenchu to initiate new practices of food procurement, some of them being designed by the agents of developmental interventions. A keen observation and analysis of these developments gives the insight that the Chenchu are moving from self-sufficient habitat based means to new trends that are culturally alien aimed at weaning them away from the local recourses rapidly increasing interdependency on the outer world.

**Keywords:** Livelihood patterns, External intervention, Biological diversity, Food insecurity and Changes.

### INTRODUCTION

The economic system of a society is ideally a consequent of the food habits and the food procuring practices which have a strong cultural backing and environmental support, though significant variance is found between complex and simple societies. With regard to the technologically advanced groups the cultural boundaries merge together and the local environmental priorities occupy a back seat while financial gain is given top priority. Where as in the case of small scale societies with simple and rudimentary type of technology there is a high degree of reliance upon the local environment which is expected to provide food, shelter, and medicine. The autochthon populations all over the world are no more confined to absolute isolation and all such groups are subjected to change due to external interventions [in most cases targeted] to a large extent and also due to internal reasons to some extent. The external interventions coming from the highly advanced societies leave the aboriginals with no options except to accept, of course with an initial resistance. Under such circumstances the traditional food procuring practices become destroyed and the short sighted nature of the new schemes led to the denudation of the local resources. This creates a situation that the tribals can neither prevail in the new introductions nor fall back on the old systems as the

new innovations no longer helpful. In this paper it is intended to project the state of food insecurity of Chenchu who have been forced to different livelihood practices within the ambit of the local habitat potential. Keeping this objective in mind ethnographic fieldwork is conducted among the chenchu employing qualitative anthropological methods.

### RESEARCH METHODOLOGY

The rich resources of Nallamalai not only provide all the basic needs of the inhabitants but also attract non-tribals belonging to diverse modes of interest. Here under an account of non-tribal exploitation is presented as it has direct impact on the biodiversity and the livelihood patterns of Chenchu. In the pursuit of this study ethnographic fieldwork is conducted among the Chenchu tribe of Nallamalai forests of erstwhile undivided Andhra Pradesh state of India. Anthropological methods like observations, participant observation, case studies, group discussion and focused interviews were conducted. These efforts helped in appropriately documenting the mode of exploitation of the forest resources by tribals and non-tribals.

### Chenchu and their Habitat

The natural abode of Chenchu is Nallamalai forest spread over the districts of Mahaboobnagar, Guntur, Prakasam, Kurnool, Rangareddy and Nalgonda. Their technological and material acquisition is very simple and minimal to meet their subsistence needs. Bow and arrow are important weapons for hunting activity which are made of locally available bamboo, *jana karra* and fiber. The arrows are provided with iron heads. The other important tools are axe and digging stick which are very much required in clearing the bushes or tapping trees, and digging roots and tubers respectively. Due to their extreme backwardness, the Shilu Ao committee designated Chenchu as a Primitive Tribal Group (PTG).

The Chenchu are one of the best Indian examples of hunting-gathering societies of contemporary times. Their food habits and economic activities are very closely interwoven with bio-status of their habitat. They lead nomadic or semi-nomadic life in the Nallamalai forest carrying the gathering and hunting tradition of early man. But in recent times there is a shift from the former to varied activities of cattle rearing, trading of non timber forest produces, settled agriculture, and wage labour. It seems that the hunting-gathering activity is well suited to their nature that has thwarted their economic progress over the ages when compared to the neighboring rural populations. The predominance of the nuclear families may be attributed to the subsistence level of economic organization. As food gathering economy basically demands individual exertion and the output is limited by environmental fluctuations, the lesser the number of members in a family, the greater the quantum of food share. The Chenchu have clan organization and strictly observe clan exogamy. Though, monogamy is the rule, polygyny is also observed in frequently.

### Biodiversity of Nallamalai

The land of Chenchu is a thick forest dotted with plains and hill ranges of varying heights, interspersed with streams and valleys. The lush green, deciduous Nallamalai forest is traversed by the river Krishna, penetrating through the age old rugged rocks. The terrain of the region is mostly undulating with scanty surface soil. The area experiences hot and dry summers, followed by monsoons with heavy rains, often intensified by cyclones, and the winter is unbearably cold. The vagaries of nature and seasonal fluctuations have significant impact upon the life forms of the forest and also on the livelihood patterns.

The temperate weather conditions of the Nallamalai appear to be congenial for manifestation of plant and animal life in their rich diverse forms. There is a marked seasonality in the occurrence of various products of different species which are of great use to the Chenchu.

A variety of plant species ranging from huge trees to shrubs and herbs with their utility significance are presented here. These plants may be classified as those that produce timber, edible products and non-timber forest produce (NTFP) based on their socio-economic importance. Prominent of the species that yield precious wood and valuable timber are teak, vegi (*Tirocarpus marsupium*), bamboo, vepi (*Hardwickia binata*), thiruman (*Anogeissus sps.*), neredu (*Sigegium cumini*), nallamaddi (*Terminalia tomentosa*), neem (*Azadirachta indica*) etc. All these species are huge trees not bound by seasonality, for their primary product of use is wood. Moreover their utility to the Chenchu is limited as they live in simple huts, but these are most exploited by the non-tribals.

The food producing flora of the Nallamalai forests upon which Chenchu mostly rely for their calories are those that yield fruits, edible leaves, and a variety of tubers. Important fruit giving trees are jana (*Grewia rotundifolia*), chitimiti (*Gardenia gummifera*), sitaphalam (*Annona squamosa*), maredu (*Aegle marmelos*), morli (*Buchanania lanjan; B. latifolia*), neredu, thorn apple, sycamore etc. Each of these fruits is available for about a month during the period from July to February. Some of the important summer fruits are nela eeta (*Phoenix loureiril*), ramaphalam (*Annona reticulata*), and konda nekkara (*Xemenia Americana*). A few of the important edible leaves are pulichinta kura (*Oxalis corniculata*), kalabanda (*Aloe veera*), devadari kura (*Erythroxylom monogynum*), doggalaku, malla kura, timma kura, chenchala kura, gurugaku, beddukura, chirrukura, somikura, chetlakindi kura, atukamanukura etc. are abundantly available during the monsoon season.

The Nallamalai is a good reserve of a number of edible tubers which contribute to the maximum food needs of the Chenchu. The food providing tubers are chenchugadda, cheda gadda (*Amorphophallus paeonifolius*), puli dumpa (*Dioscorea daemona*), nulagadda (*Eragostiella bifaria*), yeravala gadda (*Dioscorea oppositifolia*), varragadda, javaragadda, gittagadda, dondagadda, pulasa gadda, bodagadda, bendagadda, pesaragadda, thokapulasagadda, gorindagadda, bhuchakragadda (*Meruva oblongifolia*) and a host of others.

There are a variety of plant species that are identified for their valuable products often at the instance of outsiders. Apart from these there are a large variety of untapped species which play their role in the forest ecosystem.

In addition to these plant species the Nallamalai forest is endowed with rich fauna, some of them are rare species. The Indian tiger supposed to have flourished in this forest is now fast diminishing in its number. The other important cat, the cheetah is almost not to be seen. Panther and bear are the other important

wild animals that are found in good numbers. The forest is also inhabited by Pangolis, Indian giant squirrel, Indian tree shrew, ratel and palm civet which are considered endangered species. The forest is rich in the population of mouse deer, common squirrel, wild dog, fox, jackal and snake. Wild pig, wild sheep, monkey, rabbit, langur, sambur deer, antelope, wild cat, Indian porcupine, varanus, Indian gazelle, and a variety of animal species abound in this forest, most of which form the game animals to the Chenchu. The forest is inhabited by a spectrum of avian species such as peacock, jungle fowl, eagle, owl, parrot, pigeon, dove, mynah, kite, etc.

### **Exploitation of Nallamalai by Non-tribals**

Due to the richness of its biological diversity, the Nallamalai forest is attracted by non-tribals staying in nearby as well as faraway places around the forest. The non-tribals exploit the forest with reference to cattle feed, wood smuggling, dam construction, pilgrimage, urban and rural needs, poaching of wild animals etc.

Nallamalai forest provides ground for different types of grasses and foliage which serve as valuable feed to cattle. This opportunity is best availed by non-tribal neighbours. Their sheep and goat flocks graze in the forest all through the year. The cattle of non-tribals, in thousands of number enter deep into the forest for grazing for about four summer months. For those cattle that are not led into the forest, lorries and carts loads of grass is carried from the forest. People from outside the forest enter the forest and collect a variety of medicinal herbs with the help of Chenchu for commercial purpose without caring for the continuity of the species.

Wood smuggling is the greatest threat to biological diversity. Though the forest department regulates the felling of trees for valuable wood which increases Government revenue without harming ecological balance, the expected goal is not achieved. It is distressing to note that some of the species such as teak, rosewood, and bamboo varieties are gradually disappearing which has compelled for afforestation programmes. All this forest loss is due to the unmonitored authorized felling and secret smuggling which is all done by professionals.

The construction of hydroelectric project across Krishna at Sundipenta has been detrimental to the forest. Thousands of hectares of forest is cleared off for installation of dam, workshops, quarters for staff and other civic amenities and their children and the consequent commercial points. The increasing human population around the dam has exerted greater pressure on the adjacent forest with regard to firewood and timber for furniture. As a result the hills around the dam are completely emptied of forest growth.

Srisailam has become an important pilgrim centre due to the officiating deities – Mallikarjuna and Bramarambha. As this site is located in the middle of the forest vast stretches of forest has to be converted into roads and other centres of public amenities. With increasing civic and transport facilities at Srisailam the pilgrims' strength is increasing enormously. The increasing human movements automatically increase pollution in this natural eco-system and ultimately harm the growth of bio-mass.

With the expanding rural and semi urban centres around the forest there is constant exploitation of forest for fire wood and building materials. These non tribals cut down the trees indiscriminately for fire wood and timber. They carry bullock-cart loads of timber to construct houses and to make furniture.

Killing of animals for trade is not an uncommon incident in the Nallamalai. The important animals that are killed by the intruders are tiger, cheetah, spotted deer, sambur deer and bear. The valuable skin, teeth, antlers, and claws of these animals have great demand in international markets; this trading practice has ill effects on the population size of these species of animals.

### **Livelihood Patterns**

Most ethnic groups at subsistence level of economy live exploiting their environment through the means of hunting-gathering and/or collection of forest products for local consumption, sale, or exchange with other populations within the environment or outside it [1-5]. The bounty of biodiversity is harnessed by Chenchu, in two different ways- for local consumption and for trade. The utilization of plant and animal products for subsistence and domestic requirements is intimately associated with the Chenchu life as is common with any other hunting-gathering society. Trading with forest products is of recent development attributed to the influence of outside forces on the Chenchu. These two types of activities are associated with two different sets of species.

### **Food Collection and Hunting**

The food habits of Chenchu and the food contents clearly indicate the degree of their dependence upon the forest. They draw most of their nourishment from various forest sources rather than from the purchased food. The menu of Chenchu includes a variety of wild fruits, roots, tubers, leaves and meat of the game animals. The important food item of Chenchu is *Chenchugadda* which grows to a length of 2-3 feet and of arm's girth. It is either boiled in water or roasted on red coals and eaten. The diverse tubers and fruits mentioned above are eaten by Chenchu. Honey and the larvae in the comb also form a part of their diet. They get the animal protein through the practice of small and big game. The animals such as varanus, squirrel and rabbit form the small game which is not shared with

other families. The big game is shared with other members of the settlement, first with the hunting team followed by the non-participants. The members dry the excess meat and preserve for future use. Conspicuous change is noticed in food habits, a shift from the wild varieties to the cultivated stuffs (mostly purchased). The consumption of liquor remains unchanged; perhaps it might have increased in the present money based economy.

The food collection practices of Chenchu show division of labour among the family members. The couples generally go in search of food. The collection of tubers, fruits, and leaves is usually done by the women while men involve in procuring honey and hunting animals. At times men help their women in digging out the tubers. The inactive aged and the infants remain at home. Children generally display voluntary movement hunting birds and squirrels, and plucking berries around the settlement.

The hunting-gathering among Chenchu is gradually relegated to secondary position under the changing circumstances. The increasing needs under acculturation for costly clothes, ornaments, audio sets, cinema etc., exerts demand for money. The increasing populations fail to get adequate forest food and this food scarcity can also be attributed to decline in the biodiversity. This led to alternative arrangements such as trade that has a bearing to the biodiversity once again. Abruzzi [6] observed that the variation in the abundance and distribution of resources within the habitat are responded through ecologically intelligible behavior.

#### **Trade Practices**

Under the changing circumstances, the hunting-gathering Chenchu have resorted to a new activity through the use of various non-timber forest products (NTFPs) that have significance in the outside markets. The procurement of NTFPs and its processing according to the market needs has enforced new work behaviour among the Chenchu. The processing of some of the important NTFPs commercially exploited by Chenchu is presented with the view to understand labour effort involved and the new pattern of subsistence.

The most important and highly priced NTFP procured throughout the year is gum. Its use in routine life is negligible except for antidiarrhial nature of the *thapsi* gum. Gum is taken from three different trees such as thapsi (*Sterculea urenes*), kondagogu (*Cochlospermum religiosum*) and thiruman (*Anogeissus sps.*). Of these three varieties the first one is priced high followed by second and the third, and similarly the quantum of their yields. In all the three varieties gum picking and its processing involves six important steps or activities- blazing, collecting/picking, cleaning, drying, grading, and storing apart from disposal.

For the first time when a gum tree is blazed it doesn't secrete gum, rather the tree resorts to healing by closing inward the cut edges. At that time the edges need to be scrapped removing a thin layer periodically till the oozing commences. So the gum yield is released from a newly blazed tree in 2-4 weeks after the first blaze. Once gum secretion begins it is collected once in two or three days after blazing. If gum is tightly adhered to the stem it is lifted with the help of axe which is used for blazing. The blazing and gum picking is done by an individual. The gum picker tries to remove the contaminants such as bits of bark, fiber, and wood attached to the gum at the tree itself. But still cleaning has to be done at home for which the assistance of other family members is taken.

The gum thus, collected is sun dried till it is completely hardened by any of the family members. The grading of gum is a very important step which actually brings the returns. It is graded into I, II and III qualities basing on its whiteness and presence of non-removable contamination. The other crucial step is storing the gum. As the Chenchu live in very small houses, storing large quantities of gum, protecting against rain and further contamination is a difficult task. The gum is packed in gunny or polythene bags till it is disposed.

Collection of cleaning nuts (*Strychnos potatorum*) is done either individually or in small groups of close kin. These are available from November to March. The seeds lying under the trees are gathered into bags and they require no further treatment. But those on the trees are brought down either by hitting with bamboos or climbing the tree and shaking the branches or pulling down the clusters. There are also incidents of cutting down the tree for making the task easy. All these fruits are pounded in a mortar and washed in the stream till the seeds are free of any fleshy substance. These seeds are sun dried for many days till they are stony hard when crushed between teeth. The same procedure is involved in the collection of *musti* seed (*Strychnos nuxvomica*) which are available from November to March.

Tamarind is another important forest produce that has culinary importance in south Indian dishes. Tamarind collection is done through January to June. This involves a laborious process of group action. One or two persons climb the tree and shake the branches with force such that the ripened fruits fall down. The tamarind process involves removing the shell, deseeding and removing fibre, each one consuming much time and effort.

Kunkudu (*Sapindus emarginatus*), available from March to May, myrobalam (*Terminalia chebula*), from October to April, nallajeedi (*Semicarpus anacardium*), from January to May, sheekakai (*Acacia*



*concinna*), from January to March, mangakaya (*Andia spinosa*), from January to April and mahua flower (*Madhuka longifolia*), from March to June are gathered by Chenchu in their respective seasons. All these NTFP are gathered from the ground or pulled down from the trees. Before they are being disposed they are dried thoroughly. The Mahua seed is found during the months of May through August, adaviamudam (*Jatropha curcas*) available from December to February, and pungam seed (*Pongamia glabra*) available from February to June. These respective fruits are collected from the trees and are opened to extract the cotyledons (seed in case of Adaviamudam). As each fruit has to be opened individually it requires more labour input and takes much time. moduga (*Butea monosperma*) and madupa (*Bauhinea vaheil*) leaves are used in making cups, usually plucked during winter and are directly marketed. Whereas the tunki leaves (*Diospyros melanoxylon*) are gathered during summer which are to be dried. Before being dried they are bundled into hundreds. This is done either individually or with the help of other family members. Some of the important roots like maredugadda (*Dicaliphis hamiltani*) and sugandhipala (*Hemidesmus indicus*) are dug out almost throughout the year. These roots are cut into small pieces and dried till they are marketed.

Honey has application both in the diet and trade of Chenchu. The honey used for trade is mostly rock bee honey which is mostly attached to steep rocks. Procurement of rock bee honey requires a team of not less than four persons. If the cliff is very steep the honey gatherers have to climb the top and let down a person by rope. He carries with him a smoking torch, sickle and a basket. As the honey collector reaches the combs, the bees are disturbed because of the smoke and flee away. The larvae lodged part of the comb is severed and the honey comb is collected into the basket. The honey is squeezed and the comb is processed for extracting wax. The comb is made into small pieces and is boiled with a required quantity of water till the wax is dissolved and the contents attain a reddish colour. This hot liquid is filtered through the sack cloth by two men into an empty vessel and is allowed to lose temperature. As cool water is sprinkled on the surface of the hot liquid periodically the wax comes to the surface. The wax thus, produced is removed and made into cubes.

Disposal of the product is a crucial step that actually decides returns for the hard labour invested. The NTFPs have to be carried on head to the disposal point for sale, trekking long distances. The gullible Chenchu are often deprived of the remunerative price for their commodities.

The procurement of NTFPs though a forest based activity, differs from hunting-gathering in a number of ways. The hunter-gatherers as felt by McNetting [7] expend minimal labour to provide for their physical needs. The remaining of the time they

spend in recreating themselves by consuming liquor and sleeping long hours. They do not think of going for food collection or hunting till the food already gathered is exhausted. It can be said with justice that hunter-gatherers are quite literally “the most leisured people in the world” [8]. Moreover the hunting- gathering mode of living enunciates individual entrepreneurship at the most in association with the nuclear family members.

As already indicated the NTFPs procurement and processing involves a number of steps and conditions this economic activities. For example, the gum tapping require prompt and periodical visits for blazing and collection. Any negligence would render the endeavours futile, for the gum may be eaten by the langurs, washed away by rain, or stolen by the intruding non tribals. If the gum trees are at a distance of about a day’s walk the gum picker has to encamp there along with his wife and children. The cleaning of gum, drying, and its grading require the assistance of other family members. The processing of cleaning nuts, mahua seed, tamarind etc. requires investment of much labour effort and group activity.

Similarly, honey collection also requires group activity in order to reach the honey combs on the steep rocks. The group selection once again is based on the merit of efficiency and sincerity rather than kin affiliations. In addition to all these adjustments, the Chenchu have to interact with the outsiders in disposing the commodity. In the selling process, either with the private trader or with the Girijan Cooperative Corporation (GCC), the Chenchu suffer much agony or frustration as mischief is done in weighing and fixing the grade in case of gum.

#### **Cattle Rearing and Agriculture**

It is not a prominent economic activity among Chenchu, though they are surrounded by thick pastures and green foliage. Perhaps the life style of Chenchu did not encourage them to make an effective utilization of these resources. Cattle rearing are not well developed for reasons such as fear of predators and secondly, cattle rearing involve risk and constant attention in feeding and monitoring, which these leisure loving people may not be able to meet.

In the recent years the Government, in order to provide better living condition to Chenchu and to decrease dependency on forest resources agriculture is being introduced. Many incentives such as plough, bullocks, seeds, pesticides tractors and subsistence allowances were provided in the pursuit of attracting many Chenchu to take up agriculture. But this is not satisfactorily successful so far.

#### **DISCUSSION AND CONCLUSION**

The above presentation clearly shows that Nallamalai forest is a thoroughly exploited eco-system for its bountiful biological diversity. The Chenchu and

the Nallamalai forest are inseparable as they are born, brought up in the forest and interact with it throughout their socialization and thus, assume the natural heirs of the forest. As such there is valid reason to make their living on the forest itself. Heimendorf [9] observes nine-tenths of the Chenchu food supply is from nature. Thus, there is a great dependence of Chenchu on the biological diversity for their survival.

The subsistence practices of Chenchu are gradually changing from food collection and hunting to trade with NTFPs and agriculture under the influence of developmental agencies or through voluntary decision under the conditions of resource scarcity and increasing demand. At all levels of subsistence practices the Chenchu are conscious of the sensitivity and continuity of the resource base and hence may be a shift from one activity to another [10].

It is evident that the Chenchu are not the lone beneficiaries of the forest. The non-tribal exploitation of Nallamalai is of much serious nature and is detrimental to the principle of biodiversity. Grazing in the forest is very harmful to the forest. In spite of statutory restrictions, innumerable cattle, goats, and sheep of non-tribals invade forest every day and tones of grass carried out of the forest. In the late summer fire is lit to the grassy patches with the intention to provide open ground for the rejuvenation in the next monsoon. Poaching of wild life is a regular feature. All these activities along with wood smuggling carried out cause substantial destruction to the forest killing different plant and animal species subsequently scaling down the food providing potential of Nallamalai. Similarly the construction of hydroelectric project and the development of pilgrim centre at Sundipenta and Srisailam which are neither good for Chenchu nor the forest are steadily denuding the forest and polluting the environment.

It is empirically evident that Nallamalai forest, the homeland of Chenchu has become the centre of exploitation for the non-tribals. This in turn has annulled the worldview of Chenchu and consequently their subsistence practices, as such change has taken place in the composition of biological diversity with the growing unscrupulous human intervention. Most of the edible tubers and other plant products, and game animals have either disappeared in their micro-habitats or become scarce in the entire forest eco-system. This has created many a problem to the Chenchu with respect to food, shelter, and medicine. The problem is further aggravated by the increasing population of Chenchu.

The richness of the biological mass of Nallamalai and the exotic life of Chenchu has attracted a number of entrepreneurs, developers, and social workers into the Chenchu land. This has greatly influenced the life of Chenchu and disturbed their

relations with the nature with their changing needs and attitudes. By and large their reliance in the forest based food is decreased but still they have to depend upon their local ecosystem to continue their survival with new operational mode. This has led to new behavioral pattern and work culture of Chenchu. The forest that was considered food and shelter is now exploited in terms of money. The market agencies that purchase the NTFPs impose the processing conditions of the products. The collection of each NTFPs item involves a number of steps that induce new work pattern and organization relations among the Chenchu. The exploitation of NTFPs for commercial purpose was first started by outside contractors through a forest legislation by the then Hyderabad State [1]. In due course of time through different government orders the contractors are prevented from exploiting NTFPs and the Chenchu were initiated into commercial exploitation of NTFPs which again proved detrimental to some of the NTFPs species [11].

The introduction of agriculture as a respite to deforestation economic activities is not a better solution. If agriculture is accepted, then more areas of forest have to be cleared and this would effectively encashed by the land thirsty neighboring farmers augmenting the damage.

Thus, the livelihood patterns of Chenchu have now slipped out of their hand and are directed by developmental agencies and non-tribal forces. In the words of Haimendorf [12] the choice of road which any tribal society will take is hardly ever left to the tribesmen themselves but is imposed on them by external circumstances outside their own control. But it is the local ecosystem that has to support all the ongoing changes and food insecurity looms large for these forest dwellers.

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