

**Developmental Effects on
Livelihood Strategies of Tribespeople
in Attappady, Kerala**

Sanathanan Velluva

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**Kerala Research Programme on Local Level Development
Centre for Development Studies
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Contents

1. Introduction	5
2. A Profile of the Study Area	11
3. Livelihood Strategies: Major determinants	20
4. External Intervention and Livelihood	30
5. Activities, Access to Resources, and Livelihood	44
6. Summary and Conclusions	55
End Notes	57
References	58

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1. Introduction

The context

Tribal development activities have undergone spectacular changes since independence through various development-oriented programmes. The basic thrust of all these programmes has been improvement of the living conditions of the tribesfolk, the most vulnerable section of the population in Kerala, who are settled mostly in the remotest forest areas. Development programmes are implemented both by governmental and non-governmental agencies. Growth of unplanned settlements of immigrants in these regions has resulted in the introduction of new methods and techniques of production and exchange to the tribal economy, which has caused significant changes in their livelihood activities. Quite different from those of the outside world, the livelihood settings of the forest dwellers are influenced by a variety of factors, which are part of their own traditional, social, economic, and cultural structure. Over the years, in consequence of the development capsules administered to them by outside agencies, and massive influx of people to these areas from the plains below, considerable changes have taken place in their land utilisation pattern. As a result, the livelihood strategies of the tribespeople have also undergone radical change. Land alienation, changes in

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Sanathanan Velluva is Senior Grade Lecturer, Department of Economics, St. Joseph's College, Devagiri, Kozhikode.

occupational structure, and cropping pattern, forest destruction, etc., are characteristic features of the change caused by the implementation of planned development programmes on the one hand and unplanned settlement process of in-migrant non-tribesfolk, on the other.

Tribesfolk of Attappady are the most backward among the vulnerable groups of Kerala. Their economy is traditional in nature, depending mainly on land and forest. The valley was not open to outsiders till the 1950s. However, the land utilisation pattern of Attappady drastically changed since then owing to massive in-migration of people from the plains to these areas in search of land for cultivation and for starting plantations. The non-tribesfolk, from Tamil Nadu and from the rest of Kerala, who entered into these areas, adopted the own cropping systems they had been practising in the plains. Introduction of different styles of farming to the area unknown to its original inhabitants distorted and ruined the low-technology of agriculture of the indigenous people. A wide variety of cropping systems emerged displacing indigenous cultivation. The in-migrants from the low land who were culturally and technologically more advanced than the natives overpowered and dispossessed them. As a result many tribal households lost their land before the 'land hunt' strategy of non-tribesfolk. Traditional tribal cultivation lost its significance due to the introduction of new crops and new techniques of production. Development-oriented programmes were neither conceived of nor formulated with a view to protecting the traditional tribal way of life; nor were they capable of meeting the emerging requirements and countering the challenges posed to the tribal way of life by in-roads from outsiders.

In practice, most of the development programmes hardly succeeded in improving the livelihood strategies of tribesfolk. More than 50 percent of the tribesfolk now work in the lands appropriated by the settlers from outside, in the capacity of wage labourers (Sanathanan, 2000). Also, in many instances, planned development activities were over-powered by the wayward activities of the settlers. Inappropriate implementation of schemes and lack of adequate technological support resulted in a drastic decline in the productivity of tribesfolk's crops. In consequence, the tribal way of subsistence cultivation stands ruined at least in part. Also many tribal households became landless agricultural labourers; even those with some land could not produce from it the bare minimum required for their sustenance. Lack of adequate support, inappropriate implementation of development plans, pilferage of funds and exploitation have often been as the reasons for the stagnation of tribal economy of Attappady. The present study is a modest attempt to examine livelihood settings of the tribesfolk of Attappady, one of the most backward tribal areas of the State. More specifically we attempt to seek answers to the following questions.

1. To what extent have the major tribal development programmes succeeded in improving the economic conditions of the tribesfolk?
2. Do they really benefit from the activities of development agencies? Are there any inter-community differences in economic improvement?
3. What are the influences of in-migrants on the tribal economy and what role have they played in changing the livelihood activities of tribesfolk?
4. What is the pattern of land use among different tribal communities? Has any deviation

from their traditional way of cultivation taken place? What are the major factors for changes in the land use pattern?

5. To what extent are the development-oriented activities accessible to tribesfolk?

Objectives of the study

The study mainly focuses on the livelihood strategies of tribesfolk in an area which has been heavily influenced by massive inflows of people from outside the region and proliferation of activities in the name of tribal development and eco-restoration. The specific objectives of the study are the following:

1. To identify the major determinants of the livelihood pattern and asset structure of tribal households;
2. To examine the impact of external intervention on traditional subsistence agriculture and on the diversification of economic activities of the tribal households.
3. To examine the livelihood activities and income portfolios of the tribesfolk; and
4. To explore the degree of dependency of the tribesfolk to the resource-base of the economy with special reference to their access to development schemes.

Location of study

The study is carried out in Attappady, one of the backward tribal areas of the State. The area is known also for a surfeit of development activities mostly superfluous. The plight of tribesfolk continues to be steeped in the morass of ignorance, illiteracy, and poverty. Attappady has been selected for the following specific reasons:

1. Existence of three indigenous mountain tribes – Irulas, Mudugas, and Kurumbas;
2. The area lies on the margins of tracts of economic development in Kerala;
3. Most of the in-migrant population are of recent origins – Malayalis from other part of Kerala and Tamilians from outside Kerala.
4. During 1951-'81, the tribal population of the area increased by 2.36 percent and the settler population increased by 11.8 percent.
5. Settlers now occupy the major proportion of the total area cultivated with a wide variety of crops.

Source of data

Both primary and secondary data have been used in the study. The secondary sources include Integrated Tribal Development Programme (ITDP) and AHADS of Attappady; Census Reports; KIRTADS. The study, however, primarily relies on data gathered through a field-level investigation. Primary data were collected also from social workers, old settlers, politicians, journalists, and *ooru* (tribal hamlet) *moopans* (leaders). Participant observations and interviews

have also been major tools used for data collection. A detailed interview schedule was used for collecting socio-economic information from sample households.

Sample design: Size and allocation

For selecting the sample, the stratified sampling method was employed using tribal category (namely, *Irula*, *Kurumba*, and *Muduga*) as stratum*. The list of hamlets available with the Integrated Tribal Development Project Office, Agali was used for the selection of households. To allocate the sample among the strata, proportionate stratification was used. That is, for making the strata sample sizes proportional to the strata population size, a uniform sampling fraction was used. If N_i and n_i are the population size and the sample size for the i th stratum, the uniform fraction (f) is given by

$$f = n_i/N_i = n/N \quad 2.1$$

Where $n = \sum_i n_i$ is the whole sample size; and $N = \sum_i N_i$ is the total population in all strata. From the above equation the i th stratum sample size (n_i) is given by,

$$n_i = (N_i / N) n \quad 2.2$$

Using the above method, and the population list the sample households for each stratum were selected proportionately on a systematic sampling basis with a random start. In other words, in the list of first stratum, the first household was selected with the help of a random number table, and then every fourth household was selected so as to make the sample size of the first stratum proportionate to the total population of that stratum. The same procedure was adopted to obtain sample from the population.

One advantage of proportionate stratification is that it simplifies the formula for estimating the population mean of any variable. To see this, let Y_i denote the sample mean for the simple random sample selected from stratum i , n_i the sample size for stratum i , m_i the population mean for stratum i . An unbiased estimator of the population mean m is given by

$$Y_{st} = (1/N) \sum_i n_i Y_i \quad 2.3$$

where Y_i is an unbiased estimator of the population mean for stratum i .

Using equation 2.1, equation 2.3 can be simplified to:

$$\begin{aligned} Y_{st} &= (1/n) \sum_i n_i Y_i \\ &= (1/n) \sum_i \sum_j Y_{ij} \quad i = 1, \dots, m; \quad j = 1, \dots, n_i \end{aligned} \quad 2.4$$

Where,

$$Y_i = (1/n_i) \sum_j Y_{ij}; \quad i = 1, \dots, m; \quad j = 1, \dots, n_i \quad 2.5$$

Equation 2.4 establishes that proportionate stratification reduces the “stratified” estimator of the population mean to the “simple” sample mean.

Using the above procedure, 250 households were selected from Pudur *panchayat* of Attappady block. Pudur *panchayat* is selected for the final sample allotment with a view to getting representation for all the three communities. As the present study focuses mainly on inter-tribal differences in change in livelihood strategies, the primary task is to identify an area in

* A stratified sampling is one obtained by separating the population elements into non-overlapping groups called strata and then selecting a simple random sample from each stratum (Scheaffer, et al, 1986)

which all the tribal communities live. The area of Attappady valley is spread over 731 sq km comprising three *panchayats*, namely, Agali, Sholayur, and Pudur; and six revenue villages, Agali, Kallamala, Kottathara, Sholayur, Pudur, and Padavayal. The spread of three tribal communities, viz. *Irulas*, *Kurumba*, and *Muduga* is not uniform in these *panchayats*. The major chunk of *Irulas* is concentrated in Agali and Pudur *panchayats*. *Kurumbas*, on the other hand, are found mainly in Pudur *panchayat*. So, the primary task is to select a *panchayat* where all the tribal communities live. Hence the choice of Pudur *panchayat* as the sample.

However, the maximum number of sample households from one stratum has been limited to 160 and the minimum to 35 (Table 1.1). However, two households belong to Kurumba tribes had to be dropped as the information supplied by them was found incomplete and unreliable.

Table 1.1 Allocation of Sample Households among Selected Tribes

Tribes	Population Size	Sample Size	Adjusted Sample
Irulas	1659	195.45	160
Kurumbas	374	44.06	55
Mudugas	89	10.49	35
Total	2122	250.00	250

Interview schedule

A structured interview schedule was prepared to collect the information required for the study. In its preparation, the tribal survey schedules used in some earlier surveys were consulted. A pilot survey was carried out to test its adequacy of coverage. Together with the interview schedule an instruction manual was prepared to assure the accuracy of the data collected. The services of four field investigators were used for the collection of field data.

The interview schedule contained questions on household structure, household assets, land holdings, cropping pattern, crop rotation, returns from farm and non-farm activities, forest dependence and access to development activities.

During the interview, special attention was given to establish good rapport with the tribal households by politely explaining to them the purpose of the study. In order to get their full co-operation the assistance of tribal community promoters from their own community was made use of. This step was very important as to obtain correct information; if they felt that the interviewers were government officials, they would have hesitation to tell the truth. The few households, which did not respond, had dropped from the sample list and the gap was filled from buffer households in the list.

The respondents were interviewed in isolation from their friends and/or relatives to make sure that the answers would not be affected by arbitrary responses from persons around them. In most cases, it was the head of the household who was interviewed. However, in a few cases, another member of the household not the head, who managed the livelihood activities of the household, was interviewed. Instead of asking questions straight way from

the interview schedule and to reduce the monotonous nature of formal interviews, a method of informal dialogue was followed.

Limitations of the study

The study has some limitations. The data which we collected through field investigations may contain shortcomings. Since most of the tribesfolk supplied information from the memory there could be inaccuracies caused by memory lapse, particularly information supplied on assistance received from the developmental agencies and composition of family income. Finally, there were also financial and time constraints.

Organisation of the report

In section 2, the features of the study area and its population and land use patterns are discussed. The major determinants of the livelihood strategies and the asset profiles of the tribesfolk are described in the third section. The impact of external intervention, namely immigration on the subsistence agriculture of the area is examined in Section 4. An inter-tribal comparison of economic activities and income portfolios together with problems of accessibility to development schemes is attempted in Section 5. The final section summarises the findings and conclusions.

2. A Profile of the Study Area

Introduction

In this section, we examine the general characteristics of the study area and its population. Since the area was untouched by people from outside till the 1950s a brief account of the influx of non-tribesfolk into the area and the consequent changes of the livelihoods of tribes is also given. Change in land use patterns and the resultant process of land degradation in the area also traced in this section.

General description of study area

Attappady is an extensive mountain valley of about 731 sq. km in area, lying at Western Ghat ranges. It is located in the mid-eastern part of Kerala on the north-east of Palakkad district, adjoining Coimbatore and Nilgiri districts of Tamil Nadu. It forms almost the eastern half of Mannarkad taluk and is separated from the rest of the taluk by a hump like, steep mountain range. At the northern and eastern boundaries of the area are Nilgiri and Coimbatore districts of. Attappady is bordered by Palakkad taluk in the South and Karimba and Pottessery and Mannarkad revenue villages of Mannarkad taluk and Ernad taluk of Malappuram district in the West (GOK, 1976). Administratively the Attappady Development Block consists of the three *panchayats* of Agali, Pudur, and Sholayur in Palakkad district.

Attappady is essentially a plateau rising from the undulating midlands beyond the east of Mannarkad taluk to a height of 750-1000 metres. This area is flanked by mountain ranges, the Nilgiris in the north, and extensions of the Western Ghats in the south and the west. The terrain of Attappady is marked by hills and valleys, particularly high mountains and narrow valleys in the western half. The area lies in between two ranges of the Western Ghats and the general slope of the area is towards north-east. Once the hump-like mountain range from the Mannarkad approach is crossed, the plateau slides gradually towards the east and merges with the elevated plains of Tamil Nadu. From the south-west the elevation increases from 90 m to 550 m at Mukkali. From Mukkali to Anakkatty towards the east, the elevation is between 500 m and 575 m. The northern boundary of Attappady Block lies at an elevation of around 2300 m in the Nilgiris peak. From there it decreases along the south-west and later climbs up to 2000 m at Muthikulam (KSLUB and NRSA, 1994). The highest peak *Malleeswaram* which has a height of 1664 metres is visible from most locations in Attappady.

Local human population

The population of Attappady consists of tribesfolk and non-tribesfolk (Settlers or *vanthavasis*). The non-tribal population consists of migrants from Tamil Nadu, mainly in the eastern low-lying part; migrants from Kerala are seen mainly in the western regions. The tribesfolk of Attappady reside in small nuclear villages called *Oorus*. Important cultural differences exist among the three indigenous mountain tribes and the two groups of people who have come from outside the area and settled here since the 1950s.

Tribesfolk of Attappady: A brief account

All the three major tribal communities in the area, namely, Irulas, Mudugas, and Kurumbas, belong to the broad group of Dravidians. Among them, Kurumbas were less exposed to, and have suffered less from, the incursions of plainsmen into Attappady, especially during the initial stages, than the other tribes. All the tribal communities are listed as Scheduled Tribes. Tribal settlements in Attappady are known as *Ooru* (hamlet). Each *Ooru* contains, on an average, 50 houses constructed in rows, close to one another. As per the 1981 census there were 20659 tribesfolk in Attappady, spread over 140 hamlets. By 1995 there were 168 *Oorus* constituting 24228 tribesfolk. As of now there are 189 hamlets in the region (AHADS, Hamlet Survey, 2003).

Tribal hamlets of Attappady are found in all the three *panchayats*, namely, Agali, Pudur, and Sholayur. *Irula* hamlets dominate in all the three *panchayats*. Kurumbas reside only in Pudur and Sholayur is an exclusively *Irula panchayat*. Numerically, *Irulas* form the largest tribal community (82.25 percent) followed by *Mudugas* (12.53 percent), and *Kurumbas* (5.22 percent). The annual compound growth rate of *Kurumbas* during the period 1961 to 1981 was 2.44 percent as against 1.61 percent in the case of *Mudugas*, and 2.41 percent in the case of *Irulas*.

Irulas

The *Irulas* (*Irulans* or *Irulars*), the numerically dominant tribe of Attappady, derive their name from their pitch black complexion. *Irulas* are of Tamil origin and formerly inhabitants of Coimbatore district. It is probable that the *Irulas* of Attappady are the descendants of persons who had migrated from Coimbatore to Attappady during a period when Coimbatore and neighbouring places experienced acute water scarcity. The history of their mass immigration to Attappady dates back to the end of the 16th century or the beginning of the 17th century. There are at present 104 *Irula* hamlets in Attappady. *Irulas* are of medium height, long armed and have curly hair, prominent check-bones and narrow noses. They speak a mixture of Malayalam, Kannada, and Tamil.

Originally they were shifting cultivators. As a consequence of the widespread encroachment of Attappady by mainland settlers *Irulas* have taken to settled-agriculture and plough cultivation. They used to cultivate millets such as *makka cholam* or maize (*Zea mays*), *ragi* or French millet (*Eleusine coracana*) and *chama* or little millet (*Panicum miliaceum*), pulses (like *thuvana* or red gram) and oilseeds (like groundnut and castor seed). As of now, they have added to their cropping pattern almost all the crops cultivated by Tamil and Malayali settlers.

The traditional *Irula* houses are made up of bamboo, mud, and grass and are built in a row in close proximity to one another. In recent years a number of tiled and concrete houses were constructed by the Integrated Tribal Development Project (ITDP) in certain *Irula* hamlets. *Irulas* fight for these government-sponsored houses in spite of the fact that sleeping under these asbestos or tile roofed houses is for them like lying below amber bed. As sleeping within the house is intolerable during summer, *Irulas* in hamlets sleep at night outside these concrete or asbestos or tile roofed houses.

Mudugas

Mudugas (*Mudugars*) are the second largest tribal community in Attappady. The name *Mudugar* is said to have originated from the primitive custom of carrying children on their *Muthuku* (back) which is not the practice with other tribes of the valley. *Mudugas* live in remote forest settlements of the Attappady tribal area. They always prefer to remain as far removed as possible from the 'civilised' people from the plain.

Mudugas have no knowledge about their origin and early history, though they are believed to be Tamilians from Coimbatore district, who are lured by the possibility of agricultural activities in the fertile soils of Attappady. They have legends connected with their origin in common with those of the *Kurumbas*. There is a belief that they had once been *Kurumbas* and that they broke away from that tribal group to form a separate community. Another belief is that it was the *Mudugas* who had established the township at Coimbatore and that they later moved westward for fear of due to persecution and exploitation by more dominant communities there.

Mudugas are of medium height, curly hair, and thick lips and have most of the features of primitive tribes. Their complexion varies from light to dark shades of brown. They converse in a dialect of Tamil interspersed with many Tulu words and phrases, and have poor speaking knowledge of Malayalam.

Like *Irulas*, *Mudugas* also practise settled agriculture retaining several features of shifting cultivation. Their principal agricultural products are *chama*, *ragi*, rice, red gram, black gram, horse gram, cotton, groundnut, ginger, sweet potato, and tapioca. *Mudugas* lost most of their land by downright encroachment or other devious machinations by Malayali settlers. The growing contact between *Mudugas* and Malayali settlers has led to acculturation of this tribe, which often ends up in marital alliances with the latter and erosion of tribal practices and culture.

Kurumbas

Kurumbas are one of the most primitive tribal communities in Kerala. They were perhaps the earliest inhabitants of Attappady, and are strongly believed to have moved down from the Nilgiris following the colonisation of the area by *Badugas*. *Kurumbas* also claim that they are the descendants of people who had fled from Mysore during a period of war and hid in the forests. There are 16 *Kurumba* hamlets in Attappady, of which nine are in the Reserved Forests and the rest in the vested forests and are located mostly in the valley of river Bhavani and its tributary. *Kurumbas* are short, snub-nosed people. The language spoken by them is a mixture of Kannada, Tamil, and Malayalam. Their houses are built, in general, in rows, with grass, bamboo, and mud. The *Kurumba* term for house is *Aalai* or *Salai*.

Kurumbas continue to be shifting-cultivators and food gatherers. In olden days they had freedom to cut and burn as much area as they could manage for shifting-cultivation. Now they have to take permission from the officials of the Forest Department who allot to them patches of land regardless of their choice. The Forest Department allots land (*Kothukadu*) in

the name of *Ooru Moopan (Chieftain)*; it is he who demarcates plots of each household in the hamlet. He is assisted by a *Bhandari* (Treasurer), a *Kuruthalai* (Junior Headman), and a *Mannukkaran* (a soil man or an agricultural expert). With the switch-over to settled agriculture, the role of *Mannukkaran* has dwindled into a ritualistic one. Yet, it is still possible to identify the *Mannukkaran* in most of the hamlets. *Kurumbas* cultivate a variety of crops such as *chama*, *thuvava*, jowar, black gram, and *ragi*.

Land degradation

As we are aware, one of the most important assets which determines the livelihood of inhabitants in an agrarian society is land. Land degradation results in shifts or diversification in livelihood options. The land use pattern in Attappady has undergone spectacular changes since the first quarter of the past century degrading the quality of its land to irreversibly unsustainable levels. The dominant features of the most fragile mountain regions in developing countries are visible in the Attappady mountain ranges also. Persistent negative changes are taking place in crop yields, economic well-being of the people, environment and natural resources (Blaikie and Brookfield, 1987). For instance, in Attappady compared to the situation five decades ago, the extent and severity of landslides is higher; water flow in rivers and streamlets is lower; yields of major crops are lower; forest produce has dwindled as forest area sharply declined; over-grazing converted many parts into deserts; and finally, and the extent of poverty and unemployment and out-migration of persons who have little resources left with them has increased. Fall in productivity and decline in the resilience of the traditional farming systems have led tribesfolk to increasing dependence on the government for assistance. The vulnerability of Attappady may be attributed to irreversible damages caused by the overuse of fertile land and vegetative resources, and even to the delicate economic life-support system of the dependent communities. The dangers, in most cases, are irreversible or reversible only over a long period (Grainger, 1982)

The negative changes plainly visible in the area relate to (1) land degradation affecting the resource base, (2) persistent decline in crop yield which affect the livelihood of inhabitants, (3) increased unfeasibility of a specific cropping pattern as the result of which resource management has become a tedious task.

The genesis of land degradation in Attappady is complex. The resource base of Attappady was always laid open for exploitation by the *Jenmis*, the British, the Planters, the officials, the settlers, and even the so-called aboriginal tribesfolk. The area, in later stages, specifically in the past two decades has received attention of researchers, freelance writers, social workers, and politicians. For some, Attappady has to remain degraded for ever with all kinds of tribal welfare-oriented programmes in full swing so that their lucrative activities like road construction, soil conservation work, etc. could be continued ad infinitum. For some others the area has to remain a contentious base.

In the history of Attappady only a few officials have worked for the real development of the area and the welfare of its people as most government officials used to be posted to this hilly area on punishment transfer. Not interested in its development, they remained indifferent and passive spectators of the plundering of the area and its consequent desertification as well as

Table 2.1 Land use in Attappady

Land use/Land covercategories	Area (km ²)	% to total area
A) Forest	444.07	60.00
1.Ever green/Semi-ever green (dense)	146.16	19.62
2.Ever green/Semi-ever green (open)	40.38	5.42
3.Deciduous (dense)	125.15	16.80
4.Deciduous (open)	104.79	14.07
5.Degraded/under utilised	21.55	2.89
6.Scrub	1.08	0.14
7.Blank	1.16	0.16
8.Plantation	3.80	0.51
B) Agricultural lands	130.30	17.49
1.Kharif crop area (single crop)	44.87	6.02
2.Kharif and Rabi area (double crop)	7.15	0.96
3.Fallow	0.63	0.08
4.Agricultural Plantation (mixed)	77.65	10.42
C) Waste lands/Degraded lands	156.64	21.03
1.Land with or without scrub	88.93	11.95
2.Barren rocky/stoney waste	3.10	0.42
3.Permanent fallow	64.61	8.67
D) Water bodies (Major rivers / Reservoirs)	10.72	1.43
E) Road, Streams, etc.	3.27	0.44
Total	745.00	100.00

Source: Kerala State Land Use Board and National Remote Sensing Agency 1994.

Table 2.2 Changes in Land Use Since 1971 (Area in sq. km)

Category	1971	1989
Agriculture	178.10	52.00
Dense forests	406.37	164.00
Scrubs/Grass land	28.30	152.80
Barren/Rocky	—	233.80

Source: CWRDM 1994.

the alienation of its indigenous population from the land. Still for another group the resource and the people were mere instruments for experimentation. Now the area is confronting a new form of degradation other than resource degradation, that is, debasement of human relations. In short, during the past one or two decades even though the area witnessed a wide range of activities aimed at its development, Attappady is steadily degrading. A report which appeared in Deepika daily on 28 December 1995 says that the Government had spent, till that date, on an average, Rs 25 lakh per *Adivasi* family. If this amount had actually reached the targeted people, Attappady would have already turned into a paradise. Resources

intended for development of Attappady must have leaked away into unintended directions. Of the major factors for resource degradation of Attappady, the most prominent are deforestation, influx of migrants, over-grazing, road construction, and changes in the cultivation pattern (Sanathanan, 2000).

A historical sketch of Attappady valley

Till the beginning of the second quarter of the 20th century, Attappady had been inhabited almost exclusively by hill tribes. Of the several factors responsible for non-interventions in this area by outsiders, the most important had been the availability of adequate cultivable lands in the low and midlands around. Hence the area remained little exploited by outsiders and land degradation was marginal. Almost all the areas in this virgin region were, before the intervention began, under thick forests and inhabited by tribesfolk engaged in slash-and-burn cultivation. As the area was under thick forest and infested with blood-sucking leeches and wild animals, accessibility to this area became difficult for early settlers (GOI, 1961). An interview with Tamil settlers conducted in 1994 showed that the early comers succumbed in large numbers to severe malaria infestation and faced attacks from wild animals.

In the absence of transport and communication facilities, even census enumerators could not reach the tribesfolk settlements. Hence, limited accessibility resulted in false census estimates. Until the early 1950s, the agents of Zamorins of Kozhikode used to be the main source of information. These Chieftains did not have any dependable source of detailed information regarding the size of families of tribesfolk and their other dependants. A monograph of the 1961 census series makes the following observation about the Kurumbas of Attappady: "*Inhabiting as they do, in the interior dense forest regions accessibility to them is ordinarily difficult*" and notes that they had, therefore, been left out from the detailed (ethnographic) study (Kunhaman, 1983). Inaccessibility to the forest areas owing to lack of infrastructure and attack of wild animals and availability of lands in the plain areas discouraged in-migrants to settle in Attappady. However, growth of population and rising demand for land for cultivation pushed succeeding generations of in-migrants into this area. Government policies also were helpful to settlers to make this area their destination.

By the early 18th century, Attappady had become the *jenmom* property of the Zamorin of Kozhikode. The Zamorin entrusted the administration of this area to three Nair Chieftains, *Mannarghat Moopil* Nair, Palat Krishna Menon, and Eralpad Raja (Mathur, 1977). Moopil Nair got the larger portion of this area by pleasing. Once, the Zamorin of Kozhikode happened to stay at *Moopil Nair's* house. Being pleased with Nair's hospitality, along with *Moopil Sthanam* (the title of *Mooppil*), a vast area of land was given to him. In this way Moopil Nair got large areas of land in Mannarkad, including forest areas of Attappady. Nair was given an area approximating to the distance that a horse can cover in a day (Joseph, 1991). However, Moopil Nair and other *Jenmis* were not much interested in cultivation of the leech-infested forest areas of Attappady. Their interest in this area remained to capturing elephants from the dense forests for use in temple festivals. Capturing of an elephant from Attappady was considered prestigious for the family and was in those days great news (Interview: Kochunny Nair, K.C., Pakkulam). The chieftains had been given the right to collect land revenue at rates ranging from Rs 0.50 to Rs 1.25 per acre of land and forest produce by way of land

revenue from *Irulas*, *Mudugas*, and *Kurumbas*. The tribesfolk had become tenants of these *Jenmis*, the chieftains. The tribesfolk enjoyed the right to cultivate as much area as each was able to manage at the prescribed rates of land revenue. In practice, however, they were heavily exploited by the *Kariasthans* (Managers) of the *Jenmis* (GOK, 1976b). In the meantime the *Jenmis* managed to get *Jenmom* (Freehold property) rights of these lands from the Zamorin. These three Chieftains were the oldest *Jenmis* of the Attappady Valley. As these landlords owned large tracts of land in the plains below, Attappady valley remained virtually intact and untouched by outsiders for a long time. The tribesfolk cultivated these areas in their conventional ways such as shifting cultivation, hunting, and collection of forest produce (Kunhaman, 1981). *Jenmom* right gave the landlords the inheritable right to collect usufructs and rent. These landlords had also the power to give their land on lease. Moopil Nair alone held 70 percent of the Attappady land. In the first half of the 20th century, a few new landlords were given lease rights on the western part of Agali; about 6000 acres were given on lease to one Kunhammed Sahib of Mannarkad (Nair, 1986).

Till the end of the 19th century, the valley had neither a police station nor a post office. However, a full contingent of village officers was appointed, and beat constables began periodically entering the valley and getting the signature of the *Adhikari* (Village Officer) in their beat books. During the early decades of the 20th century, timber was the main product in the valley. Of the total area, 21 hills in full and another hill in part belonged to the government. The rest of the area was under dispute among the three *Jenmis* already referred to. The dispute led to frequent disturbances which culminated in actual bloodshed in 1901. A solution was finally reached around 1908 by the Divisional Officer under Section 145 of the Criminal Procedure Code. Accordingly 44 hills and part of five others were awarded to Moopil Nair, 16 hills and parts of six others to the Eralpad Raja, 10 hills to P.K. Menon, and two hills to another *Jenmi* (Innes and Evans, 1908). Even after this division most of the areas remained undisturbed by outsiders due to easy availability of land in the plains of Mannarkad and nearby areas (Kunhaman, 1981).

Settlement and demographic change

It is not clear from the available literature as to who the earliest intruders into this area were. In the opinion of some old settlers the earliest were the Tamil-speaking Gowndans who came to Attappady in the beginning of the 20th century mainly for buying forest produce. However, according to Innes,

“In Malabar Malayalam is the language of 94 per cent of the people Tamil is the language of 4 per cent, made up mostly of East coast Merchants and Gowndans and other inhabitants of the Attappady Valley” (Innes and Evans, 1908)

A Gowndan from *Thadakam*, Tamil Nadu, who settled in Attappady in 1924, remembers his experience thus: “*I came here after several days of trekking, breaking journey in different places. The eastern part of Attappady, at the time of my arrival, was full of bushes of forest trees. Tall trees were rare in the locality. However, lands were available in adequate measure for cultivation. Climate was terribly inhospitable in those days*”.

The early Gowndan settlers started cultivation in the land, which they managed to obtain by bribing the *Kariasthans* (Managers) of *Jenmis*. Gradually, they encroached into more lands in their vicinity. As there was shortage of local labour, these settlers brought workers from their native places under promise of higher wages (Mathur, 1975). A massive flow of people began during the 1950s in the eastern side of Attappady, mainly of people from Thadakam and other parts of Coimbatore in Tamil Nadu.

Information on the first Malayali from the plains below to settle in Attappady is not available in the literature nor was it known to any of our informants. However, before the colonisation trend and the massive move of people from south and central regions of Kerala to Malabar and Attappady began, relatives and neighbours of the *Jenmis* used to visit Attappady for various purposes, according to Kochunni Nair of Pakkulam, one of our interviewees. Their intention was collection of forest produce from the tribesfolk. Malayalis from the plains came to this area was, in the beginning for jobs in the plantations started by the Britishers and work in the forest land leased by landlords for timber extraction. However, many of these original in-migrants did not settle down in Attappady because of the difficult terrain; they, after a while left Attappady leaving their possessions to new in-migrants.

The independence of India in 1947 triggered rapid changes in settlement patterns. The area was opened for logging and settlement through construction of all weather roads in the region. The influential Communist parties of Kerala agitated for land reform under the slogan “land to the tiller.” However, this agrarian reform did not confer land rights on the *adivasis*, because the *Jenmis* sold much of their lands to settlers from the plain land, especially Malayalis from the Travancore and Tamilians from the Coimbatore areas. After 1956, Malayalis migrated to Attappady mainly for work in timber-felling and extraction of forest produce. In-migrant population continued to increase till about the end of the 1970s.

If the peak period of Malabar migration was 1951-’60 (Tharakan, 1976; Joseph, 1988), the inflow of people to Attappady reached its pinnacle during 1961-1970. It continued its pace till 1980 and thereafter declined sharply. Tamilians, the pioneers of the in-migrants to Attappady, reached the area mainly during the period 1951-’60. The inflow reached its zenith during 1961-’70, declined in the next decade and became insignificant after the 1980s (Sanathanan, 2000).

The whole demographic structure of Attappady has changed after the 1950s mainly due to uncontrolled influx of population (Table 2.3). As a consequence, demographic structure has turned to be unfavourable to tribesfolk by the end of the 1960s. During the 1940s, the tribal population of Attappady is estimated to have been around 10,000 and the non-tribal population just a few hundred. According to the 1951 census, the proportion of non-tribal population to total population was just 9.68 percent. The proportion rose to 67 percent in 1981 and 72 in 1991. During 1951-’61 the population in the area increased by 89.9; even though the increase of tribal population was only by 27 percent. During this period the increase of settler population was at the exorbitant rate of 671 percent. The next decade (1961-’71) also presents a similar picture with an increase of total population by 88 percent and tribal population only by 17 percent. The growth of non-tribal population was by 219 percent. Thus, the original inhabitants of the area have become marginalised. The *adivasis* have been forced to adopt ways of life of the settlers to the ruin of their rich cultural heritage and freedom of living.

Table 2.3 Population Trends in Attappady

Year	Total population	Tribal Population	Non-tribal population	Percentage of tribesfolk	Percentage of non-tribesfolk
1951	11300	10200	1100	90.32	9.68
1961	21461	12972	8489	60.45	39.55
1971	39183	16536	22647	42.21	57.79
1981	62246	20659	41587	33.00	67.00
1991	86261	24228	62033	28.08	71.91

Source: Census of India, 1951 to 1991

3. Livelihood Strategies: Major determinants

Introduction

The livelihood strategies of households are determined mostly by their social, demographic, economic, and cultural settings. Investigations into a tribal economy would not be complete without examining its socio-economic settings and supportive systems. In this section an attempt is made to examine the socio-economic settings of the tribesfolk of Attappady on the basis of field-level data. The major determinants of livelihood are ownership of or easy accessibility to assets. There exist, however, disparities among tribal communities in the ownership of the major determinants of livelihood such as land, forest, household capital, physical capital, and human capital.

Therefore, the major determinants of livelihood platform in the light of inter-relationship and interaction of tribal people in the tribal land, having poor economic situation and unique cultural settings, with various mediators, are examined here.

Household characteristics by tribes

Comparative profiles of the status of the tribesfolk in the study *panchayat* are, presented at the outset (Table 3.1)

Interestingly, the average family size of tribesfolk is found to be relatively small, only 4.2 members. The small family size may be attributed, in part, to allotment of houses to them through government-sponsored programmes and the resultant emergence of the nuclear family among them. The government-sponsored houses, however, have served as a major motivation for tribesfolk to acquire independent houses and set up independent households.

Among the three tribal groups, per-capita income was highest for Irulas (Rs 6278.2), followed by Kurumbas (Rs 5827.7) and Mudugas (Rs 4907). The average per capita availability of land is only 0.68 cents among tribesfolk, the highest being among Kurumbas namely 94 cents. The corresponding figures of Mudugas and Irulas are 56 cents and 63 cents respectively. The lands are allotted to the tribesfolk as *Kothukadu* for shifting cultivation.

Only less than 50 percent of the households were found to have electricity. When 59 percent of the houses of Irulas are electrified, the corresponding figure for Kurumbas is a mere 8 percent. Only 13 percent of the Kurumba houses are constructed with cement floor, compared with 31 percent for Mudugas and 42 percent for Irulas. Kurumbas are observed to be the relatively underprivileged among the tribesfolk in the area.

Structure composition of tribal families

The joint family system is seen to have virtually disappeared from among the tribespeople. Only 43 families (17.3 percent) of the total sample are found to of the joint family type. The field investigation discloses the fact that the joint families among Mudugas and Irulas, are

Table 3.1 A Comparative Profile of Tribal Households

Household Characteristics	Muduga	Kurumba	Irula	Total
Age of household head (years)	44.05	38.79	44.65	43.31
Mean household size (no. of members)	4.8	4.2	4.0	4.2
Size of land per household (acres)	2.66	3.94	2.54	2.85
Size of land per capita (acres)	0.56	0.94	0.63	0.68
Number of crops grown	3.51	4.22	2.72	3.16
Cattle owned (No.)	2.33	2.78	2.93	2.85
Goats/Sheep owned (No.)	3.12	5.96	6.23	6.15
Per capita farm income (Rs)	588	838.57	984.86	889.21
Per capita off-farm income (Rs)	4319	4989.1	5293.4	5070.3
Per capita Income (Rs)	4907	5827.7	6278.2	5959.5
<i>Household with</i>				
Electricity (percent)	22.9	7.5	58.8	42.7
Public water supply (percent)	28.6	26.4	53.7	44.3
Cement floor (percent)	31.4	13.2	41.9	34.3

Source: Sample Survey

waiting for financial assistance from the government to construct houses and establish nuclear households. The extant joint families are therefore likely to disappear quite soon.

The sex ratio is favourable to males both among Kurumbas and Irulas. However, females outnumber males among Muduga families. The observed composition is found to be slightly different from the latest census result. Altogether, males constitute 52.8 percent of the total in the sample households (Table 3.2).

Table 3.2 Structure of Tribal Households

Type	Muduga	Kurumba	Irula	Total
Nuclear	27 (77.1)	46 (86.8)	132 (82.5)	205 (82.7)
Joint	8 (22.9)	7 (13.2)	28 (17.5)	43 (17.3)
Total	35 (100.0)	53 (100.0)	160 (100.0)	248 (100.0)

Figures in parentheses indicate percentages; Source: Sample Survey

The distribution of population according to sex and age group gives us interesting results. As seen from the Table 3.4, about 72 percent of the population in the sample households falls in the age group of 15-60 years; pre-school children constitute only 9 percent. Another 17 percent falls in the age group of school going children. Their share is found to be the highest among Mudugas. However, our field enquiry reveals that there are children of the school going age group who are full-time workers as coolies. The share of old aged people is comparatively small.

Table 3.3 Distribution of Households according to Sex

Sex	Tribes			Total
	Muduga	Kurumba	Irula	
Male	77 (46.7)	125 (56.3)	342 (53.1)	544 (52.8)
Female	88 (53.3)	97 (43.7)	302 (46.9)	487 (47.2)
Total	165 (100.0)	222 (100.0)	644 (100.0)	1031 (100.0)

Figures in parentheses indicate percentages

Source: Sample Survey

Table 3.4 Distribution of Members of Households according to Age Group

(Percentage)

Education	Muduga			Kurumba			Irula			Grand Total
	M	F	Total	M	F	Total	M	F	Total	
Less than 5	11.7	13.6	12.7	12.0	6.2	9.5	8.5	7.3	7.9	9.0
5 to 15	27.3	18.2	22.4	16.8	21.6	18.9	17.5	12.3	15.1	17.1
15 to 60	59.7	67.0	63.6	71.2	71.1	71.2	71.6	78.5	74.8	72.3
Above 60	1.3	1.1	1.2	—	1.0	0.5	2.3	2.0	2.2	1.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Sample Survey

Human capital: Educational profile

Human capital refers to the labour available to the households: its education, skills, and health (Carney D, 1988). Human capital is increased by investment in education and training as well as by the skills acquired through one or more occupations. Public education is an integral part of macro policies designed to raise the level of human capital. Hence evaluation of their educational background is of paramount importance in the evaluation of livelihood of rural people.

One of the most important determinants in the livelihood strategy of a household is its status. Of the several constraints to diversify livelihood sources and augmentation of assets, the most serious is illiteracy and ignorance. Peasants, unless given proper guidance and information, would follow conservative methods and stick to what they have. This obstacle could be, to a large extent, removed by giving them the right type of education. Education changes the outlook of a cultivator on the use of private property as well as common property resources, as a number of studies have unequivocally established. Education has a higher pay-off for peasants in a changing, modernising environment than in a traditional society (Schultz, 1964). In most studies on the socio-economic status of households, education of the head of the household is taken to examine its impact on decisions concerning resource use and acquisition of income. This method is, in a strict sense, inappropriate in an economy in which the younger generation also actively participates in productive activities. The level

of education of the head of the household, though an important human capital in decision-making, is not a suitable criterion for evaluating the influence of education of other members of the family on various decisions-making processes. Hence, we have attempted in the present study to examine, along with the education level of head of the household, the gender-wise educational levels of other members as well, of course excluding school going children.

Nearly 70 percent of the heads of the households are illiterate. Educational status of the head of households does not show much of an inter-tribal difference. Around three-fourths of Muduga and Irula heads of households are illiterate (Table 3.5). The low educational level of the head of a household will surely be reflected in the level of his/her assets, livelihood pattern and utilisation of resources. However, educational level of other members cannot be neglected as they may also have a key role in decision-making. This view is further strengthened by our experience that in many households, data required for the study are furnished by members of younger generation.

Table 3.5 Distribution of Head of Households according to Level of Education
(Percentage)

Level of Education	Tribes			Total
	Muduga	Kurumba	Irula	
Illiterate	74.3	75.5	67.5	70.2
Primary	14.3	5.7	15.6	13.3
Middle	2.9	5.7	6.3	5.6
High school	5.7	11.3	10.0	9.7
Higher secondary and above	2.9	1.9	0.6	1.2
Total	100.0	100.0	100.0	100.0

Source: Sample Survey

Table 3.6 Distribution of Household Members according to Level of Education
(Percentage)

Education	Muduga			Kurumba			Irula			Grand Total
	M	F	Total	M	F	Total	M	F	Total	
Illiterate	28.6	35.2	32.1	44.0	58.8	50.5	32.2	51.3	41.1	41.7
Primary	19.5	23.9	21.8	23.2	24.7	23.9	17.5	9.9	14.0	17.4
Middle	20.8	14.8	17.6	15.2	6.2	11.3	15.5	14.9	15.2	14.7
HS	14.3	11.4	12.7	9.6	6.2	8.1	22.8	14.6	18.9	15.6
Higher secondary & above	16.9	14.8	15.8	8.0	4.1	6.3	12.0	9.3	10.7	10.6
Total	100	100	100	100	100	100	100	100	100	100

Source: Sample Survey

Illiteracy, of households, reckoned in terms of the educational status of all members taken together, highest among Kurumbas, say about one-half and the lowest among Mudugas (about less than one-third). Among all the three communities, illiteracy among women is more than that of men. Only a little more than 10 percent of the households have members who have education beyond the high school level. In this respect, the share is found to be the lowest for Kurumbas (about six percent) and the highest for Mudugas (16 percent). The level of education is higher among males than among females. Inter-group differences in educational level are significant.

Physical capital: Household asset profile

Capital created by the economic production processes is treated as physical capital. Houses, lighting facilities, drinking water and so on are example of physical assets. The livelihood approach (Carney D, 1998) places a lot of emphasis on physical assets, especially on the identification of assets possessed by the rural poor and can be utilised or built upon to increase the resilience and security of their livelihoods.

There has been a lot of improvement in the housing structure of tribesfolk owing to the direct support from government-sponsored projects. It does not mean, however, that there is an all-round progress in the construction of houses for all tribesfolk. This is one of the areas, about which they expressed some satisfaction. The results obtained from the field show that more than 90 percent of the tribal reside in tiled houses. Also, 89 percent of Irula houses and above 60 percent of Muduga or Kurumba houses are built with stone or bricks. However, cement floor is not very common except among the Irula houses (41.9 percent). The average plinth area is found to be larger for Muduga houses than for houses of the other two communities (Table 3.7).

Quite interestingly, around 50 percent of the houses are built with full assistance from the government. Another 25 percent houses are constructed with partial assistance from the Government (Table 3.8). The number of houses built with government assistance, either fully or partially, has been the highest for Mudugas. We couldn't see any houses constructed with assistance from voluntary organisations, though there are a number of such agencies working in the area.

As expected, 95 percent of the sample population relies on river, stream, and pond for bathing; only the remaining 5 percent have bath room facility at home. In the absence of toilet facilities, the majority of the households use open space for defecation and only 12 percent of the households have septic tank facilities in their homesteads. Modern type of toilets is seldom found in the tribal homes (Table 3.9).

Electricity has reached the area; but inter-tribal differences are observed in the extent of electrification of houses. While nearly three-fifths of the Irula houses are electrified, the corresponding proportions are much lower for Kurumbas (7.5 percent) and Mudugas (23 percent). The lighting needs of Kurumbas are satisfied mostly by solar lamps provided though developmental agencies (85 percent). Around 57 percent of the Muduga houses depend solely on kerosene for this purpose as most of their houses are situated in areas which do not have lamp facilities.

Table 3.7 Housing Conditions of Tribal Households (Percentage)

Housing Structure		Tribes			Total
		Muduga	Kurumba	Irula	
Roof	Concrete	—	—	2.5	1.6
	Tiled	91.4	94.3	96.3	95.2
	Asbestos	5.7	—	—	0.8
	Grass	2.9	5.7	1.3	2.4
Wall	Mud	11.4	15.1	8.8	10.5
	Bricks	48.6	13.2	13.1	18.1
	Stone	34.3	52.8	76.3	65.3
	Reeds	5.7	18.9	1.9	6.0
Floor	Mud	68.6	86.8	58.1	65.7
	Cement	31.4	13.2	41.9	34.3
Average plinth area(sq. ft)		261.11	246.56	225.1	234.77
Number of rooms		2.8	2.41	2.11	2.27

Source: Sample Survey

Table 3.8 Nature of Ownership of House

Source	Tribes			Total
	Muduga	Kurumba	Irula	
Fully Govt	22 (62.9)	26 (49.1)	77 (48.1)	125 (50.4)
Partially Govt	6 (17.1)	13 (24.5)	43 (26.9)	62 (25.0)
Fully self	7 (20.0)	14 (26.4)	38 (23.8)	59 (23.8)
Others	—	—	2 (1.3)	2 (0.8)
Total	35 (100.0)	53 (100.0)	160 (100.0)	248 (100.0)

Figures in parentheses indicate percentages; Source: Sample Survey

Table 3.9 Toilet Facilities of Tribal Households (Percentage)

Type	Muduga	Kurumba	Irula	Total
Open space	88.6	92.5	86.3	87.9
Toilets with Septic tank	11.4	7.5	13.1	11.7
Toilets with Soak pit	—	—	0.6	0.4
Total	100.0	100.0	100.0	100.0

Source: Sample Survey

Table 3.10 Lighting Facility of Tribal Households

Type	Muduga	Kurumba	Irula	Total
Electricity	22.9	7.5	58.8	42.7
Kerosene	57.1	7.5	37.5	33.9
Solar lamp	20.0	84.9	3.8	23.4
Total	100.0	100.0	100.0	100.0

Source: Sample Survey

Rivers and streams constitute the major sources of drinking water for more than one-half of the households. Even though the two rivers Bhavani and Siruvani dry up in the summer season, most of the households rely on them for water for their household purpose. Attempts made from the part of the government for supplying drinking water have not yielded some tangible results too. Public wells, bore-wells, and public taps together account for the water supply to about 44 percent of the tribal households. For the *Kurumba* community, other than rivers and streams, the major source of water supply is the public tap which caters to the requirements of about one-fourth of their households (Table 3.11).

Table 3.11 Source of Drinking Water of Tribal Families (Percentage)

Type	Muduga	Kurumba	Irula	Total
Public well	28.6	1.9	10.6	11.3
Bore well	—	—	23.1	14.9
Public tap	—	24.5	20.0	18.1
River	40.0	41.5	40.6	40.7
Stream	22.9	18.9	5.0	10.5
Others	8.6	13.2	0.6	4.4
Total	100.0	100.0	100.0	100.0

Source: Sample Survey

Natural capital: Land and forest resource

Natural capital is sometimes referred to as environmental resources. It comprises land and forests and other biological resources. Land is the major determinant of the asset status of households and hence a strategic factor determining their livelihood. Our field data show that around 60 percent of the households own less than 2.5 acres of land area. However, there exist significant differences among tribal households with respect to land ownership. When 13.2 percent of the Kurumba households own more than 5 acres of land, only around 9 percent of the other two communities come under this category. The Kurumba community holds a larger proportion because they have received forest land for *kothukadu*. The distribution of land, by wetland and garden land, also gives interesting information. The average total area per households is the highest among the Kurumba community. However, the average area of wetland is owned by them is lower than among the other two communities. On an average, an Irula household owned 2.37 acres of wet land (Table 3.12). Wet lands are ideally suited for cultivation of plantain, sugar cane, etc. and are in great demand among the settler population, who take these lands for cultivation on mortgage.

Table 3.12 Size-wise Distribution of Land among Tribal Households

(Percentage)

Size in Acre	Tribes			Total
	Muduga	Kurumba	Irula	
Less than 0.5	11.4	1.9	14.4	11.3
0.5-2.5	60.0	32.1	52.5	49.2
2.5-5.0	20.0	52.8	24.4	29.8
More than 5	8.6	13.2	8.8	9.7
Total	100.0	100.0	100.0	100.0
Mean wet land	1.86	1.25	2.37	2.08
Mean dry land	2.82	4.04	2.56	2.92
Mean area	2.66	3.94	2.54	2.86

Source: Sample Survey

Table 3.13 Distribution of Land Holdings according to Type of Land

(Percentage)

Size in Acre	Wet Land				Garden Land				Grand Total
	M	K	I	T	M	K	I	T	
< 0.5	33.3	50.0	—	16.7	6.9	—	15.4	10.9	11.3
0.5-2.5	50.0	50.0	60.0	55.6	62.1	31.4	51.7	48.5	49.2
2.5-5.0	16.7	—	40.0	27.8	20.7	54.9	23.5	30.1	29.8
>5	—	—	—	—	10.3	13.7	9.4	10.5	9.7
Total	100	100	100	100	100	100	100	100	100

Source: Sample Survey

Tribesfolk were initially forest-dwellers depending on the forest for their livelihood. Owing to various interventions from outside, they have lost their free access to forest and have been reduced to the level of wage labour. Still, many tribal households still depend on the forest for several purposes. They collect firewood from nearby forests for their daily requirements. Since most of the households have their houses made of brick stone and tile, the degree of dependency on forest for building materials such as reed and bamboo is not very high, particularly in the Pudur area. Extraction of cane and bamboo is also not any longer, a common practice. However, 90 percent of the Kurumba families, independently or jointly, collect forest products, namely, honey, *kunthirikkam*, etc. during the appropriate seasons of the year (Table 3.14). Some of the Irula families also rely on forest for their traditional ritual practices. At least for some tribal households, income from forest products is partly a source of their livelihood too. Mudugas are perhaps an exception; they do not depend heavily on forests for collection of non-timber forest products. Even for collection of honey they are reluctant to go to forest. It is surprisingly seen that forest, as a major source of livelihood, is losing ground in Attappady valley.

Table 3.14 Forest Dependency among Tribesfolk

Purpose	Muduga	Kurumba	Irula	Total
Firewood only	33 (97.1)	5 (9.4)	134 (83.8)	172 (69.6)
Firewood & MFP	1 (2.9)	48 (90.6)	26 (16.3)	75 (30.4)
Total	34 (100.0)	53 (100.0)	160 (100.0)	247 (100.0)

Figures in parentheses indicate percentages; Source: Sample Survey

Other capital: Livestock

In subsistence economies, animal husbandry constitutes a major source of livelihood. Attappady is no exception to this rule. Animal husbandry is widespread. Hordes of cows and goats are seen grazing in the deforested mountain slopes of Attappady. Most of these animals are owned by the Tamil settlers. There are many small goat farms in Attappady owned by settlers and absentee landlords. Except in a few cases, the cow, goat/sheep, and chicks are not main sources of commercial income of the tribesfolk. They keep cows and chicks for their own household purposes of milk and eggs. The only exception is rearing of goats which they do mainly for the market. In times of difficulty they sell their livestock at distress prices, mainly to settlers and their middlemen (Table 3.15).

Table 3.15 Livestock Ownership of Tribal Households (Percentage)

Category	Muduga		Kurumba		Irula		Total	
	Av.	Max.	Av.	Max.	Av.	Max.	Av.	Max.
Cow	2.33	5	2.78	10	2.93	12	2.85	12
Goat	3.12	6	5.96	25	6.23	40	6.15	40
Poultry	1.75	3	0.87	3	2.22	3	2.05	3

Source: Sample Survey

Table 3.15 reveals that Kurumbas and Irulas, on an average, own six goats while Mudugas own only three goats per household. A few *Irula* and *Kurumba* households own more than 20 goats, which are found to be a major source of income for them. Most of the households came to be owners of their livestock through inheritance; some of them had purchased livestock from neighbours. Buying and selling of livestock is now common among households within a hamlet.

The foregoing discussion on the major determinants of livelihood of tribesfolk reveals that they do not have adequate facilities for meeting several basic requirements for a reasonable standard of living. The per capita availability of cultivable land has considerably shrunken over the years and put a severe threat to their subsistence. Also, the tribesfolk in the area are found to be educationally backward, thus putting constraints on the possibilities for their socio-economic progress. Inter-community differences in asset ownership are significant among them. Of the three tribal communities in the area, Irulas are found to be better off.

Table 3.16 Source of Ownership of Livestock (Percentage)

Category	Source	Muduga	Kurumba	Irula	Total
Cow	Purchased	66.7	43.5	76.3	67.0
	Inherited	33.3	47.8	11.9	22.7
	Govt	0.00	8.7	11.9	10.2
Goat	Purchased	50.0	48.0	87.5	76.1
	Inherited	50.0	44.0	10.0	20.4
	Govt	0.00	8.0	2.5	3.5
Poultry	Purchased	100.0	60.9	93.7	86.2
	Inherited	0.00	39.1	6.3	13.8
	Govt	0.00	0.00	0.00	0.00

Source: Sample Survey

4. External Intervention and Livelihood

Introduction

Having looked at the major determinants of livelihood in the previous section, we now turn to a discussion of intervention of various agencies and in-migration of people from outside the region on the livelihood of tribesfolk in general and the three tribal communities separately. An attempt is also made to review the process of land alienation and marginalisation of the tribal community. The area is at present characterised by a wide variety of crops cultivated by both the settlers and the tribesfolk. Diversification of the cropping pattern among tribal households owing to in-migration and developmental assistance is also examined.

Process of settlement and its influence on livelihood

Land, the natural asset, was the major livelihood source for tribesfolk before the intervention of people from the plain lands to Attappady valley. However, the influx of outsiders to the region meant a severe setback to the livelihood settings of the tribesfolk. The majority of the new settlers are peasant cultivators who have displaced the original inhabitants, the tribesfolk from the best quality lands of Attappady. The process by which lands were required by both Malayalis and Tamilians is reviewed in the following sections.

Before the entry of settlers, *Jenmis* of Attappady had entrusted the management of their lands to *Kariasthans*. These *Kariasthans* acted as intermediaries between *Jenmis* and the tribesfolk. The main duty entrusted with these *Kariasthan* had been the collection of rent from the tribesfolk for the land allotted to them for cultivation. The tribesfolk subsisted on shifting cultivation and collection of minor forest produce such as honey, lac, horns, and herbs. The beginning of exchange of their produce with traders (mainly *Gowndans*) from Tamil Nadu marked the beginning of their contact with the outside world. These traders came to Attappady to buy forest produce which fetched high prices in Coimbatore. In exchange for the forest produce tribesfolk used to receive plastic items such as baskets, rope, and apparel. The *Gowndans*, by their frequent trips to the borders of Attappady, became acquainted, in course of time, with the *Kariasthans* and established rapport with them. This gave them a handle to acquire land in Attappady cutting wood and cultivating crops.

The entry of 'small' Malayali settlers into Attappady was, in the beginning, neither for cultivation nor for acquisition of land. They came as workers in the lands of big settlers¹ to fell trees and to do manual work in the *jenmis*' lands. The 'big' settlers in Mannarkad had been the first who bought land in Attappady from Moopil Nair. They could acquire ownership rights for vast areas of hillside lands at prices as low as Rs 2 per acre. For *Jenmis* who sold land, the amount of Rs 2 or even less per acre was attractive enough considering the zero opportunity cost of land (Kunhaman, 1981). These settlers were assisted by the *Kariasthans* who in turn received illegal gratification in the form of cash and liquor. The main reason for buying large tracts of land was the availability in them of high quality timber of several valuable species.

The landlords issued Money Receipts (MR) for the amounts received from the purchasers of land². The receipts became the documentary evidence of ownership. In the money receipts, neither the location nor the size of areas used to be specified. Instead, the settler was told some locally known border points to identify his area. In some cases *Kariasthans* were sent along with these settlers to locate the areas. In most cases of the early transactions it was the agent of the *Jenmi* who had been entrusted with the task of identifying and locating for the settler buyer. As the areas were not easily accessible even to the *Kariasthans*, lands were allotted arbitrarily. In certain cases, the allotted area was identified on the basis of some standing trees. These trees became the boundary of the land bought. This sort of allotment led to bickering and conflicts among the settlers. There were also instances of issue of MR for two or more persons for the same plot of land. As a consequence several fights took place in Attappady. *Kariasthans* were given by the *jenmis* the task of settling the disputes. This new assignment was lucrative source of income to *Kariasthans* who had till then subsisted on the payments made to them by their *jenmis*. The agents of *jenmis*, mostly the *Kariasthans*, after receiving gratifications from settlers, turned a blind eye while settlers indulged in grabbing large areas of land, much in excess of the areas mentioned in the Money Receipt. As a result, when receipt for 10 acres was given, 5 to 10 times larger areas were occupied. Neither the *Jenmi* nor the agent was interested in looking into the actual area appropriated by the settlers.

It was the big settlers who brought workers with them, mostly poor and economically backward, from the plain lands. These workers were used to fell trees and were given promises of land for cultivation. Often they were given the land after the harvest of timber was over. Agricultural labourers, mainly, *Ezhavas* and Scheduled Castes, were brought in large numbers by the in-migrant agriculturists, mostly Christians of the Travancore-Cochin Area (Mathur, 1977). There were also Christian migrants who had failed to find land for cultivation in the hill sides of Pottessery and other parts of Mannarkad. These Christian in-migrants also finally found fertile lands of Attappady. News of land at extremely low prices in Attappady hills spread in the native places of the early in-migrants and as a result, massive flow of landless people to the area followed.

The early settlers, who became big cultivators, maintained close contacts with *Jenmis* and their agents. It is through them that the later in-migrants also secured lands. The prices varied between Rs 100 to Rs 1000 per acre. Fixation of price was highly arbitrary. During the period 1950-'60, many peasant settlers had directly leased land from Moopil Nair for cultivation at a rate of Rs 2 per acre (*Karshakan*, 1994). While granting permission to cultivate the land they were also permitted to stay in the same plot. The extent of benevolence received by a lessee from the *Jenmi* depended on the status of the person who introduced him to the *Jenmi*. Generally new in-migrants were brought to the *Jenmi's* place by the *Kariasthans* and close relatives of the *Jenmi*. As the settlers' main motto was cultivation, the nature of the ownership did not bother them much. As a result many settlers got land already either occupied or cultivated by tribesfolk. The result was the pushing out of the tribesfolk from the lands they had been cultivating and living in. The land-hungry settlers were not interested in questions of the natural right of the tribesfolk on land.

As there did not exist postal communication facilities in the area, the settlers exchanged

messages with their relatives through itinerant traders. In the beginning of the 1960s, many Christian families from Kottayam reached Jellippara, Kurukkankundu, Puliyara, and Chittoor areas of Agali village. Most of these settlers got land from earlier settlers, mainly the family of Poovathingal, which had entrenched itself in the area. Many who occupied lands in the village, encroached on, besides the land bought, forest areas in a competitive spirit. Settlers as a group are not hesitant at present to report the earlier episodes of encroachment; they are however, reluctant to reveal the magnitude involved.

Up to 1966, the major land transactions in the area were between settlers and *jenmis*. After 1966, new types of land transfers emerged among settlers themselves and between settlers and tribesfolk. This was besides the routine purchase of land from Moopil Nair and other big landholders. By 1976 almost the entire area of Sholayur and Agali *panchayats* came under the occupation of TAMILIAN and Malayali settlers. Since there exists no boundary demarcation between forest land and other lands, the settlers made no distinction between the two; the fittest and the strongest among them encroached on all lands that came their way, forest land as well as tribal land.

A lion's share of the land appropriated by TAMILIANS lay contiguous to water courses. Malayali settlers could not acquire much riparian lands. Owing to the eastward flow of Siruvani and Bhavani rivers, TAMILIANS had greater access to fertile lands near to these two river beds. In this process tribesfolk were not only kicked out from their land but also pushed into the steep slopes and ravines of hills and other uncultivable parts of Attappady.

Settlers had acquired land, in the beginning, from *jenmis* or their managers and later from tribesfolk through the employment of various strategies. Tribesfolk had used the land allotted to them by *jenmis* for slash-and-burn cultivation. During the past five decades, several rounds of land transfers have taken place and many of the first generation settlers have died. Property has passed on to descendants of early settlers, *kariasthans*, or *jenmis*. At the time of our survey, we observed that settlers in Attappady had acquired lands mainly through five sources, viz., (1) inherited from ancestors, (2) purchased from *jenmis*, early settlers, fellow settlers or/and tribesfolk, (3) leased-in (*Kuthakapattom*) from *Jenmis*, early settlers, fellow settlers or/and tribesfolk, (4) encroached upon forest land and tribal-occupied areas, and (5) received free from the government. Encroachment was extensive in Attappady. In the early years of migration, many settlers had taken land from *Jenmis* and tribesfolk on lease.

However, inter-tribal comparison regarding the source of ownership of land reveals more than four-fifths of the households received their land from ancestors and the extent of encroachment was negligible (Table 4.1). An interesting observation is that Irula community had purchased about three percent of their land from fellow tribesfolk and settlers.

Nearly 90 percent of the households of the Kurumba community have not received ownership titles for their lands. Lack of ownership title for the majority Kurumba community is due to the fact that the lands allotted to them are forestlands, and for the specific purpose of shifting cultivation by way of *kothukadu* and that too on the steep slopes of hills. However, for other tribal communities also ownership title remains a mirage, for the major proportion of lands under their possession (Table 4.2).

Table 4.1 Distribution of Land according to Nature of Possession

(Percentage)

Source	Tribes			Total
	Muduga	Kurumba	Irula	
Inherited	77.1	81.1	86.9	84.3
Purchased	—	—	3.1	2.0
Encroached	17.1	3.8	—	3.2
Others	5.7	15.1	10.0	10.5
Total	100.0	100.0	100.0	100.0

Source: Sample Survey

Table 4.2 Distribution of Land Holdings according to Title (Percentage)

Title	Muduga	Kurumba	Irula	Total
Received	54.3	11.3	71.9	56.5
Not received	45.7	88.7	28.1	43.5
Total	100.0	100.0	100.0	100.0

Source: Sample Survey

Land alienation and marginalisation of tribesfolk

Large-scale land transfers have taken place from tribesfolk to non-tribesfolk in Kerala and especially in the Attappady region (Mathur, 1977; Kunhaman, 1981, 1989; Muraleedharan and Sankar, 1991). Emergence of plantations, implementation of government-sponsored programmes, indifference of officials and sometimes the favourable attitude of tribal *moopans* towards the well-to-do in society – all contributed directly or indirectly to the alienation of a native community from their main means to live. For example, the preliminary steps taken for the implementation of Silent Valley Project displaced many Muduga families. Of several factors, the most pertinent for land alienation was the massive influx of people from the midland and the lowland to the highland. A dualistic economy has emerged in Attappady through land alienation of the tribesfolk - a non-tribal flourishing economy and a tribal decadent economy. The tribesfolk look at the settlers with fear, suspicion, and hatred while the non-tribal settlers consider the tribesfolk foolish, lazy, and primitive.

Various illegal ways have been adopted by in-migrants to expropriate the land in the possession of tribesfolk. They used various means such as offer of gifts, purchase, forcible occupation and acquisition through mortgage to get land from tribesfolk. Little documentary evidence exists for most of the transactions (Muraleedharan and Sankar, 1991). There are cases in which land was obtained by settlers by offering narcotics and liquor (Panoor, 1990). In several cases, aggressive use of force and threat was the method employed (Kumaran, 1993). The various methods adopted by settlers for acquiring tribal lands are thus found to be (1) lending of money during off-season at exorbitant rates of interest and occupation of tribal land without any record, *in lieu* of loan (2) transfer of tribal land to non-tribesfolk in the guise of lease (*kuthakappattom*) or mortgage (*bhogyam*) (3) acquisition by encroachment and (4) acquisition by force and threat.

It would be interesting to examine a few instances of land loss for the tribesfolk and the tactics used by settlers to expropriate the land from this weakest segment of society.

In Sholayur, near Vayalur Ooru a tribal, Kare sold 3.60 acres of his land to a Christian settler, Yohannan just for Rs. 300 in the year 1982. At the time of registration this Christian settler gave the tribal an additional Rs. 200 and a bottle of arrack. After three years, this settler sold this land for Rs. 20,000 to a settler from Pathanamthitta. This sort of buying and selling was quite common in Attappady after the 1950s. The overt form of exploitation involved in this transaction is the extremely low price paid to the tribesfolk. In 1962-63, while the non-tribesfolk received Rs. 650 per acre, the tribesfolk received only Rs 182 per acre. In 1975-76 also the price differential was quite substantial, the land of non-tribesfolk fetching Rs. 843 per acre while that of the tribesfolk only Rs. 390 per acre.

Abject poverty of the tribesfolk and the tactics of intimidation and blackmail employed by the non-tribesfolk made it possible for this process work well (Kunhaman, 1981). The tribesfolk who did not want to sell their land also had to borrow cash from the settlers on promise of repayment after harvest. Settlers used this opportunity to snatch lands away from the tribesfolk since most of them failed to repay the loans. Thus, the easiest method followed by the immigrants, mostly those from Travancore, to acquire tribal land was money-lending to tribesfolk during off-seasons at exorbitant rates of interest; dubious methods were employed in almost all their trade transactions with the tribesfolk. The non-tribal moneylenders, mostly the rich and the greedy Malayali and Tamil settlers, generally took written statements from the tribesfolk at the time of payment of loans containing the clause that if the borrower fails to repay the loan within the stipulated time, he would dispose of his land to the money lender. This type of conditional deeds was common in most parts of Attappady during the mid-1960s. As the tribesfolk craved for cash, they did not think of the repercussions of such borrowing. Those who could not repay the principal and the cumulative interest within the stipulated time period had to surrender their land to the lenders. In the absence of any agency to serve the interests of the tribesfolk and since the tribesfolk themselves were weak and defenceless, the lands passed on to the settlers without any hitch. The extent of land lost by the tribesfolk due to non-repayment of cash loans was higher in Attappady than in any other tribal area in Kerala (Mathruboomi, 1983). Land transfer takes place in three ways viz., *Vilakkary*, *Bogyakkary*, and *Kuthakappattam*. In *Vilakkary* land is sold for money or in exchange for goods. In the two other cases, land is given to a person for cultivation on lease for one to five years. Instead of relieving this land after the lease period is over, settlers manage to keep the land in their possession, giving the tribal paltry sums of money. When disputes arise regarding land transfers, the tribal is isolated by the settler community which would stand united to defend the lessee. Demand for repayment of the sum of money advanced to the tribal would be claimed back, together with exorbitant amounts by way of interest, would be immediately made. The *Adivasis*, being the worshippers of *Malleeswaran*, never practise falsehood and seldom like to live in debt. Hence, they give their land to the settler and take up wage labour in the settler's land.

Loss of land to the tribesfolk due to encroachment by settlers was widespread during the early 1960s. In Kalkandiyoor, 142.75 acres were alienated by Tamil settlers. Of this, 140.75

acres were encroached by M.C. Chettiar of Coimbatore and who later transferred it to Assan Mohamed Rawther. As the tribesfolk were ignorant about the machinations of Tamil settlers they did not object to such practices. Several complaints were submitted by them later for legal action but they went unnoticed or were not taken up for want of proper records of rights. Instances of encroachment and unfavourable bureaucratic decisions on complaints against them were not rare even as late as the 1970s.

In Kallamala *Ooru* 60 acres of land was taken forcibly by Kalladi Kunhammed, a Malayali settler. As a result, 27 tribal households became landless (GOK, 1982). His argument at the time for eviction of tribesfolk from the land was that the land really belonged to him as he had purchased it from Moopil Nair. This land was later sold by him to other settlers from Kerala. In another incident Pazhani Gowndan forcefully occupied three acres of land from Gumban, son of Soriyan of Agali *Ooru* in the year 1967. These are only a few of the reported cases in various studies. There are large numbers of eviction which have gone unreported in Attappady. Instances of atrocities of Muslims on Mudugas, such as burning down huts and physical violence perpetrated for grabbing their lands are recorded in the literature (Mathur, 1975). There were instances of tribesfolk jointly protesting against such atrocities. Even after years of interaction with settlers and implementation of scores of tribal development programmes, the plight of tribesfolk has remained unresolved.

During the period 2002-‘03 Irula households in Pudur lost, on an average, 3.55 acres of land each owing to financial difficulty. However, Mudugas lost only 0.83 acres of which 83 percent was alienated under mortgage. Kurumbas have not reported much land loss, probably due to their settlement in the remotest part of Attappady where there is little level land suitable for cultivation. As for Irula tribes, about two-thirds of the land loss is mainly due to sale.

In the early years of migration, settlers had taken land from *Jenmis* and tribesfolk on lease. Leasing out or mortgaging of land was quite common among Mudugas and Kurumbas. While Mudugas alienated the major share of their land to Malayali settlers, Irulas lost their land to Tamil settlers. From our field enquiry, we have found that Muduga households lease out their wet, riparian lands to Malayali settlers, who are their neighbours for development of plantations. As they depend mainly on wage labour for cultivation in their lands, shortage of agricultural labour in the locality, tend to force them to lease out lands.

Table 4.3 Types of Land Alienation among Tribal Households (Percentage)

Type	Tribes			Total
	Muduga	Kurumba	Irula	
Sale	8.4	0.0	65.2	44.4
Mortgage/Lease	83.3	100.0	4.3	33.4
Encroachment	8.3	0.0	30.4	22.2
Total	100.0	100.0	100.0	100.0
Average area	0.83	2	3.55	2.60

Source: Sample Survey

Table 4.4 Direction of Land Alienation (Percentage)

Agency	Tribes			Total
	Muduga	Kurumba	Irula	
Malayalis	91.7	0.00	8.7	36.1
Tamilians	8.3	0.00	56.5	38.9
Tribesfolk	0.00	100.0	4.3	5.6
Govt	0.00	0.00	30.4	19.4
Total	100	100	100	100

Source: Sample Survey

The immediate consequence of land alienation is that the total cultivable area of the tribesfolk declined sharply while that of the non-tribesfolk increased several fold. A major chunk of the land left with the tribesfolk remained uncultivated due to several reasons such as disputes, lack of finance, and unsuitability of the land.

Process of diversification in cultivation

Traditional tribal cultivation was primitive subsistence agriculture of the slash-and-burn type (shifting cultivation or *Kothukadu* or *Punam* cultivation). Their livelihood was mainly obtained from subsistence farming and minor forest produce collected from the forest. In the course of time, the area under shifting cultivation dwindled considerably due to a variety of reasons like emergence of settlers with a different mode of cultivation, monetisation of the tribal economy and restrictions on extensive cultivation imposed by the government. The most important among them was the entry of men from adjacent areas with a technology different from their own. The tribal economy was opened up to outsiders, commercial crops gained importance and the tribal practices of cultivation paled into insignificance. Traditional cultivation gave way to diversification in cultivation, emergence of wage labour from among the tribesfolk and the development of monetised economy.

The two types of cultivation, shifting cultivation, based on tribal know-how and technology and settled cultivation (peasant agriculture), are now in operation in Attappady among the tribesfolk. Among the three tribal communities, it is mainly Kurumbas who follow shifting cultivation.

Though shifting or *punam* cultivation is been criticised on various grounds, mainly destruction of forest, the tribesfolk of Attappady had depended mainly on this type of cultivation for their livelihood for long periods in the past. Forest dwellers could obtain an independent livelihood sufficient for their family needs without much external intervention. Shifting cultivation did not in fact, decrease soil fertility of the forests. “The virgin soil is wonderfully rich, and the small amount of seed that is sown yields a bountiful harvest” (Innes, 1908).

Kothukadu, a mode of cultivation and a ‘way of life’, was extensively practised in Attappady till the beginning of this century. Certain restrictions on this practice were imposed by the Government for the first time in 1917. A series of schemes followed as a result of which the

main livelihood activities of the tribesfolk in the forest areas got restricted to a limited forest area. As a result, two ethnic groups, Irulas and Mudugas, moved away to other forest areas. At present, Kurumba is the only community – less exposed as they are to the outer world than other tribesfolk – which follows shifting cultivation within the limits of the permitted areas.

Before the intervention of the government began, land was made available for use to tribesfolk by feudal landlords in the plains at normal rates of rent; during these times, selection of land for cultivation was made more or less by choice of the cultivators themselves. The situation changed and the forest land came to be allotted to the tribesfolk by the Government, on lease terms in the name of the *Moopans* of the hamlets. *Moopan*, being the leader of the *Ooru*, has the right to distribute land among families. The allotted land, not on the basis of choice of the actual cultivators, is used for cultivation by the allottees. Land allotment has shifted the emphasis from ‘choice to chance’.

As different from settled cultivation, shifting cultivation involves traditionally established conventionality and rituals. The various steps followed in shifting cultivation of tribesfolk are selection of land, fixation of the date for beginning cultivation operations, preparation of land, sowing of seeds, weeding and harvesting. Selection of an area for cultivation is the first step involved in shifting cultivation. The *mannukkaran* (soil expert) would select the land which would be approved by the Tribal Council presided over by the Moopan. The *mannukkaran* fixes the date of cultivation after examining natural growth in the area and the soil conditions. Once the land and the date of cultivation are decided, under the leadership of the Moopan, all the able-bodied members of the hamlet participate in clearing the land selected for cultivation. This will commence, in normal case, immediately after the *Sivarathri* festival. The bush and the small trees are cut down and burned for clearing the land and the ashes serve as fertiliser. Sowing of seeds begins in the month of May. The soil is not disturbed much by way of ‘preparation’ for sowing seeds; instead, seeds are just dribbled into holes. Women take small pits on the ground for sowing *thuvara* [*thumara* or *thumarai* (*Cajanus indicus*)] and *amara* [or field beans (*Dolichos lablab*)]. Afterwards, in May itself, the seeds of *ragi* or *kora* (*Elusine coracana*), *chama* (*Panicum miliaceum*), *kaduku* [or mustard (*Brassica juncea*)] and *cheera* [or *Kirai* (*Amaranthus gangeticum*)] are mixed together and broadcast. When the plants have grown up to about one foot height, weeding work begins (by June) and it continues till August. They do weeding only to the barest minimum required for fear of soil erosion. Harvesting takes place in September. As the maturity period is different for each crop, harvesting is carried out successively starting with *kaduku* and *cheera* in September; to *ragi* in October to November; to *chama* in November-December; and to *amara* and *thuvara* by January-February.

In order to purchase condiments, salt, cloth, tobacco, dry fish, etc, they market a small proportion of the harvest of *thuvara* and *kaduku*. It is estimated that about 80 percent of the produce constituted *kora* and *chama*, while *thuvara* constituted about 15 percent. Cultivation of *cheera*, *kaduku*, and *amara* was insignificant compared to cultivation of *kora* and other cereals (Nair, 1991). Hence, the production in a tribal economy was aimed mainly at establishing a self-sufficient economy with the minimum environmental hazards. Livelihood diversification was minimal in such a subsistence economy.

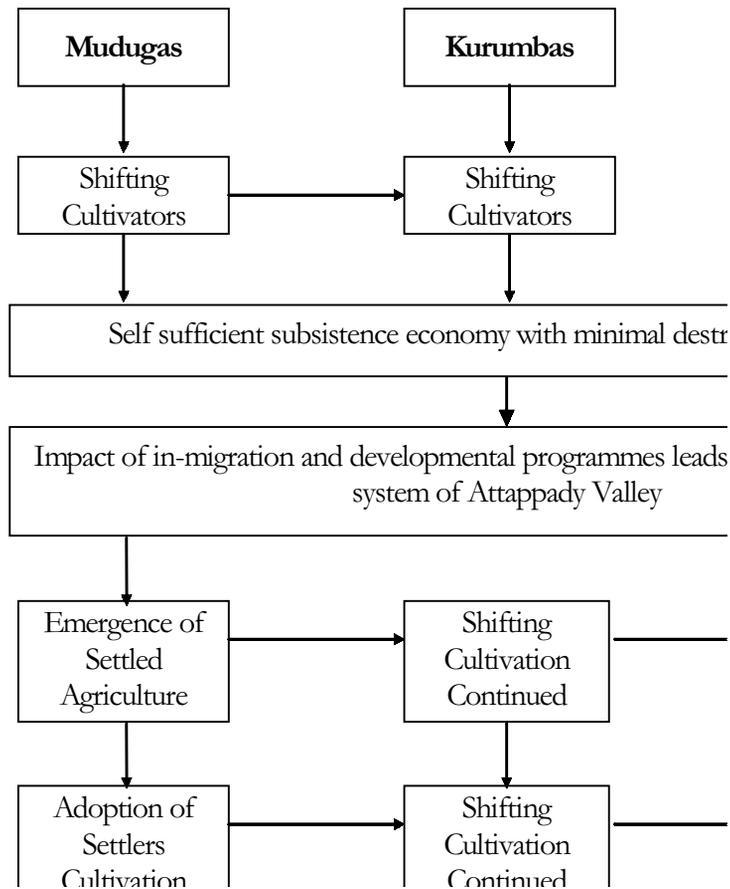
Shifting cultivation, the main source of subsistence of tribesfolk, was condemned by the British for three reasons: (1) field preparation for shifting cultivation destroy economically valuable trees, (2) If accepted as a legitimate land use, hill people claim large areas of land which the British wanted to claim either for private plantation or for government, and (3) The hill people could be forced to labour for British planters or for the Forest Department only if their independent access to forest resources was eliminated or curtailed. However, recent studies, however, affirm the superiority of shifting cultivation to other types of cultivation, in the already degraded forest land of Attappady. One notable feature of shifting cultivation is that once the fertility of the land declined, it is abandoned and another area is selected for clearing and farming. The former area reverted to forests and remained uncultivated for years together. This system of cultivation was eminently suited to the topography of the forest land in Kerala with undulating terrain, steep hills, and low-lying valleys (Kunhaman, 1981).

All the five system properties, namely, productivity, stability, sustainability, equitability, and autonomy of the tribal agro-ecosystem of Attappady are well satisfied in shifting cultivation. Efficiency of shifting cultivation in terms of energy and economy is superior to that of settled agriculture. In shifting cultivation output is high with an output-input ratio of 19.5:1. In settled agriculture the output is lower with an output-input ratio of 16.3:1. In another form of settled agriculture practised by Irulas, which is similar to the one practised by Tamilians, the output is the lowest among the three cases with the output-input ratio of 12.9:1 (Muraleedharan, et al, 1993).

Three factors must have prompted them to shift from their traditional subsistence crops to settler crops. They are, (1) large tracts of lands possessed by the settlers, and the resultant changes in cropping pattern, (2) assistance received in the form of seeds and seedlings (like coconut and cashew seedling, pepper vines, cotton seeds, etc) through governmental agencies as part of tribal development schemes, and (3) increasing cash requirements of tribesfolk which in the early days were met through sale of land to settlers. As a part of total development and building up of assets of tribesfolk, cash, and kind assistance were provided through the office of ITDP, the *Panchayat* and the *Krishi Bhavan*. A major portion of the assistance in kind was made in the form of seeds and seedlings of grains and plants not traditionally cultivated by tribesfolk. Whatever seeds and seedlings they received, they planted in their plots without receiving sufficient technological backup. As a result, many of these crops remained unproductive or yielded very low levels of output. Cultivation of *ragi*, *chama*, and other cereal crops did not fetch adequate income to meet the cash requirements of most of the tribal households. They were therefore forced to shift to cash crops like cotton, groundnut, and tapioca which require only short periods of waiting for receipt of return. Gradually, many tribal households shifted emphasis towards an array of new annual and perennial crops, from their traditional subsistence crops.

However, there is significant difference in the extent of shift towards settled cultivation among the three tribal communities. More than 90 percent of area owned by Kurumba communities is still under traditional shifting cultivation, while Mudugas and Irulas cultivate nearly half the area under their possession for subsistence purposes (Table 4.5). Our personal visit to Edavani *Ooru* of Kurumbas indicates that the settled type of cultivation is not practised

Figure 4.1 Crop Succession among Tribesfolk



by any family there. The traditional livelihood pattern of Kurumbas remains mostly unaffected; they have not taken to peasant cultivation. Hence, crop diversification is very little among these tribes. Mudugas and Irulas concede that they follow peasant cultivation, having come under the influence of the agricultural practices of Malayali and Tamilian settlers. As regarding crops cultivated, the Moopan of Pottikkal *Ooru* stated that every household grows millet, red gram, and amaranth together with other crops.

Around 50 percent of the households interviewed opined that influence of settlers is the main factor for the shift from traditional cultivation to cultivation of perennial and seasonal crops as practised by settlers. Another major reason they identified is need for money, which they could not raise from shifting cultivation. Hence, the livelihood strategies of tribesfolk are influenced to a large extent by the settlers and the need for money (Table 4.6).

Table 4.5 Distribution of Area according to Type of Cultivation (Percentage)

Type	Muduga	Kurumba	Irula	Total
Traditional crops	51.4	92.3	40.8	54.1
Other crops	48.6	7.7	59.2	45.9
Total	100.0	100.0	100.0	100.0

Source: Sample Survey

Table 4.6 Reason for Shift from Traditional Cropping System (Percentage)

Reason	Tribes			Total
	Muduga	Kurumba	Irula	
Influence of settlers	47.1	10.8	55.3	42.4
Assistance from Govt	11.8	83.8	3.5	25.9
Low productivity	11.8	2.7	9.4	7.9
Need for money	29.4	2.7	31.8	23.7

Source: Sample Survey

Cultivation of perennial crops is in general, insignificantly low among Kurumbas (only 0.7 percent) but they give great importance to cultivation of forest trees; the average number of such trees in each plot is 29. Forest trees in the lands of the other two communities are comparatively low (Table 4.7). Irulas and Mudugas cultivate extensively perennial crops like coconut, arecanut, cashewnut (cashew seedlings are supplied through supporting agencies), and pepper but seldom follow scientific principles of cultivation. They get supplies of seeds and seedlings but little crop maintenance support from the agricultural extension wing of the State government.

Table 4.7 Average number of Crops/ Trees under Cultivation

Type	Muduga		Kurumba		Irula		Total	
	Av.	Max.	Av.	Max	Av.	Max.	Av.	Max
Seasonal crops	2.57	4	3.88	7	2.49	5	2.83	7
Perennial crops	1.9	5	0.7	7	1.42	5	1.31	7
Forest trees	9.8	100	28.85	100	19.08	181	21.83	181

Source: Sample Survey

The Attappady region is characterised by great crop diversity. Crop diversification is a part of the shift in their livelihood strategies. Malayali and Tamil settlers cultivate a variety of crops many of which are raised for sales. The *adivasis* have been forced to accept many of

these crops for cultivation. However, these changes are not uniform in the region. Table 4.8 presents the allocation of land under different crop combinations among tribesfolk for current and the previous crop seasons. Of the total cultivated area among Mudugas 51.4 percent is under traditional tribal crop mix while 40 percent is under Malayali home garden crops such as jack, mango, coconut, pepper vine, and bananas/plantain, etc. Mudugas are not found practising the dry crops of the Tamilians like cotton and groundnut. Among Kurumbas the influence of home garden of Malayalis and dry crops of Tamilians are very low as more than 90 percent of their land area is under shifting cultivation. However, together with settlers, Kurumbas are practising *ganja* cultivation in the interior parts of forest. A different picture is obtained for the Irula community. They are practising all types of crops – Malayali home garden types, traditional tribal crops, and TAMILIAN settlers' crops including sugarcane. One reason cited for this type of adoption is that the Irula community has settled in areas of concentration of settlers and that their average size of wet lands owned by them is larger than those of the other two communities. Also a few of the *Oorus* are very near to rivers or on the road side. The farming system based on tribal crops now takes the following form.

1. Tribal subsistence crops supplemented with perennial and seasonal crops of Malayali settlers;
2. Tribal subsistence crops supplemented with quick income-yielding annual crops cultivated in both dry land and wetland by TAMILIAN settlers; and
3. Traditional subsistence crops supplemented by all types of crops brought in by settlers.

A perusal of change in crop diversification from the previous year indicates that area under traditional crops has dwindled from 65.7 percent to 51.4 percent for Mudugas. At the same time, the area under Malayali home garden crops has increased. Interestingly, the area under traditional crops cultivated by Irulas also decreased drastically and Malayali settlers' home garden crops gained dominance. The comparison of areas under current year and the preceding year itself points to the pace of diversification of crops between at least two tribal communities. Kurumbas are not much affected by the cultivation practices of settlers as they reside in the remotest part of Attappady. However, our field investigation revealed that governmental agencies have supplied home garden seeds and seedlings to Kurumba households, but without instructions about the technology of their cultivation. We have witnessed pepper vines left totally uncared for in several Kurumba hamlets.

It is now usual for peasants to leave their land uncultivated. Various reasons have been attributed to this. During 1962-63, about 41 percent of the cultivable land of the tribal people had remained uncultivated. The corresponding figure was 81 percent in 1975-'76. One of the most distressing reasons for leaving cultivated land fallow is the unsuitability of the land itself. For instance, nearly 28 percent of the land held by the tribesfolk in 1975-'76 had rocky and uncultivable patches. The corresponding percentage had been only 2 percent in 1962-'63 (GOK, 1977). As Kurumbas cultivate land for subsistence purposes and the type of cultivation is slash-and-burn, almost their entire area is brought under cultivation. They leave only very small proportion of their land uncultivated as their livelihood is greatly influenced by these crops especially during the off-season. Nearly 85 percent of the area is either cultivated in part or in full. However, Muduga and Irula households leave the larger

Table 4.8 Crop Combination among Tribal Households (Percentage)

Crop Combinations	Current Year				Previous Year			
	M	K	I	T	M	K	I	T
Tribal crops	51.4	92.5	41.1	54.6	65.7	90.6	61.3	68.7
Malayali home garden	40.0	3.8	22.7	21.0	28.6	3.8	7.7	10.0
Tamilian dry crops	—	—	9.9	6.1	—	—	8.5	5.2
Tribal crops & Malayali home garden	8.6	1.9	5.0	4.8	5.7	1.9	4.2	3.9
Tribal crops & Tamilian dry crops	0.00	1.9	18.4	11.8	0.00	3.8	16.2	10.9
All crops	0.00	0.00	2.8	1.7	0.00	0.00	2.1	1.3
Total	100	100	100	100	100	100	100	100

Source: Sample Survey

part of their lands area uncultivated. It is surprising to see that in an economy, where land is an important source of subsistence, only 20 percent of land owned by Mudugas are fully put under cultivation. Various reasons have been attributed for this situation.

Table 4.9 Proportion of Area Cultivated in the previous year (Percentage)

Area Cultivated	Tribes			Total
	Muduga	Kurumba	Irula	
Full	20.0	49.1	32.4	34.3
More than half	22.9	35.8	31.0	30.9
Half	28.6	11.3	22.5	20.9
Less than half	28.6	3.8	14.1	13.9
Total	100.0	100.0	100.0	100.0

Source: Sample Survey

Inadequate irrigation facilities and poor and unpredictable climate have been found to be the major reasons. More than 50 percent of the households opined that lack of irrigation facility is the main reason. Poor or unpredictable climate in the region acts as a deterrent to consistent agricultural practice (Table 4.10). Irula farmers grow cotton and groundnut but the yields are low and uncertain, as their lands lack irrigation facilities. Often they go for the trial-and-error method in the selection of crops, as they themselves are not sure of the suitability of the land for the crops. In addition, Irulas and Mudugas depend primarily on daily wage (*Cooli*) labour for their income and avoid devoting too much time to the risky venture of cultivation on their marginal lands. In short, the livelihood of Kurumbas still depends on subsistence farming; more diversification of cropping is observed among Mudugas and Kurumbas.

Table 4.10 Reasons for Leaving Land Uncultivated (Percentage)

Size	Tribes			Total
	Muduga	Kurumba	Irula	
Ill health	3.6	3.4	—	1.3
Inadequate irrigation	75.0	62.1	43.8	52.9
Poor climate	10.7	17.2	37.5	28.8
Poor quality of land	10.7	17.2	18.8	17.0
Total	100.0	100.0	100.0	100.0

Source: Sample Survey

Thus, we found that external intervention in the form of in-migration has alienated tribesfolk from their ancestral lands. In the process of settlement and land transfer tribesfolk were pushed to the steepest parts of the Attappady hills. The process of land transfers from the tribesfolk to settlers continued unabated till most tribesfolk were reduced to the status of wage labourers living from hand to mouth. Only a few are left with relatively large holdings. As a result of settlers' influences, coupled with the services of agricultural extension agencies, the agricultural practice of the tribesfolk has undergone drastic changes from shifting cultivation to an array of crop combination practices. However, these changes could not improve the living condition of tribesfolk as they lack technical and financial support to enhance the productivity of their crops.

5. Activities, Access to Resources, and Livelihood

Introduction

After discussing external intervention on livelihood strategies, we now move on to an analysis of the access of tribal households to the fruits of developmental programmes; their economic activities, both natural resource based and non-natural resourced based; and the income portfolios of the tribal households. Livelihood strategies are composed of activities that generate the means of household survival. Therefore, different categories of activities and incomes generated from them are examined in the first part. Access to resources, natural and non-natural, is the prime factor, which determines the livelihood of poor rural people. In the second part we examine the access of tribesfolk to resources through programmes mediated by developmental institutions.

Activities and livelihood

Before external intervention began, the tribal economy consisted mostly of natural resource-based activities. However, there has taken place a drastic change in the livelihood activities in course of time. The categories of activities that are potential components of a livelihood strategy among tribesfolk are examined here by considering the activity status of all members of the sample households.

We have classified the occupational status of the members initially into main and subsidiary; each category is then subdivided into nine categories, namely, (1) agriculture (cultivation) and other allied activities including livestock maintenance, (2) wage labour (*cooli*) in agricultural and non-agricultural sectors, (3) trade/business, (4) Government services including activities of developmental agencies, (5) students, (6) household work, (7) unemployed, (8) too young or too old, and (9) others.

The most striking observation is that cultivation as a primary occupation accounts only for 3.3 percent of the total sample; and in the Irula community, the figure is below two percent. A large proportion of household members reports *cooli* work as their primary occupation. While 58 percent of Irulas and Kurumbas are engaged as daily wage labourers, 40 percent of Mudugas are engaged so. Both men and women engage themselves as wage workers in farm and non-farm activities. Women concerned with household chores alone, are not very common among tribal households and they are all engaged in wage labour. The main sources of wage labour for tribesfolk is work in the lands of the non-tribesfolk during the agricultural season; work is available also in soil conservation programmes, and construction projects carried out.

The participation rate of tribesfolk in government service is merely about two percent. Students comprise 18.3 percent of total household members (Table 5.1).

Table 5.1 Distribution of Members of Households according to Primary Occupation (Percentage)

Activity	Tribes			Total
	Muduga	Kurumba	Irula	
Agriculture	7.9	5.0	1.6	3.3
Wage labour (<i>coolli</i>)	40.0	58.8	58.4	55.6
Trade or Business	—	—	0.6	0.4
Govt. service	1.2	1.4	2.7	2.1
Students	24.8	17.6	16.9	18.3
Household work	4.8	3.6	1.6	2.5
Unemployed	5.5	4.1	6.1	5.6
Young/Old	15.8	9.5	11.6	11.8
Others	—	—	0.6	0.4
Total members	165	221	640	1026
	100.0	100.0	100.0	100.0

Source: Sample Survey

Most of the sample households consider cultivation in own land, a secondary source of income. When wage labour is not available most of the families spend time in own farm activities. Of the total 1026 household members, 660 are found to be engaged in some economic activity or other. Among them, 82 percent reported having done some development work I their agricultural land, but not any cultivation activities. Hence, in income-earning activities, tribesfolk are reduced by and large to the status of casual wage labourer.

Income portfolio of tribal households

The income portfolio of each tribal group is constructed separately to understand the relative shares of their difficult economic activities in their livelihood platform. For all the three tribal communities, the main source of income comes from cultivation of land, livestock rearing, sale of forest produce and wages. Income from government service and trade or business is insignificant, hence not considered. Effort has been made to explore the relative shares of each source to total income in each community (Table 5.2).

Table 5.2 Distribution of Households according of Monthly Income Level (Percentage)

Income (Rs.)	Muduga	Kurumba	Irula	Total
< 1000	25.7	9.4	10.6	12.5
1000- 2000	40.0	52.8	41.3	43.5
2000-4000	28.6	32.1	42.5	38.3
>4000	5.7	5.7	5.6	5.6
Total	100.0	100.0	100.0	100.0
Average monthly family income	1950.95	2043.36	2105.82	2070.62

Source: Sample Survey

Economically, the Irula community is better off than the other two communities, as 42.5 percent of the Irula families fall in the monthly income bracket of Rs 2000-4000. Mudugas are found to be very poor as more than one-fourth of their households have monthly income below Rs 1000. On the average, 40 to 50 percent of all the tribal families lie in the monthly income bracket of Rs. 1000 to Rs 2000. However, this picture does not clearly give the economic status of the household unless we consider the average household size. The average monthly income from all sources, farm and non-farm, of a household with four members is around Rs 2000 only. Wide inter-community differences are noticed in average family income (Table 5.3).

Table 5.3 Income Portfolio of Tribal Households (Percentage)

Source	Muduga	Kurumba	Irula	Total
Wage income	88.02	80.43	84.04	83.81
Livestock	1.72	5.63	7.35	6.24
Forest products	0.00	5.18	0.27	1.27
Agriculture	10.26	8.76	8.34	8.68
Total	100.00	100.00	100.00	100.00

Source: Sample Survey

Let us now examine the income portfolio across tribal communities. As might be expected, the proportion of income from wage labour is more than 80 percent for all the communities while income from agriculture is seen to be as low as around 9 percent. Much variation is not observed in the relative shares of income from agriculture and wage labour to total income, across the communities. Income from livestock and forest products seems to be less important for *Mudugas* (only 1.72 percent of their income portfolio) than for *Irulas* and *Kurumbas* (10.81 percent and 7.62 percent respectively). Forest dependence of *Kurumbas* for collection of minor forest produce, on the one hand, and livestock maintenance among *Irulas*, on the other, are reflected in their income portfolio. It does not mean the relative share of forest products and livestock are higher for these tribesfolk groups. Overall, the tribesfolk are distinguished by their reliance on wage income, and their relative low incomes from other sources.

After a perusal of the income portfolios of households, we may examine the inter-tribal variations in the share of various sources of income viz., livestock, forest products, and agriculture to total household income and the relative importance of each.

Livestock

As for *Mudugas*, 83 percent of the families are not generating any income from livestock and for other communities the corresponding figures turn out to be 66 percent for *Kurumbas* and 45 percent for *Irulas*. However, for families depending on livestock, 22 percent are generating only less than 10 percent of their income from this source. Around 20 percent of *Irula* households generate 10 to 20 percent of their family income from this source. The average monthly income from livestock is found to be the highest for *Kurumbas* and the lowest for *Mudugas*.

Table 5.4 Share of Livestock Income to Total Households' Income (Percentage)

Share	Muduga	Kurumba	Irula	Total
No Share	82.9	66.0	45.0	54.8
Less than 10	11.4	15.1	26.3	21.8
10 to 20	5.7	13.2	20.6	16.9
Above 20	—	5.7	8.1	6.5
Total	100.0	100.0	100.0	100.0
Average monthly income (Rs.)	195.83	338.88	281.29	285.97

Source: Sample Survey

Forest Produce

As mentioned earlier none of the Mudugas are found relying on forest other than for collection of firewood. Income from forest resources supplements around 10 percent of family income for around 76 percent of Kurumba families. Another 9 percent could accrue 10 to 20 percent of their family income exclusively from forest products. The average income from the marketing of forest product is Rs 119 for Kurumbas and only Rs 33 for Irulas. For diversification of income portfolios proper training to tribesfolk and scientific extraction of minor forest produce are essential.

Table 5.5 Share of Income from Forest to Total Household's Income (Percentage)

Share	Muduga	Kurumba	Irula	Total
No Share	100.0	11.3	83.1	70.2
Less than 10	—	75.5	15.6	26.2
10 to 20	—	9.4	1.3	2.8
Above 20	—	3.8	—	0.8
Total	100.0	100.0	100.0	100.0
Average monthly income (Rs.)	0.00	119.46	33.72	88.17

Source: Sample Survey

Agriculture

The share of income from cultivation to total income of more than 50 percent of tribal household is less than 10 percent (Table 5.6). Nearly half the Muduga households and a quarter of households of other communities generate another 10 to 20 percent of their family income from agriculture. However, only a meagre two percent of the families create above 40 percent of their family income from this source. It follows that the share of farm income to the livelihood of the tribal households has fallen to extremely low levels.

Some interesting insights into livelihood strategies are gained from these results. All tribal

communities depend on wage labour as the major source of their income and diversification to other occupations has been minimal. Kurumbas still depend on forest as they are living very close to the forested region. Developmental programmes could not generate adequate employment opportunities. Developmental schemes failed, at least in part, to inculcate the urge for diversification of occupations of the tribesfolk.

Table 5.6 Share of Agricultural Income to Total Household's Income (Percentage)

Share	Muduga	Kurumba	Irula	Total
No Share	2.9	—	13.1	8.9
Less than 10	42.9	56.6	52.5	52.0
10 to 20	42.9	28.3	22.5	26.6
20 to 40	8.6	15.1	9.4	10.5
Above 40	2.9		2.5	2.0
Total	100.0	100.0	100.0	100.0
Average Monthly Income (Rs.)	206.12	178.93	202.15	197.3

Source: Sample Survey

Access to resources and livelihood

Livelihood of a household depends also on access to resources. Access to resources indicates wealth status and resource use generates income. Access to forest resources, credit, health facilities, and developmental activities enhances the economic opportunities of tribal households. Leakage and pilferage from the development schemes defeat their very objective. A recent study by AHADS came to the conclusion that very little of the huge amounts of money spent on various development activities in the Attappady block, in the form of concessions and assistance, had reached the intended beneficiaries.

Access to forest resource

Mudugas depend on forest for collection of firewood, reed, and bamboo. During the early days of in-migrants from the plains below, the main source of livelihood for tribesfolk, in addition to crops cultivated, was forest produce. They collected medicinal plants and other forest produce for own use and for sale. Now, the degree of dependency on forests has declined considerably and is limited to the collection of essential items for household use. However, Kurumbas who live in the interior parts of forest collect various minor forest produce for commercial purposes. But they collect only a few items, about seven or eight, since the younger generation among them – and also among Irulas – is reluctant to go to forest for livelihood. Honey is the most important item of forest produce collected by the tribesfolk. More than 90 percent of the Kurumba households collect honey during the season, while only 16 percent (i.e., 26 families out of 160) Irula households are engaged in this activity. The average collection of wild honey is 9.94 kg a year per household. Other important items collected are *Kundirikkam* (dammer), *Kungillyam* (sal tree), etc. All these are collected mainly for the market except *Kizhangu* (tubers). The mean income per tribal household from forest produce works out to Rs 491.

Table 5.7 Distribution of Families according to Minor Forest Produce Collection
(Percentage)

Forest Produce	Tribes			Total	Average Quantity	Average Income
	Mudugas	Kurumbas	Irulas			
<i>Thenu</i>	No collection of MFP	90.57	16.25	34.74	9.94	594.98
<i>Kundirikkam</i>		22.64	0.00	5.63	12.5	985.41
<i>Cheenikka</i>		41.51	0.63	10.80	18.26	268.63
<i>Kungillyam</i>		49.06	0.63	12.68	11.07	280.25
<i>Kizhangu</i>		47.17	0.00	11.74	8.92	137.5
<i>Resins</i>		3.77	0.00	0.94	4.5	150
Others		11.32	0.63	3.29	20.28	256.25

Source: Sample Survey

Table 5.8 Marketing of Minor Forest Products (Percentage)

Agency	Tribes			Total
	Muduga	Kurumba	Irula	
Private traders	No collection of MFP	12.1	62.1	20.6
Intermediaries		3.4	0.6	0.00
Co-op society		68.8	31.0	62.4
Domestic use		19.1	3.4	16.5

Source: Sample Survey

The collected forest produce is sold immediately as the tribesfolk are always in dire need of money. Kurumbas market more than two-thirds of this collection through co-operative society. However, Irulas sell their collections directly to private traders in the locality. Sales through intermediaries is not practised prevalent in the area. Owing to various types of interventions and the consequent monetisation of the tribal economy, the degree of forest dependence has declined to low levels among the tribesfolk of Attappady, except in the case of households living in the remotest part or near to dense forest areas. Hence, forest as livelihood has lost its predominance in Attappady. Lack of alternative livelihood sources has diverted the attention of the younger generation to other available and easily accessible occupations, particularly to wage labour.

Access to credit and its use

Tribesfolk look for credit facilities for meeting their daily needs of consumption and long-term needs house construction, as well as for marriage and house repairs. Their credit needs for consumption purposes are the highest during the off-season. Lack of credit facility was the prime reason noted for land loss and land alienation as tribesfolk heavily depended on landlords and settlers for financial assistance. Credit facility in Attappady seems to have

improved considerably by now. From our survey, it is found that the practice of borrowing from banks and cooperative society for agricultural or other business purpose is not yet very common among the tribesfolk. However, many tribal households reported cases of borrowing from the “Government”. This, however, was later found to be the financial assistance received for house construction or repair of house. A major and notable activity undertaken through governmental agencies is the construction or repair of houses of tribesfolk. Of the total sample, 84 percent household are reported to have received money for construction purposes and the average amount received comes to Rs 18929 per household.

Even though credit is accessible in the region, only Irulas (15.8 percent) have taken loans from banks. However, settlers, both Malayalis and Tamilians make use of institutional credit facilities to a much greater extent. About 15 percent of the Irula households have utilised bank loans for agricultural purpose (Table 5.10). Poor repayment capacity, ignorance, and arrogant behaviour of officials are pointed out as reasons for the reluctance of tribesfolk to approach banks for financial assistance.

Table 5.9 Source of Credit to Tribal Households

Source	Tribes			Total	Average Amount
	Muduga	Kurumba	Irula		
Government	20 (87.0)	29 (90.6)	92 (80.7)	141 (83.4)	18929.79
Settlers	—	—	2 (1.8)	2 (1.2)	8000.00
Banks	3 (13.0)	3 (9.4)	18 (15.8)	24 (14.2)	9520.00
Landlords	—	—	2 (1.8)	2 (1.2)	1250.00
Total	23 (100.0)	32 (100.0)	114 (100.0)	169 (100.0)	16663.43

Figures in parentheses indicate percentages

Source: Sample Survey

Table 5.10 Distribution of Households according to Purpose of Credit (Percentage)

Purpose	Tribes			Total	Average Amount
	Muduga	Kurumba	Irula		
Consumption	—	—	4.4	3.0	11800.00
Agriculture	13.0	9.4	14.9	13.6	10391.30
House construction	87.0	90.6	77.2	81.1	18986.13
Marriage	—	—	2.6	1.8	4333.33
Others	—	—	.9	.6	4000.00
Total	100.0	100.0	100.0	100.0	16663.43

Source: Sample Survey

Access to health facilities

Epidemics and various other diseases are quite common in the region, though their intensity magnitude has come down over the years. Even now, especially during the rainy season, several contagious diseases are reported annually through the media. During our field study, instances of children between 10 to 15 years of age working as wage labour because their parents were suffering from chronic diseases like tuberculosis. Inaccessibility to specialised treatment facilities, have many patients unattended and uncared for. However, tribesfolk get free medical treatment from government hospitals and dispensaries in their locality.

There are three public health centres and one community health centre operating in Attappady. Altogether 27 sub-centres are available in the relatively interior areas. In addition, two Ayurvedic hospitals and three Homoeopathic hospitals also exist. As expected, tribesfolk rely mainly upon government hospitals (Public health centres) and dispensaries for treatment of any kind of diseases and are found happy with the medicines dispensed to them by these institutions. Significant inter-tribal differences are not observed in the degree of dependence on government hospitals. Surprisingly, nearly 95 percent of the tribal households depend only on government hospitals for treatment. Their economic position is yet to permit them to enjoy treatment offered by private hospitals and doctors, but at exorbitant prices (Table 5.11).

Table 5.11 Choice of Hospital of Tribesfolk

Type	Muduga	Kurumba	Irula	Total
Govt hospital	29 (82.9)	48 (90.6)	158 (98.8)	235 (94.8)
Private hospital	6 (17.1)	5 (9.4)	2 (1.3)	13 (5.2)
Total	35 (100.0)	53 (100.0)	160 (100.0)	248 (100.0)

Figures in parentheses indicate percentages

Source: Sample Survey

About six percent of Kurumba households resort to tribal medicines. However, on the whole, tribesfolk preferred Allopathy to all other systems.

Table 5.12 Distribution of Households by the Preferred Systems of Medicine

Type	Muduga	Kurumba	Irula	Total
Allopathy	94.3	83.0	98.8	94.8
Ayurveda	2.9	1.9	0.0	.8
Homeo	2.9	1.9	1.3	1.6
Nature cure	0.0	7.5	0.0	1.6
Tribal medicine	0.0	5.7	0.0	1.2

(Percentage)

Source: Sample Survey

The number of deaths reported from our sample households for the year 2002-2003 is 22, of which 13 were from Irula households. Of the total reported cases, three were suicides committed due to financial problems.

We also attempted to seek the views of tribesfolk regarding the attitudes of the medical personnel in the government medical care institutions. Surprisingly almost the entire respondents (98.3 percent) expressed their satisfaction with the treatment facilities and the attitudes of doctors. Many tribal households mentioned the name of a particular doctor and spoke in appreciative tones about his dedicated services. The major inconvenience facing the majority of hamlets in Attappady is the location of hospitals and dispensaries in places far away from their hamlets.

Table 5.13 Attitudes towards Medical Facility (Percentage)

Rating	Muduga	Kurumba	Irula	Total
Good	28.6	22.6	53.8	43.5
Moderate	68.6	75.5	45.0	54.8
Bad	2.9	1.9	1.3	1.6
Total	100.0	100.0	100.0	100.0

Source: Sample Survey

Access to developmental programmes

Over the years tribal households have received assistance in cash and in kind, through several developmental programmes. Assistance rendered through these schemes has undoubtedly played a strategic role in improving the living conditions of tribesfolk. The areas of assistance received are broadly classified as agriculture, animal husbandry, education, self-employment, and house construction.

Agriculture and animal husbandry

One of the prominent areas in which assistance is required to improve the living conditions of the tribesfolk is agriculture. The areas of assistance in agriculture comprise supply of land and inputs required for cultivation. There is high inequality in the availability of cultivable land for the tribal communities. When less than one-third of Kurumba households and about 30 percent of Irula households reported as having received land for cultivation, not a single Muduga household reported so. Also more than one-fifth of the Irula community received seeds for cultivation from governmental agencies. Assistance in the form of fertilisers, tools and implements, and irrigation facilities remains far below requirements (Table 5.14).

Another area of assistance is supply of cow, goat/sheep, and chicks. Only a few households (less than 10 percent) received assistance in this segment; inter-tribal disparity in assistance received of livestock is high. Muduga households reported that they have been completely left out from the support scheme during the year 2002-2003 (Table 5.15).

Table 5.14 Distribution of Households according to Access to Agricultural Resources
(Percentage)

Resource	Muduga	Kurumba	Irula	Total
Land	0	32.1	30.6	26.6
Fertiliser	0	3.8	5.0	4.0
Seeds	2.9	3.8	21.9	15.3
Tools	0	9.4	1.9	3.2
Irrigation	0	1.9	0	04

Source: Sample Survey

Table 5.15 Distribution of Households according to access to Animal Husbandry
(Percentage)

Resource	Muduga	Kurumba	Irula	Total
Cow	0	9.4	10.6	8.9
Goat	0	7.5	8.8	7.3
Poultry	0	3.8	3.1	2.8

Source: Sample Survey

Education and self-employment

Education plays a crucial role in changing the attitudes of people towards better livelihood strategies. It is not just the build-up of schools but easy and free access on the one hand and fulfilment of associated requirements on the other, which enable vulnerable commitments to improve their levels of living. Several facilities are made available to tribal children to undergo education; they are not fully made use of for the want of income of the tribal households. All tribal children have facilities like stipend, books, dress, mid-day meals, and hostel facilities. However, inter-community disparities exist. The distribution of tribal households according to access to educational facilities is shown in Table 5.16. Around 50 percent of the households enjoy all the educational facilities. Irula households enjoy more educational facilities than the other two communities. Next in the order, come Kurumbas. It is the Muduga community in Pudur is that lags behind.

Table 5.16 Distribution of Households according to Access to Educational Facility
(Percentage)

Resource	Muduga	Kurumba	Irula	Total
Stipend	14.3	39.6	60.6	49.6
Books	17.1	41.5	63.8	52.4
Dress	17.1	41.5	61.3	50.8
Mid-day meal	17.1	39.6	60.6	50.0
Hostel	5.7	30.2	55.6	43.1

Source: Sample Survey

Self-employment has not become widespread among tribesfolk. Schemes implemented for

promotion of self-employment among them have not yielded the expected results. Training for starting small stores or other small business units remains inaccessible to most tribal households. Training given for the collection of forest produce a practice, which is dwindling in the area, and for forest work has helped promotion of certain self-employment activities (Table 5.17).

Table 5.17 Distribution of Households according to Access to Self-employment Scheme
(Percentage)

Resource	Muduga	Kurumba	Irula	Total
Petty shops	—	1.9	1.9	1.6
Business	—	—	.6	0.4
MFP collection	—	37.7	11.9	15.7
Forest work		5.7	6.9	5.6

Source: Sample Survey

House construction and repair

Housing condition of most of the hamlets has improved in recent years. In the place of huts built with reeds, grass, and mud now stand houses built with tiles and bricks and cement. In this respect the role of government has been extremely valuable. Most households received assistance in the form of free house sites and/or free houses or repairs to existing houses. More than three-fourths of the houses have been constructed with governmental assistance and the land has also been provided freely. Assistance has been received also in the form of support for repair of existing house, such as replacement of thatches roof to tiled roof, and adding new rooms to existing structures.

Table 5.18 Distribution of Households according to Access to Housing Facilities
(Percentage)

Resource	Muduga	Kurumba	Irula	Total
Free house site	28.6	84.9	89.4	79.8
Free house	28.6	69.8	88.1	75.8
Repair of house	25.7	43.4	79.4	64.1

Source: Sample Survey

The preceding analysis has shown that most of the tribesfolk primarily depend on wage work for livelihood. Wage earnings are highly for maintaining a reasonable standard of living for the majority of the households. Dependence on subsistence agriculture and forest products has considerably declined, particularly among Irulas and Mudugas. Resource requirements of tribesfolk are not fully met through institutional agencies and support schemes.

6. Summary and Conclusions

The study was conducted in Attappady Block of Palakkad district, one of the backward and fragile ecological regions in Kerala. There are three major tribal communities – Irulas, Mudugas, and Kurumbas – living in this region. The area witnessed massive influx of settlers both from Kerala (*Malayalis*) and Tamil Nadu (*Tamilians*) since the 1950s, as a consequence of which dramatic change in land use and demographic structure of Attappady has taken place. The demographic structure has undergone change in favour of settlers within a short span of time. A dualistic society and economy emerged by the mid-1970s.

The major determinants of livelihood of a community are possession and/or access to natural, physical, household, and human capital. A perusal of the ownership/possession of these assets indicates that development programmes have not succeeded in building up the minimum basic requirements of tribesfolk. More than 40 percent of tribesfolk still remain illiterate and there are wide inter-community differences in educational achievement. Illiteracy among women is higher than among men. Electricity is yet to reach more than 90 percent of the Kurumba households. The housing conditions of tribesfolk, however, have improved significantly in recent years.

Per capita land availability has considerably come down and around 50 percent of the households own land below 2.5 acres, of which the share of wetland is insignificantly low. Now only the Kurumba community depends on forest as a livelihood and collect non-timber forest products. Inter-community differences in asset ownership and forest dependency are quite visible among tribesfolk of Attappady; Irulas are the relatively well-off community among them.

External intervention to Attappady is essentially a continuation of the outmigration process to Malabar which had its origin in central Travancore; some people from Tamil Nadu also had migrated to this region even earlier. The cavalier approach of the *Jenmis* of the lands and their managers and the lack of state control were the major factors which facilitated the massive influx and settlement of in-migrants during the early stages of the process. The early settlers were rich land owners from the plains who had direct influence over *Jenmis*. The main motivating factor for the inflow of these people to the region at the first stage was acquisition of land for extraction of forest timber; cultivation of land became the major motive only during the next stage.

The process of settlement, turned increasingly exploitative in nature over time, particularly since the massive influx of landless and economically backward people to the region began. In their frantic efforts to acquire land, tribesfolk underwent indiscriminate exploitation at the hands of in-migrants from both sides of the valley. As a result, a large number of tribal households lost their land to the Malayali and the Tamil settlers. In most cases of land transaction tribesfolk got cheated, the in-migrants exploiting their ignorance and fear. In this process, most of the fertile riparian lands and other low lands which had been under tribal occupation passed on to the settlers, especially to the Tamils. Tribesfolk were pushed out in the process to the steepest parts of Attappady hills. The process of land transfers from the

tribesfolk to the settlers continued unabated till most tribesfolk were reduced to the status of landless agricultural labourers. The very few tribesfolk who were left with some bits of land were either located in the remotest parts of the forests or the lands they retained were the least fertile type.

As a result of the influx of people from outside the area, agricultural practices of the valley have undergone total change from the unique tribal mode of production to a variety of modern types. The Malayali and the Tamil settlers brought into the area a variety of crops many of which aimed at catering to the market for money. The *adivasis* have been forced to accept many of these crops to supplement their livelihood. Kurumbas, however, continues to cultivate 90 percent of their land with traditional tribal crops (under shifting cultivation). Inadequate irrigation facilities, poor climate, and poor quality of land are identified as the major reasons for decline in dependency on land as the major source of their livelihood.

Large proportion of the households in the study area earns their livelihood as wage labourers. While 58 percent of Irulas and Kurumbas are engaged as daily wage labourers, 40 percent of Mudugas are engaged so. The main sources of wage labour for tribesfolk are work in the land of non-tribesfolk during the agricultural season; works in soil conservation programmes; construction work offered by contractors, etc. The participation level of tribesfolk in government service is a mere two percent.

Wages contribute more than 80 percent of tribal's household income. Income from other sources, namely, livestock, forest products, and agriculture is relatively low among all communities, with only small inter-community variations. The drastic decline in the share of agriculture in the income portfolio of tribesfolk is attributed to land alienation, lack of fertile land, and lack of sufficient institutional support. Agriculture, for most of the households, is an activity taken up during periods when opportunities in wage labour become scarce, and only as a secondary source of income. Forest dependency is higher among Kurumbas than among Irulas and Mudugas.

Tribesfolk's access to resources and benefit-oriented schemes has yielded mixed results. Dwindling of forest areas and lack of supportive systems has reduced forest dependency of tribesfolk, especially Mudugas and Irulas. In the absence of proper education, productive utilisation of credit facilities is not common among the tribesfolk. Considering the vastness of Attappady and the heavy dependence of the tribesfolk on allopathic treatment, health centres, and dispensaries are highly inadequate.

Development-oriented assistance and concessions have benefited the tribesfolk a great deal. However, inter-community differences existed in the extent of utilisation or the allotment pattern or assistance. Irulas and Kurumbas benefited more than Mudugas in the Pudur *panchayat*. Assistance to improve the farm income is found quite inadequate. Assistance to improve access to education, like stipend, books, dress materials, mid-day meal and hostel facilities have benefited all the tribal households. Mudugas, however, reported a lower level of utilisation of educational assistance from developmental agencies. Little effort has been made to equip the tribesfolk to take up self-employment opportunities. However, the effort to improve the housing condition of tribesfolk has yielded quite commendable results.

End Notes

- 1 Early rich settlers were *Jenmis* for the small settlers and hence gave undue respect and were ready to do any thing for them.
- 2 In Attappady area Money Receipts given by the *Jenmi* was known as MR and the term is commonly used by settlers.

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