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**AGRARIAN DISTRESS AND
LIVELIHOOD STRATEGIES: A STUDY
IN PULPALLI PANCHAYAT, WAYANAD
DISTRICT, KERALA**

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ABSTRACT

This paper examines the household livelihood strategies under agrarian distress in Pulpalli Panchayat of Kerala. It also looks at the relationship between household assets and livelihood strategies. The negotiations of institutions by the marginalized and depressed sections of the society were analysed in detail.

Major causes of agrarian distress in the study area are the ecological degradation and fall in crops income. Land continues to be the most important asset determining livelihood outcomes. The livelihood strategies have been investigated in relation to land, education, housing pattern, investments & credit facilities, and participation in organizational activities. The livelihood strategies adopted by farmers in the wake of agrarian crisis includes diversification of agriculture, share cropping, organic farming, self-help group activities, cattle rearing, migration and exchange of labour. Livelihood strategies varied across socio-economic groups as farmers owning better landholdings diversified cropping patterns while poor households participated in the activities of SHGs. Casual agricultural labourers and marginal farmers moved to other places in search of jobs. Mitigation of agrarian distress requires public provision of education, health and other social safety measures.

Key words: Livelihood risk, Coping Strategies, Livelihood, Livelihood Assets, Institutions, Wayanad, Kerala

JEL Classification: Q, Q 00

I. Introduction

The agrarian economy of Kerala has been under distress in recent years. In the early years of the present decade, prices of major crops have witnessed wild fluctuations with sharp fall in successive years (Subramanian, 2007). This has brought in high degree of instability in farm incomes. This is compounded by the fact that these years have been characterised by adverse weather conditions which affected crop yields. Many regions in the state are still under the grip of economic and environmental shock despite the fact that there are signs of recovery of agricultural economy with normal rainfall and revival of prices of some of the crops (especially rubber). The State and the Central Government have come out with intervention packages for revival of the livelihood of the affected population. It is generally believed that the economic shock has occurred because of implementation of policies of economic globalisation and liberalisation and the reduction of various subsidies and welfare measures provided to the agrarian population (George, 2005). Against this background, the present paper makes an attempt to examine the household livelihood strategies under conditions of shocks and vulnerability, by drawing on the data collected from a study conducted in Pulpalli Panchayat in Wayanad district. We have

shown in an earlier paper (Nair et.al 2007) that Wayanad suffered severe economic and environmental shocks mainly from the sharp fall in the prices of pepper and coffee and a long period of unsustainable land use practices. Their impact on the eco-system was further aggravated by declining rainfall since the 1990s. In Pulpalli Panchayat also the households might have developed short-term coping and medium or long-term adaptive strategies in response to the stress and shocks and consequent vulnerabilities. We try to understand the manner and processes through which households negotiated various institutions in their livelihood struggles. The study, carried out within a livelihood framework looks at the relationship between household assets and livelihood strategies. We have given in appendix I, the sampling procedure employed in the household survey.

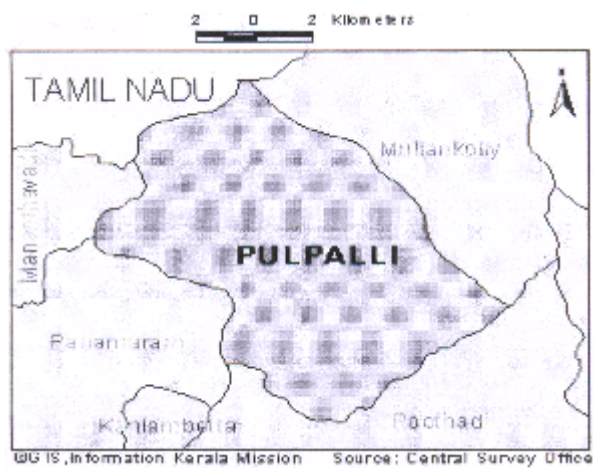
This paper is organised as follows. Section 2 provides a brief profile of the study area. This is followed by an analysis of household assets and livelihoods in section 3. The livelihood strategies pursued by the households under conditions of shocks and vulnerability are analysed in section 4. Section 5, examines the negotiations of institutions by the marginalized and depressed sections of the society. The last section hauls together the main findings.

II. Profile of the Study Area

Pulpalli is a relatively secluded region surrounded by forests on three sides. Rivers *Kabani* on the western side and *Kannaram* on the eastern side separate Pulpalli from other neighbouring Panchayats (see the map). The population of the panchayat as per the 2001 census was 34293 with 17425 males and 16868 females. Out of the total population, about 22 percent are scheduled tribes. Workers in the population was about 11.5 thousand and of this 29% were cultivators, 41 percent were agricultural labourers and the rest were other types of workers such as those in forestry and plantations. The cropping pattern found in the Pulpalli Panchayat is more or less the same as that of the district as a

whole¹. Pepper mono-cropping was a widespread practice till recently in most of the areas of Pulpalli. Climate of Pulpalli is reportedly different from that of other parts of Wayanad, with more droughts and less rain, a condition comparable to that of the neighbouring Mysore plains (Panchayat Development Report 1997).

Map of Pulpalli Panchayat



Kappikunnu is one of the wards of the Pulpalli panchayat. It was a typical Wayanadan village comprising of hills, slopes, valleys and forests. We conducted our study there. The area comprises four major *kunnus* (hills) that are the settlements of various communities. Each *kunnu* is encircled by paddy fields. The households of Chettys are found on the

1 The total cropped area in Wayanad was 1,96,756 ha (DES 1998). Coffee in Wayanad (67,510 ha.) constitute 34.31 per cent of the total cropped area in the district and 78 per cent of the coffee area in the state. The other major crops are pepper (40,088 ha.), coconut (11,383 ha.), cardamom (4106 ha.), tea (6049 ha.), rubber, cassava and ginger. A recent increase in the area under coconut cultivation is noticed at the lower regions. Rice is cultivated in 12,855 hectares. The paddy fields of Wayanad are in the valleys of hillocks. In the majority of paddy lands, only a single crop is harvested. Ginger cultivation has also substantially increased in recent times and the ginger produced is area marketed mainly in the form of green ginger. Homestead farming is also important in this district.

slopes juxtaposed with tribal settlements. All the traditional Chetty houses face the fields and the houses of the settled farmers face towards roads. Tribal colonies are located in remote areas of the village and are relatively secluded. The fact that two sides of the village are surrounded by forests has its impact on conditions of living of the local population.

Kappikunnu is one of the locations in the Pulpalli region where migration took place very early. In the early 1950s, immigrant families started to settle in Kappikunnu by encroaching on the revenue lands. Unlike other forested parts of Pulpalli, Kappikunnu consisted largely of revenue lands in which a number of Chetty (first in-migrants) and Kuruman (original inhabitants) households had been undertaking cultivation. The remaining parts of Kappikunnu were under possession of the Pulpalli Temple. These lands were gradually handed over to the immigrants on lease. During the initial years of immigration, people began cultivating food crops including grains, tapioca and other tuber crops only to satisfy their hunger. The first cash crop cultivated in the area was lemon grass, introduced by the in-migrant farmers. Deforestation especially in the forest region of Pulpalli was an outcome of this pattern of cultivation introduced by the in-migrant farmers as the crops needed no shade. Big trees were completely burnt down as cutting them down was found difficult. The cultivation was highly labour-intensive, involving both male and female workers. All the households collectively worked to surmount the difficulties encountered during the early period of in-migration.

Households which made a surplus first from cultivation of lemon grass and tapioca later turned to cultivation of other cash crops like coffee and pepper by 1970s. By the end of the decade, many families had developed good gardens especially of pepper. In the early 1980s pepper prices were high and pepper cultivation yielded handsome returns. This caused pepper cultivation to spread fast across Pulpalli. The superior quality of the soil and the favourable climatic conditions augmented

pepper productivity. Farmers increased investments and expanded the area of cultivation. Those who had more assets and had better access to credit institutions flourished more than their peers who lacked such access. During the latter half of the 1990s, the price of major crops like coffee and pepper began to increase on an unprecedented scale. Coffee prices increased immediately after the dismantling of the Coffee Board which had been functioning as a marketing monopoly under the Central government. Soaring prices benefited farmers of all levels. Pulpalli, at that time, became famous for its wealth and prosperity. The place came to be known as a 'mini Gulf'. Rising demand resulted in massive inflow of consumer products into the local market. Impact of the price boom was manifold. One of the results was a drastic change in the consumption behaviour. A construction boom was evident in the array of new concrete houses and commercial buildings constructed in this period. The quantity and quality of food consumption had improved across all the sections of people. All categories of farmers began to spend more on education and health, relying heavily on the private sector providers. Labour households began spending more on clothing and food.

Banks followed a flexible approach in sanctioning loans to farmers. In fact, both co-operative as well as public sector banks were literally chasing farmers with offers of loans. Informal credit was also available in plenty. Many big farmers started to diversify their activities, some of them investing in informal banking and others in commercial enterprises. Construction industry in Pulpalli developed on a large scale by building many new residential buildings, shopping complexes, restaurants, hotels, etc.

Immigration of workers to Pulpalli was mainly from the northern districts of Tamil Nadu. It was in response to the newly found prosperity of the 1990s. Workers came in hordes and formed new settlements like the *Meenam kolli colony*, thereby energising the local economy in a number of ways. Even small farmers started to employ Tamil labour in agricultural activities, which was cheap compared to local tribal workers.

It is reported that during this period, several tonnes of fertilisers were sold in the area every day; and that small farmers complained about non-availability of fertilisers in adequate quantities as big farmers bought them in bulk and exhausted available supply. Similarly, there was a tremendous demand for four-wheel vehicles and every farmer household seemed to be fond of keeping a jeep at home.

This particular period of buoyancy happened to coincide with the period of implementation of the decentralised planning programme of the state, which created physical wealth and developed public infrastructure at the local level. Almost all the roads were metalled and a number of new roads were constructed. Water distribution is another field of governmental intervention. Two drinking water supply schemes were implemented with the support of the local MLA² fund. Two big check dams across rivers for irrigation have been constructed. There is a ration shop to supply ration to eligible households. The cooperative sector is active in the region especially for collection and distribution of milk and for the provision of rural credit.

Pepper grew in abundance in Pulpalli and farmers capitalised on its price hike. But this phase gradually weakened due to onslaught of diseases on pepper and changes in climate. Ninety-two percent of the farmers' households in Kappikkunnu have experienced decline in yield. Fifty-eight percent of them attributing it mainly to climate factors whereas forty percent report it to be due to pests and diseases. Since the 1990s, a gradual decline in rainfall is being perceived in the Wayanad region as a whole. Within Wayanad, there are regional variations in rainfall. Pulpalli is prone to rain shortage. Local people see the shift in the local climate as a major reason for the recurring shortage. They also reported a corresponding change taking place in the agricultural practices. Crops

2 Every Member of the State Legislative Assembly is allotted a special fund through the annual plan exclusively for carrying out development activities in his/her assembly constituency according to his/ her discretion.

like coconut and rubber, which were once considered as not adaptable to the local environment, have already found a place in many local homesteads.

A widespread perception among farmers was that the indiscrete use of chemical fertilisers and pesticides has ended up in the outbreak of pervasive pest attacks and diseases and deterioration of soil quality. Since the early 1990s large-scale conversion of paddy fields in the area to the cultivation of mainly areca-nut and coconut has been observed to take place. Partially this is due to changes in climate, but partially also due to the intensification of commercial cropping. Once the land got permanently converted, people started inter-cropping with the cultivation of pepper and coffee. This happened largely during the period of the price boom in the second half of 1990s. Seasonal conversion of paddy fields also takes place mainly for the cultivation of ginger and banana. This trend became strong by 2000, following the price crash of mainstay crops. Local farmers testify that shortage in rainfall as the main reason for the conversion of paddy lands in to other crops. If a plot is converted, it causes shortage of water compelling the neighbours to follow suit. Many people in the area observe that the lowering of water level in ponds, wells and levelling up of the traditional water pits is a consequence of conversion of paddy lands.

The region witnessed a sudden crash of prices of almost all cash crops from 2000. Coffee and pepper were the worst affected crops. According to the survey conducted in the study area, 98% of the households experienced decline in their agricultural incomes. Eighty three percent of them saw import liberalisation as the main reason for the price crash. They also witnessed a severe draught in the summer of 2004. This region did not get normal monsoon that year and the summer rains were also scant. The impact was severe and the northern side of Pulpalli, stretching up to the Mysore forest of the Karnataka state, literally went dry. The draught had a devastating effect on the pepper gardens of the area.

Economic and environmental shocks have affected the entire population in the area, regardless of their caste and community status. Drastic reductions in agricultural incomes of the farmers and wage incomes of the labourers had been the visible manifestations of the malady. How did the households shape their livelihood strategies in response to these shocks? How did the households negotiate various institutions and organisations in developing their coping and adaptive strategies? In particular, what has been the role of the state in mitigating the livelihood shocks and vulnerability? In the sections that follow, we shall take up these issues. As a prelude to this, in the next section, we will take up an analysis of the relationship between household livelihood and assets.

III. Household Livelihoods and Assets

In this part of our study, we discuss the livelihood activities pursued by households and their outcomes as related to asset base. The activities they pursue are the result of their livelihood strategies. Assets and endowments of households help them shape individual livelihoods while vulnerabilities push households to seek and pursue coping strategies.

Natural capital, human capital, physical capital, financial capital and social capital are the five-dimensional asset base of households. Land, education, housing pattern, investments & credit facilities and participation in organisational activities are taken as proxies for them. Occupational patterns are described in detail in order to bring out the mosaic of livelihood activities. The monthly per capita consumption expenditure (MPCE) of households are assumed to quantify livelihood outcomes.

Livelihood Activities

In the study area there are 683 households with an estimated population of 3050. Out of the total population, 57% are settlers dominated by the Christian community and Ezhavas. The rest 43% of

the population are natives who have been living there for centuries. They belong to tribal communities like Paniyans, Kattunaykan and Mullukurumans and to the Chetty community. The tribals constitute about 32% of the population. The forward community comes to around 28% of which the majority are Christians.

The average household size in the village is 4.5, which is comparable to the State's household size. But community wise, Paniyan households are the largest in size; perhaps due to the joint family system among them. It is seen that only about 7% of the population falls in the elderly age group of 60 years and above. Nearly 50% is below the age of 26 years, which indicates the preponderance of the young population.

Nearly 44% of the population is in the labour force of which 40% is in the workforce and the remaining 4% is unemployed on the lookout for work. In the work force, 72 % are men and the rest 28% are women. While nearly 60% of the male work force are engaged in some kind of gainful activity, only 22% of the women force are in a similar situation. But we cannot state that women are not working since it is seen that nearly one-third of them are engaged in household chores such as cooking, washing and child-rearing, and in farm level duties. (see Table 1)

Table 1: Distribution of Population by Usual Activity Status

Usual activity	Male	Female	Combined
	No (%)	No (%)	No (%)
Working	883(59.4)	345(22.0)	1228(40.1)
Employment seekers	54(3.6)	51(3.3)	105(3.5)
Student	290(19.5)	350(22.4)	640(21.0)
Household affairs	10(0.7)	454(29.0)	464(15.2)
Disabled/Sick person	26(1.8)	74(4.7)	100(3.3)
Too young and too old	223(15.0)	291(18.6)	514(16.9)
All	1486(100.0)	1565(100.0)	3051(100.0)

In the context of vulnerability, the contribution made by unpaid women workers also been increasing in the household production activities, especially among small-scale cultivator households. Women members from all medium and small farmer household in the area participate now in its agricultural activities. Unlike in the past, even among the traditional landlord communities like Chettys, women are now compelled to do agricultural work in their own farms and very often even wage work. Many Christians and Ezhava women who had stopped doing wage work in the economically progressive situation of the 1990s have again started doing wage labour, though on a limited scale. In many such cases, the contribution of women to households through production activities goes underreported. Among Paniyans, however, women having small kids prefer to remain at home with children, even if the fields of cultivation are not far away from their homes.

In the study area, household occupations are classified based on the main source of income during the reference period. The main occupation of the majority of the households is agriculture, only about 28 % of the households are engaged in the non-agricultural sectors. A similar pattern is seen in the occupational distribution of working persons. More than 70% of the workers are engaged in agricultural activities, 45% as casual agriculture labour and 26% as cultivators. Another 14 % work as casual non-agriculture labour consisting of rural artisans, masons, carpenters, helpers in construction sector, etc. It can be seen that only a few alternate employment opportunities are available to the villagers (see Table 2). There are also a few households, especially ST community members, who are involved in illegal economic activities like felling of forest timber, sand-mining, illegal brewing and/or import of illicit liquor etc.

Table 2: Percentage distribution of households and workers according to main occupation

Occupation	% of households	% of workers
Cultivators	29.0	26.0
Agriculture labour	42.1	45.2
Non-agricultural labour	14.0	14.4
Regular salaried/wage paid employment	4.7	4.2
Professional/technical	--	2.5
Forest dependence	3.6	2.3
Others	6.6	5.4
All	100.0	100.0

The distribution of workers according to caste and main occupation is given in the Table 3.

Even though, the Christian community constitutes only about one-fifth of the workforce, they contribute to two-thirds of the professionals, 60% of the salaried class and 41% of the cultivators. ST communities contribute more than 50% the agriculture labour sector; of these the contribution of Paniyans alone is nearly 40%. The Kattunayakan ST community, which lives within the periphery of forest, is the only community almost exclusively depending on forest produce to eke out a living. Besides collection of forest produce, agriculture labour is their only available alternate occupation. Paniyans and Kattunaykans are occupationally the least diversified groups in the area, having but a nominal presence in non-agricultural labour.

About 60 percent of the workers in the village work as casual agricultural and non-agricultural labourers. The number of days of employment for them during 365 days preceding the data of survey is given in the Table 4. In the case of agricultural labourers, the average number of days of work was 93 for males and 52 for females, with more than 50 percent of the workers getting only less than 90 days. The situation

for non-agricultural workers is much better with male workers getting on an average about 140 days of employment and female workers 170 days of employment. It appears that the higher number of days work for non-agricultural workers are due to the dependence on forest based activities. (Table 4)

Table 4: Days of employment during last 365 days in casual agriculture and casual non-agriculture labour

Days of work	Casual Agriculture labour (%)			Casual Non-agriculture labour (%)		
	Male	Female	All	Male	Female	All
14 to 30	16.5	25.2	18.1	--	--	--
31 to 90	38.3	35.6	37.8	--	50.8	17.3
91 to 180	39.7	39.2	39.6	41.7	--	27.6
181 to 300	5.5	--	4.5	43.2	41.2	45.1
301 & above	--	--	--	15.1	--	10.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Mean	92.6	52.1	81.0	139.6	169.0	147.0
S D	167.7	169.1	174.7	374.2	458.4	382.7

Kattunayakan is the only community which has primary dependence on forest engaged in collection and sales of non-timber forest produce. All the 19 Kattunayakan households in the study area depend on forest as their main source of income. Being a forest-bound village, the rest of its population is also linked directly or indirectly to collection of forest produce in organising their livelihood activities, such as collection of firewood, green manure, green fodder, bamboo etc. Cultivator households collect green manure. Paniyans, an indigenous community in the area, depend on the forest for gathering food and food materials, such as tubers and yams. During some months wage work is also available related to forest maintenance, fire-line making, construction of check-dams and boundary posts, etc. undertaken by the forest department.

Household Consumer Expenditure

Household consumption expenditure can be considered an aggregate measure of household welfare and thus represents the livelihood outcome of a household. Moreover it also acts as a proxy variable for household income. The household consumer expenditure is the sum total of the monetary values of consumption of various groups of items namely (i) food, pan, tobacco, intoxicants fuel and light, (ii) clothing and foot wear and the like, and (iii) miscellaneous goods and services and consumer durables. According to the method adopted in this study, the expenditure incurred by a household on domestic consumption during the reference period (30 days) is considered monthly household consumer expenditure. For a household, monthly per capita expenditure (MPCE) is obtained by dividing total monthly household consumer expenditure by the household size.

The mean MPCE of the households in the village is Rs. 989. The MPCE varies according to the social group. The lowest MPCE is found among the ST communities. The Paniyans MPCE is Rs. 287 and the Kattunaikans MPCE is Rs. 482. The Nair community has the highest mean MPCE of Rs. 1467. Christians and Ezhavas follow closely with Rs. 1407 and Rs. 1340 respectively. (see Table 5).

More than one-fourth of the households in the study area have MPCE below Rs. 500; another one-fourth has MPCE between Rs. 500 and 800. Only about 7% have MPCE above Rs. 2500. The vulnerable groups are Paniyans and Kattunaikans. About 85% of Paniyans and 56% of the Kattunaikans have MPCE below Rs. 500.

The average MPCE is Rs. 989 per household, but the amount varies widely among occupational groups. The highest average MPCE is for salaried group, but the number of their households is very small. Among the others groups, cultivator households spend the highest MPCE of Rs. 1585. The casual agricultural labour households and households

Table 5: Percentage Distribution of Households in MPCE Class by Social Group

MPCE	Paniyan	Kattu nayakan	Mullu kuruman	Chetty	Ezhava	Other OBC	Christian	Nair	Total
0 - 300	63.1	29.0	0.0	0.0	0.0	0.0	0.0	0.0	11.4
301 - 500	21.1	27.0	25.0	13.7	14.1	11.7	7.8	0.0	14.4
501 - 800	15.8	25.0	0.0	27.6	21.9	50.8	19.5	28.7	25.3
801 - 1000	0.0	19.0	25.0	30.0	16.2	24.2	6.7	0.0	12.7
1001 -1250	0.0	0.0	0.0	13.6	30.3	0.0	19.8	42.9	17.4
1250 -2500	0.0	0.0	50.0	15.1	3.5	13.3	33.0	0.0	11.4
2500 & above	0.0	0.0	0.0	0.0	14.0	0.0	13.2	28.4	7.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Mean	267	482	843	850	1340	801	1407	1467	989

depending on forest produce fall in the lowest category. Households in the casual non-agricultural labour category are in a better position than that of casual agricultural labour households. Among the poor, the majority belong to households of casual agricultural labour and of forest dependence. In fact nearly 46% of the casual agricultural labour households and 40% of the forest dependent households have MPCE of less than Rs. 500. If the cut-off point is taken as Rs. 800, 73% of casual agricultural labour households and all the forest dependent households come under the lowest category. (see Table 6)

Land as a Livelihood Asset

In the study area, nearly 70 percent of the households are directly involved in agriculture either as cultivators and / or as casual agricultural labour. There exists wide variation in the size of landholdings among households. Among the cultivators, nearly 50 percent have landholdings of more than 200 cents. Even though the average holding size is 1.21 acres, about 50% of the households have only less than 50 cents of land. Community-wise, most of the large holdings belong to Nairs, Christians and Ezhavas and most smallholdings to Paniyans and Kattunaykans. There are a large number of cultivators belonging to the Chetty community, whose average holding size is higher than the mean size of holding (see Table 7). The highest holding size is observed among the Nairs twenty eight percent of their households have more than 5 acres of land each. There is no single household among the Christians with holdings of less than 20 cents.

Fourteen percent of Chetty households in the area also have large holdings of more than 5 acres each. Fragmentation of land is found to be more among the Chetty community. This may in part due to the practice of giving shares to women members on their marriage and in part due to the increasing aspirations of the young members to form nuclear families, a relatively new phenomenon among them. Unlike in-migrants of other communities, Chettys did not show great enthusiasm in acquiring land

Table 6: Percentage Distribution Of Households In MPCE Class By Occupation

MPCE	Cultivator	Casual Agriculture labour	Casual Non-agriculture labour	Regular salaried/ wage paid job	Forest dependence	Others	All
0 - 300	0.0	24.9	1.2	0.0	19.5	0.0	11.4
301 - 500	11.0	21.4	10.5	0.0	19.6	0.0	14.4
501 - 800	15.2	26.4	32.6	0.0	60.9	49.0	25.3
801 - 1000	5.1	15.1	10.5	34.3	0.0	26.5	12.7
1001 - 1250	28.5	10.5	22.1	0.0	0.0	24.5	17.4
1250 - 2500	19.9	1.7	23.1	34.3	0.0	0.0	11.4
2500 & above	20.3	0.0	0.0	31.4	0.0	0.0	7.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Mean	1585	565	915	1942	484	823	989

Table 7: Percentage distribution of landholding according to social groups

Land holding (in cents)	Paniyan	Kattu Naykan	Mullu kuruman	Chetty	Ezhava	Other OBC	Christian	Nair	All
Land less	--	--	--	--	7.8	--	0	0	1.6
1 - 10	63.2	94.0	--	--	14.8	38.7	0	28.7	26.2
11 - 20	10.5	--	--	--	17.6	12.1	7.2	28.7	9.7
21 - 50	21.1	4.0	--	13.7	21.8	--	6.6	0	12.3
51 - 100	5.2	--	25.0	58.9	7.8	25.4	27.6	14.2	18.7
101 - 200	--	2.0	75.0	13.8	8.4	12.1	26.2	--	15.2
201 - 300	--	--	--	--	7.8	11.7	13.0	--	6.0
301 - 500	--	--	--	--	0	--	19.4	--	4.4
500 & Above	--	--	--	13.6	14.0	--	0	28.4	5.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Mean (cents)	15	9	128	140	173	64	194	170	121

Table 8: Percentage distribution of ownership of land holding according to household occupation

Land holding (in cents)	Cultivator	Agriculture labour	Non-agriculture labour	Regular salaried/ wage paid job	Forest dependence	Others	All
Land less	--	--	-	--	-	24.5	1.6
1 - 10	--	35.8	45.4	--	90.2	24.5	26.2
11 - 20	--	12.3	21.0	34.3	--	--	9.7
21 - 50	5.6	24.9	--	--	5.0	--	12.3
51 - 100	8.6	19.3	33.6	--	--	50.1	18.7
101 - 200	35.6	7.7	--	31.4	4.8	--	15.2
201 - 300	15.0	--	--	34.3	--	--	6.0
301 - 500	15.0	--	--	--	--	--	4.4
500& above	20.2	--	--	--	--	--	5.9
All	29.0	42.1	14.0	4.7	3.6	6.6	100.0
Mean(cents)	314	40	27	140	10	43	121

to add the ancestral property. Many Ezhavas and Christians acquired some land when they first settled in the area as nuclear families. But the male members of their families, mostly sons, took special interest in acquiring additional land by their own effort even as tiny plots. Such was the reputation attached to land. A major source of financial asset for many Christian youths for buying land was dowry.

There are only a few Paniyans and Kattunayakan ST households with landholdings of more than one acre of land. Many families belonging to these groups had received small plots of land from their erstwhile 'masters' to whom they had been attached before the influx of migrants began; but a large part of these lands were alienated by them on a large scale to the new settlers, who exploited their ignorance. A few of these indigenous communities had let their lands for construction of houses under government schemes to their landless relatives. There is positive relation between size of landholding and MPCE. About 50% of the households have land below 50 cents and about 70% of them have MPCE of less than Rs. 800. Among households with MPCE of less than Rs. 500, about 80% have landholdings of less than 50 cents. (see Table 9).

Forest as Livelihood Asset

ST households eke out much of their incomes from forests. As is shown in Table 10, 35% of the households are having either primary or secondary dependence on forest produce. Of them, 10% are primary dependents and the rest 90% are secondary dependents.

Primary dependents are Kattunaykans who collect from the forests firewood, fodder, honey, bamboo and fencing materials (mainly reeds) for commercial as well as for domestic purposes; fish and crabs are caught exclusively for home consumption. Secondary dependents are mainly cultivators and casual agricultural labourers; they collect mainly green manure, and firewood; they also graze cattle in forests. Nearly 42% of the primary forest dependents are poor with MPCE of below Rs. 500.

Table 9: Percentage distribution of landholding according to MPCE class

Land Holding (in cents)	MPCE class (in Rs)							Total
	0 - 300	301-500	501- 800	801- 1000	1001- 1250	1250- 2500	2500 & above	
Land less	--	--	--	--	1.6	--	--	1.6
1 - 10	8.2	3.7	6.9	3.0	3.0	1.6	--	26.4
11 - 20	1.5	1.4	4.4	--	--	2.4	--	9.7
21 - 50	1.7	4.4	3.0	1.7	1.6	--	--	12.4
51 - 100	--	3.2	5.3	3.2	5.3	1.6	--	18.6
101 - 200	--	--	4.4	3.2	4.5	--	3.0	15.1
201 - 300	--	1.4	1.5	1.6	--	1.4	--	5.9
301 - 500	--	--	--	--	--	4.4	--	4.4
500 & Above	--	--	--	--	1.5	--	4.4	5.9
Total	11.4	14.1	25.4	12.7	17.5	11.4	7.4	100.0

The estimated average value of forest collection comes to about Rs. 637 for primary dependents and Rs. 447 for secondary dependents.

Table 10: Distribution of forest dependents according to MPCE

MPCE	Status of forest dependence (%)			% of forest dependent household to total household
	Primary	Secondary	All	
0-300	20.8	34.9	31.8	11.1
301-500	20.8	24.2	23.8	8.3
501-800	58.4	20.9	24.7	8.6
801-1000	--	10.2	9.2	3.2
1001-1250	--	9.3	8.4	2.9
1251 & above	--	2.3	2.1	0.7
All	100.0(10.0)	100.0(90.0)	100.0(100.0)	35.0
Estimated average value of forest collection (Rs)	637	447	491	--

Figures in parentheses indicate row percentages

Education

Human assets increase in proportion to the educational achievements of households. Education and skills become decisive variables for occupational diversification of household members. Moreover, productivity of workers is affected by the variables education and age.

It is seen from the Table 11 that more than one-fifth of the workers in the study area are illiterate and that about one-fifth of them are in the age group 15 to 25 years. Thus it is clear that large-scale illiteracy prevails even among young workers. Illiteracy is the highest among tribal workers who have the least capability for occupational diversification. Only 24% of the workers have education up to the secondary level and above. The total illiteracy rate, which is only 22%, should be seen also in the context of the large presence of the ST population in the area.

Table 11: Educational status workers according to age (in %)

Education	Age in years			
	15 - 25	26 - 59	60 & above	All
Illiterate	16.2(21.4)	22.3(58.5)	49.5(20.1)	23.0(100.0)
Literate, < Primary	15.4(22.0)	22.3(63.3)	33.8(14.7)	21.3(100.0)
Primary, < Secondary	30.5(37.1)	24.9(60.2)	7.2(2.7)	25.0(100.0)
Secondary	12.0(26.4)	15.3(67.1)	9.5(6.5)	13.7(100.0)
Above secondary	25.9(46.1)	15.2(53.9)	--	17.0(100.0)
Total	100.0(30.3)	100.0(60.4)	100.0(9.3)	100.0(100.0)

Figures in parentheses indicate row percentages

Financial Assets of the Households

The survey data indicate that, as compared to the period 1995-1999, there has been an increase in loans availed by the households both in terms of number and amount (see Table 12). During 1995-1999, 11% of the households had obtained loans from nationalised banks. The corresponding proportion has increased to 33% since 2000. Similarly, while 3% of the households availed cooperative bank loans prior to 2000, the corresponding proportion has increased 12% since 2000. The proportion of households obtaining gold loans has also doubled. There has been significant increase in the loan amount from the year 2000 onwards. At the same time, the loans taken from moneylenders have come down both in numbers and amounts per loan. Probably it may be because of easier access to organised money market, where interest rates are lower.

One reason for the increase in the number of bank loans appears to be the need for meeting essential expenditure in the face of the steep decline in income caused by fall in prices of farm produce. Another reason could have been the strategy of banks of allowing conversion of old unpaid debts into new debts.

Table 12: Average loan outstanding(Rs/-) by source of loan for 1995-1999 and the periods since 2000

Source of agency	Period of loan obtained	
	1995 -1999	Since 2000
Nationalised banks	22552(11.1)	30793(33.0)
Cooperative banks	17287(3.0)	121430(12.1)
Gold loan	16147(9.6)	20148(15.8)
Money lenders	16147(9.6)	1136(6.4)

Figures in parentheses indicate estimated percentage of households

More than 78% of households have outstanding loans due to various financial institutions and moneylenders. In the survey it was found that some households have loan liabilities which they had contacted first during the mid seventies, which they kept on renewing into new loans till now. The average amount of loan outstanding per household comes to around Rs. 65,000. 43% of the loans are given by nationalised banks; and about one-third by cooperative banks. The rest of the loans are in the form of gold loans or from moneylenders or from friends and relatives. The details on loans outstanding classified by MPCE category and according to main source of loan are given Table 13. In the poorest category, falling in the MPCE of below Rs. 300, only about 27% of the households have outstanding loans; and those loans have been taken exclusively from moneylenders. This shows their poor access to organised credit institutions. It is found that all households above the MPCE category of Rs. 1000 have outstanding loans.

At least one household each in all the MPCE categories has invested in housing during the past 5 years. The proportions of households which invested in housing range from 1.5% in the lowest MPCE category of Rs 0-300 to 80% in the highest two categories Rs 1251-2500 and 2500 and above (see Table 14). No household from the lowest MPCE group has made any significant investment in land and in plantations. The

Table 13: Mean Loan outstanding (in Rs/-) by MPCE class and main source of loan

MPCE	Bank	Cooperative bank	Gold Loan	Money Lenders	Total
0 -300	--	--	--	1500(12.8)	853(26.9)
301 - 500	12828(22.4)	--	6852(30.6)	7085(20.4)	12331(64.3)
501 - 800	14533(69.0)	10720(17.8)	4943(23.0)	904(12.1)	14317(74.7)
801 -1000	20712(49.4)	16000(27.6)	12651(37.9)	487(27.6)	31087(86.2)
1001-1250	21917(37.8)	14742(69.7)	4568(47.0)	2857(17.6)	28290(100.0)
1251- 2500	39778(87.1)	30000(38.5)	22837(60.2)	13945(47.4)	92060(100.0)
2500& above	81370(100.0)	237858(80.0)	35027(60.0)	--	388310(100.0)
All	33580(43.3)	59548(30.4)	13544(34.6)	5721(19.4)	65274(78.5)

Note: parenthesis gives the percentage of households with loan outstanding

proportion of households that made investment for land and plantations increases positively with increase in the MPCE categories. All households except those in the lowest MPCE category of less than Rs. 300 had been able to make financial investments. The percentage of such investing households remains almost constant up to the MPCE category of Rs 1251-2500. This observation may be explained in relation to the increased saving propensity of poor households, certainly an outcome of the SHG movement in the area. But, interestingly there is no single household having an investment in the lowest MPCE category of (Rs 0-300) which accounts for 92% of the tribal households in the study area.

Physical Assets of the Households

In the study area almost 80% of houses are permanent structures, with strong walls and roofs which can withstand all climatic conditions and seasonal variations. All sections of population own such houses in the area. Credit goes to the state for accomplishing this pattern of housing through its various housing schemes, which were implemented by the panchayat. The kutcha type of houses which still account for about 21% are expected to be replaced in course of time; the delay is mainly due to technical and procedural snags in providing housing assistance. The majority of the semi-pucca and pucca houses have latrine facilities. But

Table 14: Investments made by households during the past five years

MPCE class	% Of investing households to total households in MPCE class			
	Housing	Land	Plantation	Financial assets
0 -300	1.5	--	--	--
301-500	30.6	10.2	--	30.6
501-800	24.7	2.9	2.9	17.2
801-1000	36.8	25.3	40.2	13.8
1001-1250	26.9	47.9	30.3	16.8
1251-2500	80.8	79.5	66.7	26.9
2500&above	80.0	80.0	80.0	80.0

only about 36% of the houses have electricity. This is because of the difficult hill terrain of the area with tree cover all over, conditions which are unfavourable to electrification.

Table 15: Habitat characteristics

Characteristics	Percentage
House type	
Kutchra	21.0
Semi-Pucca	68.6
Pucca	10.4
Electrified	35.7
Latrine facility	71.0

Participation in Social Organisation

Social organisations refer to institutions, relationships, and norms that shape the quality and quantity of a society's social interactions. Putnam (1993) uses the term 'social capital' to refer to dimensions of social organization that generate multiple horizontal linkages and foster development of social trust, collective reciprocity and tolerance. Social capital consists of the stock of active connections among people: trust, mutual understanding, and shared values and behaviours that bind the members of human networks and communities and make cooperative action possible. (Cohen and Prusak 2001: 4)

For quantifying the participation rate of people in social organisations we considered the percentages of population aged 15 years and above to the total population aged 15 years and above in the study area. From the survey it was found that the Self Help Groups (SHGs) are the major social organisation the people; next in the order come religious institutions. Nearly 50% of the households which participate in SHG activities are casual agricultural labourers and about one-third, cultivators. (see Table 16) The same participation pattern is found in the case of religious institutions also. In cooperative organisations other than tribal cooperatives, only cultivators are seen to be involved.

The level of social interaction among tribals is poor. However they participate in SHG activities. Tribal co-operatives in the panchayat area are functioning to collect and market forest produce. Kattunaykas are the only group of people who collect non-timber forest produce for commercial purpose. But dominant Kuruma community members control the affairs of tribal co-operative. All office bearers belong to this community. Kattunaykas have no voice in running the society. Forests near to Kappikunnu are poor in so far as forest produce is concerned and therefore most of the Kuttunayakas do not hold membership in the tribal co-operative. Generally, participation of Paniya and Kuttunayaka members in the SHGs is less. But members belonging to Kuruma household actively participate in the SHG activities.

Chetty and Ezhava communities are the only participants in religious organisation. (Table 17). However, the Christian participation in religious organisations is under-reported, since in our definition, activities in temples, churches and mosques are not included in religious institutions. The Christian community is closely linked to churches and the church has tremendous influence on the day-today affairs of the households. In political organisations and trade unions Paniyans and Kattunaykas do not participate; a fact which indicates that their social interaction and networks are poor. Interestingly, in recreational activities represented by participation in sports clubs, the participation is confined mainly to the Christian community. Participation in recreational activities is restricted by the level of education. Only persons who are at least the moderately educated would have the confidence to organise recreational events and manage activities. The population participating in social organisations, such as sports club consists only of salaried persons.

Analysis of Asset Pentagon

The increased attention to rural livelihoods arises from the recognition that significant portions of rural poor in developing economies are vulnerable in terms of sustainable livelihood systems. A

livelihood is generally defined as comprising the capabilities, assets, (including both material and social resources) and activities required for living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both in the present and in the future, while not undermining the natural resource base.

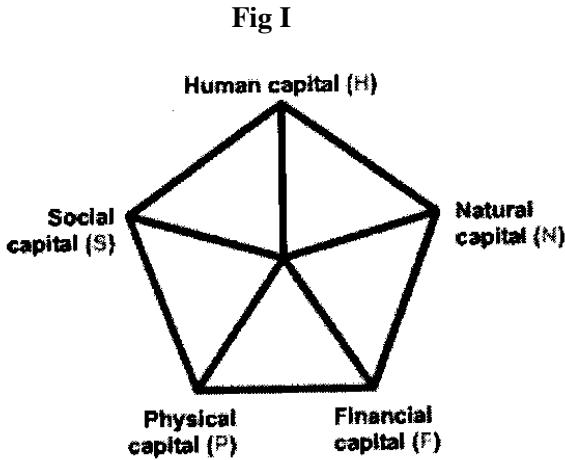
People draw on a set of 'capital assets' as a basis for their livelihoods. Carney (1998) identifies five sets of assets: human, natural, financial, physical and social. The capital available to individual households reflect their ability to gain access to systems (the resource base, the financial system, society) through which these capitals are produced. As such, we can identify the 'access profile' of households that defines their ability to gain access to capital assets. It seeks to gain an accurate and realistic understanding of people's strengths (assets or capital endowments) and how they endeavour to convert these into positive livelihood outcomes.

For analysing the access of people to various capitals, we use the 'asset pentagon'. The asset pentagon as in Figure I lies at the core of the livelihoods framework 'within' the vulnerability context. The pentagon is developed to provide information about people's assets to be presented visually, thereby bringing to life important inter-relationships among the various assets. The shape of the pentagon can be used to show schematically variations in people's access to assets. The idea is that the central point of the pentagon, at which the lines meet, represents zero access to assets while the outer perimeter represents the maximum access to assets. So pentagons of different shapes will apply to different situations and these pentagons change over time. So the asset pentagon should be considered a dynamic presentation of the assets of a social group. On this basis pentagons of different shapes can be drawn for different communities or different social groups within the same communities.

Table 17: Percentage of persons aged above 15 years participating in social organisation according to social categories

Community	SHGs	Credit Coop.	Marketing Coop.	Tribal Coop.	Religious Org.	Sports Club	Political Org.	Farmer's Org.	Trade Unions	% of persons in each category
Paniyan	9.5(13.8)	--	--	--	--	--	--	--	--	18.4
Kattunayakan	2.6(10.0)	--	--	100.0(1.3)	--	--	--	--	--	6.9
Mullukuruman	8.6(33.1)	--	--	--	--	--	--	6.0(6.6)	--	7.0
Chetty	9.1(22.7)	--	--	--	23.7(13.7)	--	13.3(5.2)	6.6(5.2)	--	10.8
Ezhava	21.0(36.5)	50.0(3.0)	100.0(3.0)	--	72.6(29.3)	--	23.3(6.3)	38.6(6.3)	42.3(6.6)	15.4
Other OBC	14.3(34.6)	--	--	--	--	--	22.2(8.3)	6.6(8.3)	-	11.1
Christian	26.3(27.6)	50.0(1.8)	--	--	--	100.0(3.8)	35.6(5.8)	42.2(5.8)	19.2(1.8)	25.7
Nair	8.6(49.5)	--	--	--	3.7(5.0)	--	5.6(5.0)	--	38.5(19.8)	4.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Figures in parentheses are percentages of participating population in each social category

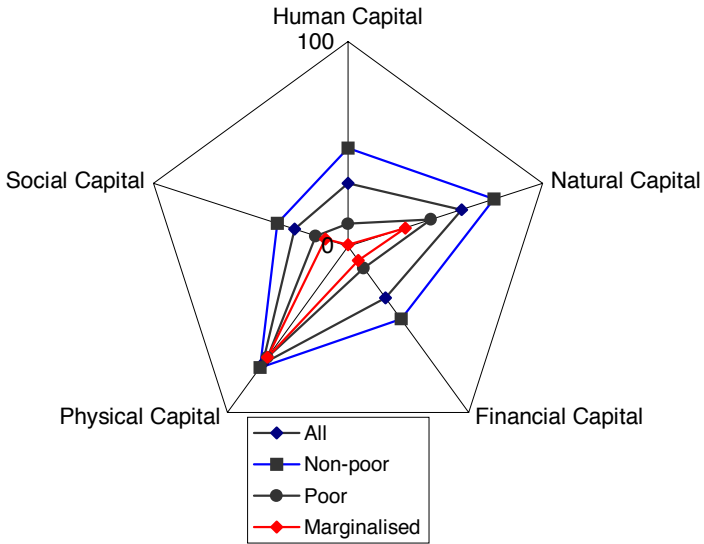


For assessing the asset status of households in the study area and for plotting the pentagon, we developed a quantification method. In this method we identified appropriate proxy variables in order to represent each asset and developed the quantification method for the particular variable. The proxy variable for each asset and its quantification methods are given in Table 18.

After quantifying the proxy variable we plotted a pentagon for all the households taken together and analysed it visually; later we plotted pentagons separately by occupation, by community and according to monthly per capita consumption (MPCE). The category of households with significant difference in the form of lying away from 'all households', was taken into consideration and named as the 'poor' (poor defined as households which have MPCE below Rs. 500). Households lying in the inner most pentagon inside the pentagon plot for poor, were households belonging to the marginal communities (Scheduled Tribes) (See Figure II)

Table 18: Proxy variables and method of quantification

Asset	Proxy variable	Quantification method
Human capital	Education of the head	Illiterate = 0, literate but of household primary = 25, primary but below secondary = 55, secondary = 75 and above secondary = 100.
Natural capital	Total landholding of the household	If no land then 0, if the household's total landholding lies below first quartile then score is 25, if between first quartile and median then 50, if between median and third quartile then 75, if above third quartile then 100.
Physical capital	Type of house owned	No house =0, if temporary shed = 25, Kutcha = 50, semi-pucca = 75, pucca = 100.
Financial capital	Investment made by the household during the past five years in land development, in agriculture and for housing.	If no investment is made then 0, if the households total investment lies below first quartile the 25, if between first quartile and median then 50, if between median and third quartile then 75, if above third quartile then 100.
Social capital	Per capita participation of household members in social organisations scale.	The total no of social organisations participated by members of the household is taken and is divided by the household size for equivalence. The household having maximum percapita participation is given a mark of 100 and the rest of the households were given the percentage shares to the maximum mark.

Fig II. Asset Pentagon of Pulpalli

In order to examine the phenomenon further, we tested the association among various variables by a correlation analysis. The actual data for consumption expenditure, the land owned and the investments made were fed into the analysis, whereas for variables of education, housing and participation on social organisations, the ranks were used. The correlation coefficients are given in Table 19. The results show that there is significant correlation between all types of assets; that it is the highest between land and investment, and land and education. It is obvious that those with larger landholdings have better access to finance and education. Naturally their consumption expenditure, which is considered one of the main livelihood outcomes, is also on the higher side. That is to say, land - the natural capital - is the determining capital.

Table 19: Correlation coefficient matrix

	Consumption expenditure	Investment	Land	Education	Housing	Participation in organisation
Consumption expenditure	1.000					
Investment	0.665***	1.000				
Land	0.716***	0.606***	1.000			
Education	0.643***	0.441***	0.545***	1.000		
Housing	0.419***	0.479***	0.476***	0.347***	1.000	
Participation in organisation	0.301**	0.306**	0.246*	0.454***	0.196	1.000

Significance level: * $p < 0.5$, ** < 0.01 and *** $p < 0.001$

From the analysis carried out above about various assets possessed by different social groups and their level of consumption we may draw two major conclusions.

1. From the pentagon plot analysis it is found that there are households inside the pentagon plot for poor. They lie in the innermost pentagon. They are the poorest of the poor and are considered 'marginalized households'. It is found that these households belong to Paniyans and Kattunaykans.
2. There exists a significant correlation among all types of assets which the households possess and access. This correlation is the highest between land and investment, as well as between land and education. It is obvious that those with higher landholdings have better access to finance and education. Naturally their consumption expenditure, which is considered one of the main livelihood outcomes, also is on the higher side. In other words, land, the natural capital, is the determining capital.

IV. Local Institutional Setting and Specific Strategies

Household Level Strategies

In our study area, the livelihood strategies adopted by farmers' households in the wake of agrarian crisis have mainly been: diversification of agriculture, share cropping, organic farming, Self-Help Group (SHG) activities, cattle rearing, migration and exchange of labour. Households have used a combination of strategies in different blends and proportions. Effectiveness of the strategies also varies across households according to the extent of production, social value of assets and ability to use institutions.

Some of the household level strategies go hand in hand with interventions of the government and other institutional agencies including NGOs. For instance, SHG activities are part of both household level strategies and formal institutional interventions. Some other household

strategies are also shaped by utilising existing institutional support systems and environment.

Diversification of Crops

Farmers believe that mono-cropping is no longer sustainable in the context of frequent price fluctuations. Pepper is the major crop here occupying 31% of the total cropped area. (see Table 20). Though cultivators belonging to all size groups give priority to pepper, pepper mono-cropping is slowly and consistently giving way to mixed cultivation of multiple crops. Mixed cropping of coffee and pepper is common among medium holders (of 201-300 cents). Large landholders increasingly cultivate ginger, a crop which is virtually non-existent among the category of small landholders. Its production costs are very high and only asset-rich farmers can invest heavily in ginger cultivation. The categories of other crops cultivated include mainly vanilla, cashew nuts and cardamom, which are newly introduced on 1.6 % of the gross cropped area. It is obvious that only asset-rich holders are able to intensify diversification of cultivation.

Nearly 20 % of the area is under cultivation of food crops like tapioca and banana. Recently, farmers have started cultivating banana as a cash crop replacing rice, since it fetches good price in the past few years. In Kappikunnu, it is now cultivated in 7% of the total cropped area. But banana cultivation is facing a crisis now due to the wide-spread media reports about the excessive use of pesticides with the result that the Wayanad variety of banana has few takers in the market. Rice cultivation, which occupies around 10% of the total cropped area, is undertaken mainly by Chetty and tribal sharecropper households belonging to the lowest landholding size group. They allot nearly 20 percent of their land for rice cultivation. Rice still plays a major role in the subsistence economy of the poor people in the area. The big land holders retain rice cultivation as part of their diversification strategy, devoting quite small proportion of land to

this crop. All size groups of farmers cultivate rice, though its share in the overall pattern has decreased.

Changes in the local ecology have also contributed to the diversification of crops. In the past, rubber, coconut and areca-nut were cultivated only in midland areas. Now around 22% of the total cropped area in Kappikunnu is brought under the cultivation of these crops. The area under cultivation of these crops is gradually increasing, especially in the context of the vulnerability caused by unprecedented market fluctuations.

Organic Farming

Here we consider organic farming as a coping strategy. Pests and diseases caused large-scale crop destruction. It, in combination with the sudden changes in the economic condition increased the vulnerable situation of the farmers. This has inspired some farmers to go for organic farming, which is considered both cost effective and pest-resistant. Two groups in the area undertake organic farming through SHGs. One group is registered as a cooperative society. The other is controlled by an NGO, the Wayanad Service Society under the Roman Catholic arch-diocese. There are four SHGs under this NGO, each comprising of about 10 households.

The co-operative organic farming group was the first of its kind in Kerala. Initially attached to a church, this group later de-linked from it and established itself as an independent cooperative society with the active support and participation of the state agricultural department. The co-operative society has a membership of 200 farmers who are setting up a special organic zone spread across three wards in the Pulpalli panchayat and including a portion of Kappikunnu.

SHG Activities in the Area

Two types of SHGs are functioning in the village. One type is under the *Kudumbasree* constituted by the state government as part of

Table 20: Distribution of area under different crops

Holding size (cents)	Rice	Pepper	Ginger	Coffee	Arecanut	Coconut	Rubber	Banana	Tapioca	Vegeta-Tubers	Other crops	Gross cropped area
51-100	20.4	27.7	0.0	17.8	3.2	8.4	17.6	3.3	1.6	0.0	0.0	100.0
101-200	15.0	31.0	3.2	16.3	6.1	7.6	4.3	10.4	1.9	3.3	0.8	100.0
201-300	4.0	46.3	3.8	22.8	5.6	3.9	0.0	0.0	5.1	8.5	0.0	100.0
301-500	14.3	29.9	6.7	10.8	4.0	9.1	4.8	15.2	1.9	1.9	1.4	100.0
501& above	8.2	27.7	6.9	15.3	4.1	16.4	16.0	0.5	0.9	1.1	2.9	100.0
All	11.2	31.3	5.4	15.4	4.7	10.7	8.6	6.6	1.9	2.7	1.6	100.0

the state decentralisation programme. Other Self-help groups are functioning under different NGOs. Micro-financing and other income-generating programmes are generally the major activities of SHGs. SHGs of non-poor farmers are confined mainly to organic farming activities. State controlled *Kudumbasree* SHGs are functioning exclusively for women belonging to 'Below the Poverty Line' (BPL)³ leaving no scope for the majority of other households to join them.

Hopefully, the poor households are really benefiting out of *Kudumbasree* activities. They organise their economic activities within their neighbourhoods through collective actions, and find a way out from the ongoing crisis. SHGs have become locally a means of women's empowerment to a limited extent. Most of them perceive SHG activity basically as an economic activity which can supplement household income. Income earning used to be till recently the sole monopoly of the male members of households.

Four NGOs also have organised SGH activities in the area. These NGOs have been active in the district for the past many years. An interesting new trend seen in the area is the formation of SHGs by community organisations like the SNDP (Sreenarayana Dharma Paripalana Yogam of Ezhava community, which is a powerful state-wide organisation), and spiritual organisations like Amruthanandamayi Mutt. These function more or less on caste or religious lines.

Another growing tendency among the households is to join in as many SHGs as possible. The intention seems to be to mobilise the maximum financial assistance possible. This is however, possible only for relatively better off households with high stable incomes. Husbands belonging to such households give full support to their wives in joining

3 Below Poverty Line is estimated by the government according to a household survey reflecting the socio-economic condition for preparing a development index to identify households belonging to the poverty groups, who are eligible for many of the state welfare programmes. All tribal households automatically come under the Below Poverty Line category.

many SHGs as an economic strategy to improve the condition of households and repayment of outstanding loans.

Individual participation in SHG activities takes several forms depending upon the institutional characteristics of the households concerned such as the common economic interests, dimensions of power in the relation among members, social perception of members etc. However, SHG participation as a coping strategy has given opportunity for women to interact more with the institutional power centres outside households and thereby developing capability in negotiating with the power centres within households. Political affiliation of households, especially of male members, is critical for the members to draw support economic activities through a system of patronage. In our study ward, some cases reveal the local politics of SHG participation.

Sherly and Reena are two women married to brothers belonging to a labour-cum-cultivator household. They stay in different houses in the same compound and hold 30 cents of land each inherited from their fathers. Both are members of a self help group functioning in their neighbourhood. Their husbands are casual agricultural wage labourers. In their spare time they attend to agricultural activities in their wives holdings. The households face severe water shortage in this locality. So collection of drinking water is a major burden to these women for which they walk daily at least half-a-kilometre each way. They also participate in SHG meetings and activities. Besides micro credit activities, they are also planning to start some other ventures. Their husbands are sympathisers of the Congress party and are actively involved in the local election process. They maintain good rapport with the ward member and are able to pressurise him for getting provisions for their women's SHG. But they rarely participate in the political activities at the local level.

On the other hand, Mohanan, a casual agricultural and non-agricultural wage labourer having a marginal holding does not allow his wife Mary to participate in the activities of the SHG run in the panchayat.

He is an active BJP worker, supported by a section of people in the nearby tribal colony. He harbours some personal rivalry with the ward member. Mohanan was denied a house under the panchayat scheme, though his request was sanctioned in the *gramasabha*. He justifies his decision to forbid his wife from participating in SHG activities because of the close association of that ward member with that particular SHG. He believes that they have to please the ward member to get any benefits through the SHG. And he does not like to do that.

In many other cases, though the male head of the households are reluctant to allow their wives to participate in SGH activities, they are unable to prevent their wives participation because of the pressing demands of the households which they themselves are not in a position to fulfil.

Leela, a young tribal woman, married to a Christian casual non-agricultural labourer and a congress worker, is an active member of an SHG in her neighbourhood in Kappikunnu and an executive member of the Community Development Society at the Panchayat level. Her husband John does not fully support her in her activities, as he believes that a woman should not participate in public affairs. It would give a chance for neighbours, he argues, to depict her in bad light. But he is not able to stop her from attending SHG activities since he is a drunkard unable to support his family. He does not quarrel openly with his wife, but disagrees with her totally. According to her, she used to shy away from men and strangers; but her active participation in the SHG movement has enabled her to overcome all inhibitions. Now she takes courage to undertake social responsibilities and occasionally participates in local political activities as a Congress party member.

Women belonging to the Christian community have come in a big way to the forefront of SHG activities in the locality. Controlled and guided by Church organisations, they have seized several socialisation opportunities. Their early exposure to NGO activities has given them an edge over others.

Cattle Rearing

Dairy activities in the study area have increased as a response to economic crisis. This change may be attributed to two factors: the attempt of marginal farmers to arrest declining household incomes by buying a cow or adding more cattle to the existing stock; and organic farming as a coping strategy adopted by the farming households in the area which increased the demand for organic manure. Among the poor, cattle-rearing is viewed as part of the work of the female members of households. The marginalized communities, mainly rear goats for sale in the local markets for slaughtering.

According to the data supplied by the local milk cooperative, milk collection has considerably increased in the area after 2000; from around 150 thousand litres in 2000-01, it has increased to 250 thousand litres by 2003-04. This particular society secured the first place in the state for procurement of milk. A large farmer belonging to Kappikunnu who owned around 10 cows was selected as the best milk producer by the State Milk Producers Union for the past two consecutive years.

A number of formal and informal institutional arrangements are at work enabling many households to adopt this strategy successfully. Co-operative organisations are important among the formal institutions in the production and distribution of milk. At present there are four collection centres in Kappikunnu under the milk cooperative.

There are a number of institutional arrangements through which poor people can acquire cattle. Formal institutional support is given mainly through credit loans facilitated by the co-operative society, the banks and the *Kudumbasree* SHGs. In the context of current vulnerability, the local co-operative bank has introduced an innovative system of credit disbursal by which poor people, basically small cultivators, are given two cows under a single loan, extending for a period of two years. One cow is given in the first year and the second in the following year. The

loan may be repaid from the second year onward. Both the cows are insured. This type of loan has been appreciated widely and according to the Bank authority in the locality, it has been working successfully in the context of the livelihood crisis. The milk cooperative society has introduced a loan for the cultivation of green fodder, which also has been proved useful. Ownership of land, individual collateral, etc are some of the preconditions required to avail such loans from the local co-operatives.

The farmers find many impediments in their interaction with formal institutions. Treatment and vaccination of course are major hurdles related to cattle-rearing. Though a medical centre under the dairy department is functioning in the area, farmers experience great difficulty in taking their cattle to this point in times of need due to the distance. Young people are reluctant to walk the long distance with their cows. Instead, they expect the doctors or the assistants to come to the place where the affected cattle are located. They are asked to pay Rs.150 as 'consultant fee' for each such visit. The milk producers find this situation as a serious disadvantage but are reluctant to express it to the officials.

Marginalized communities in the area have only sparse resources to maintain a sustainable cattle economy. Such households have been taking up goat rearing. In Kappikunnu, a number of households belonging to the Paniyan and Kattunaykan communities in the vicinity of forest keep herds of goats. In the Paniyan settlement, Melekappil, there are around fifty goats owned by the households. But only two households in the Melekappil Paniyan colony have cows. The Kattunaykans in the Kurukkan moola colony, have around 70 goats. These two settlements enjoy the advantage of close proximity to the forest.

Migration

The crisis situation has created deep-rooted desperation and pessimism among farmers. The previous generation had succeeded in

combating the hostile environment and establishing themselves as cultivators in this region out of sheer will power. But no one in this area seems to have a similar resolve now in succeeding in cultivation. The main reason for this pessimism is changes in climatic conditions and the quality of the soil. Educated and skilled youths belonging to the third generation of the in-migrants are now desperately attempting for permanent migration away from the locality.

Mainly small farmers and labourers have adopted migration as a coping strategy. In the wake of the price fall and the consequent crisis, a number of labourers from the area migrated to Tirupur and Coimbatore in Tamil Nadu. These are the centres of the garment industry in south India which absorb thousands of unskilled and semiskilled rural labourers pushed out from their local moorings due to distress and desperation. Around 12 persons from our study area had moved to these places in search of jobs in cloth mills. But all have come back giving up their jobs after spending one to two months there, due to the precarious working conditions prevailing there, which was worse than those in their home village.

Many girls and women too migrated temporarily to the neighbouring states and districts to take up jobs as domestic servants and teachers. The migration cannot however be taken as an income-enhancing strategy of households as many of them are paid only meagre wages. For many of them, migration has been simply an escape from the trying and distressing situation at home.

Reena, the eldest among three daughters of a small cultivator household, reached Andhra Pradesh using the contact of a distant relative and joined as a teacher in a pre-primary school. The school owner, who is also from Kerala, pays her Rs.1500 per month as salary besides food and accommodation. Her father, an ailing cultivator, and mother, working as a casual agricultural labourer, explain that though the amount is small, she is no more a 'burden' to them and whatever she is earning could be saved for her future. This job also gives her exposure to the outside

world and an opportunity to explore other possible opportunities. And back at home, there still is nothing much left to offer. There are also households from which girls have moved to remote areas in Punjab and Rajasthan.

Most of the households from which girls are moving out belong to the Christian community. The wider network of migrant relatives and friends they have, and above all, the institutional support of the Church in times of departure and arrival at different places, facilitate the migration process. A strong ethos of self-dependency and self-reliance on their part also work as a launching pad for such migratory shifts.

A number of persons were reported in the survey as migrants, who stay at home for less than six months, and not included as household members. Migrations mainly related to seasonal agricultural and construction works were also reported from the area. Seasonal labour migration is an increasingly important feature of livelihoods in tribal areas. Such migration can no longer be viewed merely as an adjunct to an essentially agrarian way of life, but has to be seen as an integral element in the coping, survival and livelihood strategies of tribal farming families. From the survey data it is seen that nearly 18% of the workers moved out of the village for work. Out of them, nearly 85% were males (see Table 21).

Table 21: Percentage distribution of workers in the village by mobility status

Mobility status	Male	Female	All
Mobile workers	20.6(84.7)	9.6 (15.3)	17.5 (100.0)
Immobile workers	79.4(69.2)	90.4 (30.8)	82.5(100.0)
All	100.0 (71.9)	100.0 (28.1)	100.0(100.0)

Figures in parentheses are row percentages

The main reason for moving outside the village seeking employment is reportedly 'under-employment in the village'; occupation-wise, about 81% of casual agricultural workers move out due to underemployment in the village. (See Table 22)

Table 22: Reasons for moving out by occupation outside the village (%)

Reason for moving out	Casual Agricultural labour	Casual Non-agricultural labour	All
Under employment in the village	80.7	54.4	73.7
For income enhancement	6.5	19.3	9.9
Better job outside the village	6.4	0	4.7
Lack of opportunity in the village	0	17.6	4.7
Others	6.4	8.7	7.0
Total	100.0	100.0	100.0

Occupational shifts happen only in the case of about 9% of the out-migrants, mostly consisting of small and marginal cultivators who migrate and do agricultural labour at the places of destination. All agricultural labourers and non-agricultural labourers do the same types of work in the places of destination. Only 2% of the migrants are forest dependents who do the agricultural labour when they move out of the village. (see Table 23)

As shown in Table 24, 40% of the out-migrant workers belong to the lowest MPCE category (Rs 0-300), which suggests that extreme poverty is one of the main reasons for pushing people out of the village. However, this strategy does not help them a great deal to improve their economic conditions. Seventeen percent of the labourers belonging to

Table 23: Occupational shift of the migrant workers

Occupation in the village	Occupation outside the village		All
	Casual agricultural labour	Casual non-agricultural labour	
Cultivators	9.4	--	9.4
Casual agricultural labour	61.1	--	61.0
Casual non-agricultural labour	--	21.6	21.6
Forest dependence	2.8	--	2.8
Others	--	5.1	5.1
Total	73.3	26.7	100.0

the highest two MPCE categories also move out in search of jobs, probably for more skilled and non -agricultural employment. For the poorer majority, migration is a defensive coping strategy to surmount existing debts and extreme economic vulnerability.

Table 24: Percentage distribution of migrant workers according to MPCE class

MPCE	Percentage of Persons
0 - 300	39.7
301 - 500	8.6
501 - 800	24.5
801 - 1000	10.3
1001 - 1250	9.4
1250 - 2500	7.5
All	100.0

Fifty-four percent of the total mobile workers belong to the communities, of Paniyan and Kattunayakan, which again emphasize that asset poverty is a decisive factor for their migration. Though in varied degrees, people belonging to all social groups have adopted this strategy. Workers other than Paniyans and Kattunaykans go for construction work, pepper and coffee plucking work etc. in their destinations, which are not as hard as work associated with ginger cultivation locally. (see Table 25)

Table 25: Mobility status of workers according to social groups and sex

Community	Male	Female	All
Paniyan	38.7	62.1	42.3
Kattunayakan	12.7	3.7	11.3
Chetty	5.6	--	4.7
Ezhava	20.4	--	17.3
Other OBC	11.6	34.2	15.0
Christian	5.5	--	4.7
Nair	5.5	--	4.7
Total	100.0	100.0	100.0

Seasonal migration of ST labourers is mainly to Kodagu region of Kuzhury, Karnataka state, for providing labour in the large scale ginger cultivation undertaken by the big farmers and businessmen from Wayanad.

To meet the growing demand big businessmen engage middlemen and farmers themselves directly recruit groups of labourers who were then brought to the work-sites at the destination. Nobody goes alone along with strangers who come to recruit them. People from the same 'colony', all friends and relatives, are driven straight to the work sites in jeeps. They prefer to go with family, friends and relatives as groups. An amount is given as advance to the migrant households. The rest of the amount is paid when they return back home after completing their work. Unmarried youths constitute the largest chunk of migrant labourers.

But not all families send their young members to distant areas for work. Belli, a 58 years old Paniyan having four adult sons does not like the idea of their going out for ginger cultivation. He says that the working condition is very bad in the ginger fields in those destinations. Workers have to toil continuously under the sun from early morning to late evening. He also fears that the availability of local arrack in plenty would tempt and spoil his children.

Share-cropping

The incidence of share-cropping of rice increased among the marginalized groups only recently. Acute underemployment faced by them for the past few years has compelled them to search for other options. Searching for land to cultivate was among the options before them.

The Chetty landowners in the area, who had discontinued the cultivation of rice due to declining profits by 2000, reciprocated positively to the plea of Paniyan and Naykan households for share cropping of their land, as they were unwilling to lease out land to immigrant farmers who had a reputation for indulging in excessive use of pesticides and fertilizers.

Extreme shortage of rainfall was also a reason for increased share cropping. Rice is the only crop that is found under share-cropping.

According to the prevailing practice, landowners supply seed and manure and labourers do the manual work. The owners and the share cropper share equal proportion of the produce after harvest inclusive of straw. Usually all members of the share cropper's family takes part in the farm activities.

Kariyan, a 48 year old Paniyan worker, took a piece of land about 15 km away from his home from a Chetty landowner under whom his parents had worked as bonded labourers. He set up a temporary shed

with the help of the landowner in that land. He farmed the land with the assistance of his wife and two daughters. For the past three years this family has been doing share-cropping with the Chetty landowner. After the crop is harvested, the family returns home till the time of the next crop.

Increased Dependence on Forest

Among the Kattunaykan households, forest dependence increased as a result of underemployment in the village. They collect bamboo, fencing materials, honey for sale and tubers, yam and fruits for own consumption. Collection of forest produces had been only a supplementary activity for most families in earlier days. In the past many of them used to have adequate wage labour within the forest itself. This was an area where large scale bamboo felling for private enterprise took place until 2000⁴. Since they had independent means of income, no household in the area used to bother about obtaining official permission for collecting forest produce. Now their increasing vulnerability is forcing them to depend more on the forest for survival. They collect forest produce for their survival. This makes them "illegal collectors and forest encroachers" in the opinion of forest officials, as Kattunaykans do not possess any official authorisation to collect forest produce. There are increasing conflicts between the forest officials and Kattunaykans.

Collective Strategies

Collective actions, associated with a wide spectrum of farmer's movements, are mostly undertaken to build up pressure from below.

4 Mavoor Gwalior Rayons was one industry in Kerala in the forefront which started producing wood pulp in the 1950s and which absorbed large quantity of bamboo of Wayanad. It was closed down in 1999 following an environmental movement by the local people against the company as it caused large scale pollution of the Chaliar river and resulted in widespread occurrence of cancerous diseases. Bamboo-cutting for the company was a major source of wage income for workers including Kattunaykans in our study area.

Two independent 'apolitical' organisations are the direct outcome of the agrarian crisis. Most of the other organisations have political affiliation, especially with the left parties.

The Farmers' Relief Forum (FRF) is one of the 'apolitical' organisations formed in the 1990s exclusively for protecting the interests of farmers. This organisation enjoys some degree of influence among small cultivators of the area cutting across party lines. Its militancy in blocking the revenue recovery proceedings initiated by the local bank won it many followers. The activists of this organisation blocked officials from entering the indebted households. They also took a lead role in initiating negotiations. This brought FRF to the centre stage of the farmer's agitation in the region. Unlike the INFAM, which is patronised mainly by large landholders, this organisation has become a platform for small cultivators including a large chunk of traditional Congress sympathisers.

INFAM is an organisation formed under the control of the Christian church in the late 1990s. It follows both affirmative and assertive actions to face the crisis. Unlike the FRF, this organisation has a base among all over Kerala. It has organised massive protest rallies at different centres in the district as well as in other parts of the state. INFAM intervened in the market by collecting products directly from farmers for sale and promoting organic farming. But much of their efforts have proved a failure. They have also been accused of diverting the farmers along wrong directions.

Leftist political organisations of farmers are consistent in their protest against WTO and new economic policies pursued by government, which they find as the main reason for the debacle in the agrarian sector of the state. It was the left wing organisations which conducted the first massive protest in Wayanad in 2000 against the new economic policies pursued by the central government.

Box 1. Strategising the Protest

Mr Joseph is a local leader of the Farmer's Relief Forum and also an active worker of the Congress party. He is a small cultivator with 3 acres of land in his possession. His association with FRF started only three years ago.

Like many others in the locality, he gives utmost importance to provide good education to his three children. He has sent his eldest daughter for nursing studies in a private college in Bangalore by paying a huge capitation fee. As is the trend in the locality, he has built a concrete house spending a fairly high amount during the pepper boom period.

Fall in the price and fall in production of crops has affected Mr Joseph also. Now he is indebted for an amount of Rs one and a half lakh to different banks. He approached the party leaders for help in the context of revenue recovery proceedings of the bank, which they were unable to provide. So he decided to meet Farmer's Relief Forum leaders, some of whom were also the local leaders of the Congress party. They helped him in stalling recovery actions from the banks; hence he became the local organiser of the forum. He also organised many similar households in the area to join FRF by assuring them physical help during similar official actions. He, along with other farmers, has succeeded in blocking all types of revenue recovery measures.

He also maintains good relationship with the Congress party and is actively involved in local developmental activities undertaken by the local panchayat, which is ruled by the same party. He is also the chairman of People's Committee for the local dam construction.

Farmer's Suicides in the Region - Failure to Cope?

For the past two years a number of suicides have been reported from Wayanad. The suicides have been attributed to the agrarian distress in the district. Indebtedness of heads of households has been reported by the media as the sole reason for most of the suicides. Political parties and the farmers' organisations took up the issue and the Government announced compensation to the families of victims. Not all suicides were due to agrarian distress, but there was a tendency to attribute them to agrarian distress so that compensation could be claimed (Table 26). Despite such capitalising on the distress, the majority of those who committed suicide belonged to the poorest section as per the data obtained from the Pulpalli Circle Office of the police.

Table 26: Number of reported suicides

Year	Number of suicides	Reason for suicide		Sex	
		Indebtedness	Other reasons	Male	Female
2001	51	7	44	38	13
2002	49	7	42	37	12
2003	44	7	37	33	11
2004	30	17	13	27	3
Total	174	38	136	135	39

Source; Local police station, Pulpalli

The percentage of farmers who committed suicide were 23, 14, 22 and 57 for the past four years. A heavy increase in the percentage of farmers is notable in 2004. Meanwhile, in the case of agricultural labourers, the incidence declined in 2004. The rates of suicides among agricultural labourers were 47%, 53%, 52 % and 40% respectively of the total number of suicides (see Table 27).

Table 27: Number of suicides according to occupation

Year	Number of suicides	Occupation		
		Farmers	Agricultural labourers	Others
2001	51	12	24	15
2002	49	7	26	16
2003	44	10	23	11
2004	30	17	12	1
Total	174	46	85	43

Source: Local police station, Pulpalli

There were few cases of suicides reported among the indigenous communities during the earlier period. About 11% of the persons who committed suicides in the past four years belong to the indigenous population (see Table 28). Reasons reported for their suicides are ill-health, mental problems, alcoholism and quarrels.

Table 28: Number of suicides among the tribal population and others

Category	2001	2002	2003	2004	Total
ST	8	5	6	1	20
Others	43	44	38	29	154
Total	51	49	44	30	174

Source; Local police station, Pulpalli

Besides indebtedness, the other reasons reported for suicides by the local police are mental agony due to ill-health, conflicts within families, liquor addiction, failure in examination, divorce or separation in marriage, etc. Police records may not provide reliable data on suicides, since it is an offence under IPC and many households may not like to report them to police. However, many of these deaths could have been avoided if they had enough security with regard to assets, especially

during periods of acute agrarian crisis. It is also very clear that, whatever may be the reasons behind each case, poverty is found to be the common background of most of them.

Mitigation Strategies - State Initiatives in the New Institutional Context

Mounting public pressure from farmers' agitations and sensational media reports blaming the state for inaction compelled the state to take various remedial measures. Public provisioning and distribution of compensations were the major strategies adopted by the state government. This was apart from the mitigation strategies undertaken by the panchayat.

Public Provisioning

Free supply of rations was a fruitful strategy adopted by the state government during the distress following the price crash and drought. Starvation deaths were reported among the tribal people of Wayanad in 2000 in the context of underemployment and livelihood crisis. Following the pressure from media and agitations by political-civil organisations, the government declared free ration for the entire tribal population in the whole state. Supply of free rations to the marginalized communities in the area during the lean months as a policy existed even earlier. But in 2004, the government distributed free ration for the entire population in two panchayats - Mullankolli and Pulpalli - for three months to deal with the drought. In the context of acute underemployment, many tribal respondents perceive it as the only strategy that prevents mass starvation deaths among them.

Another programme of the State and the Central governments which targeted the poor groups was the distribution of subsidised rice. But a friction commonly develops between the local ration dealer and tribal consumers. They allege that he tries to extract an additional income from selling good rice in the open market. Many of the tribals complain that the dealer sells fine rice in the open market and replaces it with inferior quality rice for distribution to ration card holders. We collected

information on Public Distribution System (PDS) in the village, mainly relating to entitlement and off-take. Since rice is the staple food of the villagers, we analysed the distribution of rice for the households entitled to receive it. Table 29 shows that 80% of the households possess ration cards. Those households which do not have ration cards were mostly new households. Out of those who possessed cards, 40% belong to the BPL category. Interestingly, about 35% of the non-poor households have managed to obtain BPL cards, while only 55% of the poor households and 66% of the marginalized households have BPL cards. In the case of off take, only about 40% of the households make a full off-take. They are mostly BPL cardholders. Only 28% of the marginalized households make a full off-take. They show the lowest proportion in off take. Lack of purchasing power is the main reason for their poor offtake. Thus it is found that PDS is not very effective in this village at a time when villagers are facing a grave situation.

Table 29: Details of offtake of rice from PDS

Details	Percentage of households			
	Marginalized	Poor	Non-poor	All
Possession of ration cards				
Having ration card	68.0	79.4	80.4	80.0
BPL cards	66.3	54.9	35.4	40.0
Off take during the last month of households having entitlements				
Full off take	28.4	30.3	42.6	39.4
Less than full offtake	40.6	30.6	10.4	15.7
No off take	31.0	39.1	47.0	44.9
Reason for no/less off take				
Lack of money	85.0	75.0	15.0	32.7
Poor quality rice	--	--	9.4	6.9
Not necessary	--	--	70.3	49.5
Other reasons	15.0	25.0	5.3	10.9

The major coping strategy adopted by the government as part of public provisioning has been distribution of drinking water, following severe drought in the area. The revenue department was given full powers to undertake necessary steps. The District Collector ordered the take over of all ponds in the district in the private holdings and under private agencies by government under the supervision and guidance of revenue officials. They were given the responsibility to collect and distribute water. The Village Officer decided the area and the routes in consultation with Panchayat representatives.

Operationalising of the strategy however had a few pitfalls. Conflicts arose mainly on the quantity of water distributed. Distribution was done once in a day or on alternative days. A household was allowed to keep any number of pots at the distributing point in the neighbourhood. Initially there was restriction about the quantity of water allotted to each household. Owing to the strong protest from people, they were allowed to take as much as they wanted. Such frictions and conflicts were subsequently solved by people themselves. In most neighbourhoods, people cooperated and assisted one another in collecting water even in the absence of the concerned household members at the distribution point.

However, as the number of pots available with the marginalized households was few, they were unable to store all the quantity of water required by them. To meet their additional requirements, these households depended on unclean sources like muddy water pits in the area.

Compensation

Two category of people received compensation from the State: households of farmers whose crops the drought destroyed, and the immediate relatives of farmers who committed suicide because of their inability to repay debts due to the agrarian crisis.

For deciding the crop loss due to the impact of drought, officials from the agricultural department visited garden lands and assessed

damages. The earlier practice was to deploy officers belonging to the same area for deciding compensation. This time officials from neighbouring districts were deployed to avoid nepotism. Even this new method did not satisfy most of the people and many alleged corruption and malpractices in the assessment of compensation. According to some of the farmers, many small cultivators managed to receive compensation which was much higher than their actual damage. There were also cases where the damages were huge but the compensation was small. But in the earlier method of assessment done exclusively by the local agricultural officials, large farmers were reported to have had a major say and the total amount of compensation was said to be divided among them according to the size of their land holdings instead of dividing according to the proportion of actual damage suffered by them. This time, it is the large farmers who make accusations and allegations.

Suicide cases reported from Wayanad had kicked up controversy and protests across the state. Following media reports on suicides and subsequent public pressure, the government declared a compensation of Rs.50,000 each for the aggrieved families.

Mitigation Strategies and Decentralised Governance

A major institutional change at the local level during the period of crisis was the political and economic empowerment of Panchayat Raj institutions. Power - fiscal and political - was devolved in a significant way from the state to the local panchayat. In our study area, activities of the panchayat were confined to mitigation strategies like improvement of physical infrastructure. The introduction of Kudumbasree as a state level poverty eradication programme was very effective in the context of livelihood vulnerability. A revolving fund has been set up under the Kudumbasree programme for transferring money to local SHGs to undertake productive ventures. Remarkable improvement is visible in the physical development of the area; new roads and new houses have emerged. The dilapidated houses of marginalized people are getting replaced with the financial assistance of the Panchayat.

The convening of the local gramasabha, the village council, itself has become a mitigation strategy on the part of the government as it forms an appropriate forum to discuss livelihood issues. It is supposed to be a forum to take decisions regarding most of the collective strategies that influence local livelihoods. All the causes of livelihood vulnerabilities cannot be handled at the local level alone as the possibilities for curative measures at this level are extremely limited. Nevertheless, local panchayats can definitely play a proactive role by upholding the livelihood interests of local people and providing temporary relief to the suffering population through transparent and accountable governance practices.

However, our survey reveals that most of the households in the village do not believe that the Panchayat uses its funds transparently and that a majority of them are dissatisfied with the functioning of the Panchayat. There was strong discontent even among local LDF leaders who were involved in implementing the programme. One section among them believed that the programme virtually decentralized corruption and showed examples from the village itself to corroborate their point of view.

Gramasabha

In the initial stages of people's planning Gramasabha meetings evoked a lot of enthusiasm. Now the enthusiasm is waning. There was huge participation during the early days. In the gramasabha meeting conducted to approve the plan prepared by the panchayat during the present study, there was clear evidence of poor people's participation. Less than five male members participated in the gramasabha meeting. The total number of participants was around 50, comprised mainly of SHG women. Only a few women took part in discussions. Even those who spoke, spoke hesitantly in presenting their views, as it was obvious that they did not want to offend the representatives of the Panchayat. A Panchayat member read out to the audience the local plan. Nobody gave views on its priorities.

According to Panchayat authorities, the low participation and lack of enthusiasm on the part of the people was because the current gramasabha does not select beneficiaries of its welfare schemes which was the main interest of the participants in the earlier days.

One section of the people permanently stayed away from gramasabha meetings as they both belonged to the opposition party and did not expect any benefits or they did not have a good relationship with their ward member. People from higher economic strata also rarely participated in the gramasabha meetings unless they felt that they stood to gain from some of the projects to be discussed in the meeting. Such projects might be schemes for drinking water distribution, road construction etc. Many informants alleged that decisions regarding such schemes were taken according to the convenience of the local elite.

This does not mean that all developmental activities and beneficiary selections made by gramasabha go without tensions or conflicts. For instance, in the last gramasabha meeting there was heated exchange between a ward member and some of the aggrieved members of the same party, on allegations of partiality in distributing individual benefits. At the end of the tussle, a member was almost in tears and women participants intervened and saved him from further humiliation. According to some of the opposition party members, they usually do not attend the gramasabha, as they are sure that they will not gain anything by doing so.

Financial Assistance to Poor

Under the local panchayat schemes, financial assistance is disbursed to the poor for constructing houses and latrines facilities. It is mandatory that the Gramasabha should approve the list of beneficiaries prepared by the ward member with the help of a committee. As far as our study area is concerned, this committee comprises only the close confidants of the ward member.

Complaints are raised against beneficiary lists prepared by the selectors. It is alleged that the lists are altered after gramasabha meetings and that the names of undeserving people are later inserted into it. It is found that in some cases members of the same family get three houses, two latrines etc. Corruption is implicated in such cases.

Housing Scheme for Marginalized Groups

Construction of houses is an effective mitigation strategy on the part of the State, which has contributed significantly for developing the physical assets for the poor and the marginalized groups in the area.

This is also one of the most glaring areas of corruption at the local level. After passing the grant for housing by the Panchayat, the cheque is released on behalf of the eldest female member of the household. Most of these females are ignorant about the modern institutional procedures and have trepidation to face the gramasabha. So a third party comes for mediating between her and the panchayat. This broker, most likely a contractor who has the support of ward member and his assistants, then takes charge of the whole affair from the stage of cash release from the panchayat to the stage of completion of construction.

Though most of the tribal beneficiaries know of the magnitude of corruption involved in assigning the responsibility to a contractor, they are utterly helpless in the current institutional set up to take up other initiatives. As one tribal member says, "if we do not agree to give the work to these brokers we will not even be selected for benefits. We do not know how to approach the panchayat and what to do. We need not worry about it once they take up responsibility". According to some other informants, a contractor spends only half of the total amount sanctioned for the construction and pockets the rest of the amount, sometimes sharing it with his cronies including his political friends.

Mitigation Strategies and Local Politics

The representative of this ward admits that the problems of corruption and nepotism are associated with the mitigation strategies implemented under various schemes funded by the local Panchayat. He rationalizes it in terms of his political survival strategies.

Leaders consider beneficiary programmes for personal advancement by using it to mobilise people around them and as a strong base for upward mobility in the political ladder and for successful negotiation with their political leadership. In this sense, local politics is highly embedded within the market relations.

The functioning of SHGs is also a part of this strategy. A number of young women in this area combine active involvement in local political activities with participation in SHG activities. Their services are recognised with favours and appointments to responsible positions within the SHG organisation. Some of them also get into the network of corrupt practices.

V. Marginal Groups and Institutional Negotiations

The settler communities adopted the modern cash crop economy. This enabled them to internalize the modern institutional environment, which in turn shaped new cognitive structures allowing them to access land, education and health at ease. These have helped them acquire a fair quality of life or at least a level of capability adequate for further mobility. But this has not been the case with the marginal groups in the area. They, like other people of different castes and communities in the village, are also in constant interaction with modern institutions. But in terms of adaptive capabilities, the impact of such interaction is weak on them.

Land Redistribution

Most of the in-migrants in the early days of their arrival in the study area lived a poor life. They were afraid that government officials

belonging to revenue, police and forest departments would evict them from the lands which they had encroached long ago. Leaving behind all their political differences, they organised themselves under leftist farmer's organisations. But the leftist farmer's organisation lost their hold among the people soon after the distribution of titles to settlers. Unlike in other parts of Kerala where strong peasant movements facilitated the growth of communist parties, in Pulpalli region the in-migrant cultivators negotiated with political organisations very pragmatically. As explained by a CPI (M) leader in the area, "they became communists to get their encroachment upon fertile lands of Pulpalli legitimised. Later they leaned towards the Congress party and the Church for furthering their economic mobility and security." In later years Pulpalli became one of the richest regions in Kerala and one of the strongholds of the Congress party. Most of the in-migrant cultivators in the area were fully aware of the profitability of cultivating of cash crops and also about the land redistribution policy of the government.

The situation of the tribal groups was completely different. They were not aware of any of the institutional factors that were transforming their social environment. The new regime of private ownership was depriving them of their customary rights. The *Valli* system of labour arrangement had given them full freedom to access the land possessed by their masters for fulfilling basic livelihood needs. They were free to collect tubers, roots, leafy vegetables seasonally and to catch fish from nearby fields during rainy seasons. Many of these customary rights were curtailed with the in-migration of the plainsmen.

In general, in-migrants from southern Kerala are seen to give utmost importance to education of their children. This was mainly due to their earlier exposure to the modernisation process in the erstwhile Travancore State from where the major in-migrant community of Syrian Christians came. Missionary activities also have influenced their attitude towards education. During the early period of migration, there was only an upper

primary school in Pulpalli. For higher education they had to walk a long distance and cross the river. Subsequently, due to the collective effort on the part of the people, the number of schools increased gradually and there are at present 12 schools at various levels in the region.

Cutting down of education expenditure is only done as a last resort even in times of distress. Most of them are conscious about 'quality' education, though they are not very clear about the notion of 'quality'. They send their children to schools, mostly in the private sector, in the town. Intra-household competition is also a deciding factor in the selection of schools.

Table 30: Percentage of Students attended in educational institutions

	Type of Educational Institution				
	Govern- ment	Aided	Unaided	Others	All
Students from					
Marginal households	58.2	33.8	-	-	100.0
Poor Households	62.1	37.9	-	-	100.0
Non-poor households	9.6	65.8	22.6	2.0	100.0
All households					
Male	15.8	59.6	21.3	3.3	100.0
Female	20.8	62.9	16.3	0.0	100.0
Combined	18.3	61.2	18.8	1.7	100.0

From Table 30 it is clear that the majority of the children of poor and marginalized households go to nearby government schools. Most of the households in this category are not in a position to spend on high transportation cost needed for sending the children to private schools. Children belonging to Paniyan and Naykan groups in the area are rarely found taking private vehicles for going to schools. Interestingly, in the

matter of giving education to their children, there is not much difference between the poor and the marginalized households. The public education system is vital for these sections of the population. About 58% of the marginal households and 62% of the poor households enrol their children in government schools. There is an aided school with hostel facility for marginalized students in the area⁵. Thirty-four percent of the marginalized household's children and thirty-eight percent of the poor children attend the aided school. Sixty-six per cent of the children belonging to the poor group go to the aided school. No student belonging to the poor and the marginalized categories goes to unaided schools.

The data shown here do not speak much about drop-outs, irregularity in attendance and problems related to day-to-day interaction of students within schools, especially in the case of children from marginalized households. The case of a government lower primary school in Kappikunnu adequately describes the specific problems faced by the marginalized section. This particular school was started here in 1998-99 following local pressure exerted on the Panchayat through the *Gramasabha* and a people's committee. This school was intended mainly for attracting tribal children in the nearby colonies. There was a conflict between two neighbourhoods, Kolarattukunnu and Mundakuttikunnu, about the location of school. The Panchayath selected Mundakuttikunnu for establishing this school, which is accessible to all the tribal settlements in the area, inviting the wrath of the people in other neighbourhoods. They decided not to send children to this school. Meanwhile, students belonging to the non-poor communities belonging to this locality chose to send their children to other aided and un-aided schools due to the

5 In Kerala there are schools under government, the private aided sector and the private unaided sector. Aided schools are run by private management with rights to admit students and appoint teachers. The salary for the teaching and the non teaching staff and educational benefits to children of the private aided schools are drawn from the government exchequer. Unaided schools are completely under the private sector, functioning without government aid. Most of the *English Medium Schools* are in the unaided sector.

presence of vast numbers of tribal children in this school. This particular school has been selected for many benefits under the central government *Sarava Siksha Abhiyan* (SSA) scheme. The local Panchayat also allots grants from its plan fund. Free noon - meal is served here and recently it has bought a TV set for attracting enrolment. This school has a good building and a good playground. Still the school faces shortage of children. Teachers complain that non-tribal parents have strong bias against the school despite availability of good infrastructure facilities due to the prominent presence of tribal students, whom they choose to avoid.

Some of the tribal children come to school at the beginning of the school year and attend classes till they receive benefits like free books, dress and the lump sum grant. Then they discontinue. Except a few, most of the children are irregular in attending school. The dropout rate is prohibitively high (see Table 31).

Table 31: Dropouts among students of the marginalized groups

Year	Dropouts from schools				No. of Tribal students on rolls	
	Paniyan		Kattunayakan		Boys	Girls
	Boys	Girls	Boys	Girls		
1998-99	5	5	2	1	22	15
1999-00	7	6	2	3	26	18
2000-01	5	0	1	0	27	15
2001-02	2	1	2	0	37	21
2002-03	1	1	4	1	32	31
2003-04	4	5	5	1	40	32
2004-05	1	0	6	3	37	40

Source: Local School register

The data shown here do not indicate any particular trend in the number of dropouts. The large number of dropouts in the initial two years was due to the removal of over-aged students from the same settlement who used to come to school just for curiosity along with the

younger children. The number of dropouts increased in the last two years because of a conflict between some parents and teachers. There was a heated exchange, during which abusive language was exchanged between parents and teachers. Some parents thereupon opted to stop their children from attending this school.

Nonetheless there is not much decline in the total number of students enrolled in the school during the period 1998-2005. According to teachers, most of the students are not regular in attendance. They say that if they follow rules of attendance strictly in the case of tribal children the number of dropouts would increase. The teachers take tremendous effort to bring children to school, at least in part in order to protect their own teaching posts in the school.

There are a number of reasons for the irregularity observed among tribal children in attending school. For many of the Paniyan students, seasonal shifts of residence between the villages of their parents depending on the availability of work prevent them from continuing education in the school. Apart from these work-related shifts, during festival seasons they also move to households of relatives. This is a common practice among Paniyans and Kattunaykans. Elder members, especially old women, visit the households of kinsfolk occasionally. They take their grandchildren along with them on such occasions and come back only after three or four days sojourn. During the period of harvest, when parents go to work in the fields, some students, especially girls, stay back home to look after their young siblings. Teachers report that the school children become reluctant to return back to school after absenting themselves consecutively for a few days and it is difficult to teach such students with any reasonable amount of success.

Medium of instruction is another major problem for the students of marginalized households in the classroom. Kattunaykan children, whose mother tongue is a Kannada dialect, face special difficulty in following what is taught in Malayalam. Some of them fall silent in

classroom. Paniyan children also face the same problem, though less severely.

Only a small number of girls go to higher secondary school from the village. This is mainly because they are burdened with performance of household chores. When mothers go out in search of livelihood, the girl children take care of domestic chores like washing, collection of water, etc. During the harvesting season they assist their parents in agricultural work. Contract work has increased the involvement of girl children in productive work. Still, some of them manage to get an opportunity to learn at the higher secondary stage, most probably by staying in hostels.

More boys than girls in the village attend the higher secondary stage of school. They generally belong to households with the parents more educated. The aspiration of a father is kindled by his association with landholding families and with educated members in the village that facilitates his children's schooling. His own slight ability to read and write inspires some fathers to send their children to schools. In such cases, children attempt to adapt to the modern school environment.

Health

The public health facilities in the region are being provided through actions undertaken collectively by the local people under the leadership of political leaders. The leaders of the Congress party were in the forefront of initiating many of the local developmental activities including the opening of new schools, health centres, roads etc. whereas the Communist party workers were involved in mobilising poor farmers and labourers for establishing their legal rights. They later were in the forefront to oppose the bonded labour system.

The Government was forced to set up a hospital and appoint a doctor in the area following a blockade at the office of district medical officer in Kozhikode. It happened in the late 1960s following a cholera

outbreak and the death of many in-migrants. In 1971, a people's committee was formed under the Panchayat president and it constructed a hospital building with contributions from the people.

During that period, in-migrants, irrespective of their class or rank felt the need for public health facilities. Private health service was provided by local Ayurvedic practitioners or retired allopathic doctors, but it was inadequate to meet people's needs.

Now, 81% of the patients belonging to the Rs 0-300 MPCE category depend on nearest government hospitals. 50% of the patients in the highest MPCE category (Rs 1251 and above) also use government facilities. 76% of the poor category (Rs 301-500) goes to private hospitals for treatment (see Table 32). Patients belonging to all categories use both private and public medical facilities. This is really a significant eye-opener especially in a vulnerability context.

Table 32: Type of medical institution in which sick persons are treated according to MPCE groups (in %)

MPCE(in Rs)	Type of Hospital		All
	Government	Private	
0-300	27.7(81.1)	6.6(19.9)	17.3(100.0)
301-500	12.9(23.5)	43.0(76.5)	27.8(100.0)
501-800	20.0(50.8)	19.9(49.2)	19.9(100.0)
801-1000	25.8(66.7)	13.2(33.3)	19.6(100.0)
1001-1250	6.5(40.0)	9.9(60.0)	8.2(100.0)
1251 & above	7.1(50.0)	7.3(50.0)	7.2(100.0)
All	100.0(50.7)	100.0(49.3)	100.0(100.0)

Note: Parenthesis gives the row percentage

Significantly, 50% of the patients treated in private hospitals belong to the poor groups (below Rs.500). 50% among the highest MPCE groups get treated in government hospitals. 45% of the total number of patients

who underwent treatment in any hospital belongs to the poorest category. The percentage of the patients who underwent treatment in any hospital belonging to the highest two MPCE categories is only 15. It is seen that the incidence of diseases is more among the poor and that many of them are compelled to depend on private hospitals, most probably for specialised treatment. Patients belonging to the highest MPCE groups do not shun government medical facilities for normal treatment, since treatment obtained is at subsidised rates.

The patients among the marginalized groups do not always go for outside medical treatment. Indigenous practitioners and midwives are available among them. Many among them ignore common ailments like fever, headache, and abdominal pain. Tribal people are eligible for free treatment in government hospitals. Any expenditure incurred for treatment and purchase of medicines is reimbursed by the tribal extension office in the area. Many people in the village are not able to avail these facilities, though they are very much aware of their entitlements. Chitachi, a Kattunayakan woman, hospitalised her son in the medical college at Kozhikode, where his treatment continued for two months. She got first time assistance for transportation charges from the tribal extension office. She spent a large amount for his treatment, which she managed to get from local persons. She met the tribal extension officer after she returned from hospital and claimed reimbursement. The officer did not settle the claim immediately. She said: "I did not go again there to get the amount. We don't have money to travel many times to the office. So I did not pursue it".

Many among them find similar problem in getting reimbursement in going to hospitals. Relatives in the neighbourhood attend on the patient only at the critical stage of the disease. Then they approach the tribal extension officer (TEO) or the Panchayat representative for help. If the TEO fails to send a vehicle, they collect money from neighbours including farmers, with the approval of the ward member for hiring a vehicle to go

to the hospital for the treatment. This is an informal arrangement practised in the village, by all the social groups. For long-term treatment, they constitute a committee of local people to collect money and manage the treatment. However, for extending such long term community support, the marginal groups are excluded.

According to the information supplied by the local health centre, a health assistant is in charge of the centre and she is expected to visit all the households periodically. Marginalized people in the area suffer mainly from diseases like TB, cancer and sickle-cell anaemia. Scabies is common among children. The Health Assistant in the village observes that unhygienic conditions of the tribal colony and malnutrition worsen the situation of marginal people. They are reluctant to take medicines regularly. She provides curative as well as preventive medicines free to tribal people in the village. She complains that they seldom open their mouth to say a word about the diseases they suffer with and their symptoms. Her strategy is to establish rapport with one or two families in the colony and persuade them to divulge information about other members in the colony. But it is observed that on some occasions, this strategy has proven counter-productive as intra-household distrust and suspicion is prevalent among people in almost all tribal settlements in the study village.

Marginal Groups and Participatory Development in the Village

The Panchayat Act envisaged that many of the livelihood constraints caused by the rigid structures of formal institutions that deny access to land, health and education would be overcome through people's participation in local development and governance. The expectation was to give voice to the voiceless in the everyday functioning of the state.

But in recent times not a single tribal person is found to be participating in the two *Gramasabha* meetings held in a year. Chitayan, who had participated in the two *Gramasabhas* initially, said that there

was no use in participating in the *Gramasabha* meetings. Nobody was there to listen to their problems. He could not speak about any of their problems. So he stopped participating in the *Gramasabha*. *Oorukoottam*, a special *Gramasabha* exclusively for marginalised tribal people is intended to assure them that their demands would be heard. But many tribal people in the village are not aware of the functioning of the *Oorukoottam*. It is convened according to the convenience of the ward member and the officials.

Some of the respondents complained that they were not kept informed about the meetings. The tribal extension officer has appointed a number of promoters from different tribal communities to be in charge of various wards in the Panchayat and they are expected to inform the details about the meetings to all concerned. There is conflict of views among different sections of the people with regard to the functioning of tribal promoters. This is partially due to the unfriendly relationship among different communities and their households. Paniyan households look at a Kuruma promoter often with suspicion. Even a promoter belonging to the same community of households or members in the colony does not always have a good rapport with all. Inter-personal or inter-household distrust is also a major obstacle in the functioning of participatory bodies, especially while dealing with the matters related to monetary benefits.

Participation of tribal women in the SHGs under the Panchayat, as well as in NGOs, is poor. They are not familiar with the highly formalised procedures in the functioning of SHGs and NGOs. Those who participate in the meetings feel powerless in the presence of outsiders who control the proceedings.

There is a recent policy shift towards decentralised forest governance, which hopes to ensure that the local people participate in forest management (Joint Forest Management). This policy has no impact in the area till the time of our survey. This particular village has not been selected for the Joint Forestry Management programme. Though this

village is surrounded by forest, none among the Kattunaykans from this village has got any job related to forest management. The appointments are mostly made on political lines. So the jobs go to party activists even from far away places. A few Kurumans from the nearby villages have got employment in the Range Office as watchers.

The lives of Kattunaykans are affected in different ways by the forest administration. First, the forest administration has curbed their customary rights of free access to forest resources. The officials torture them when they are found in forest for collecting forest produce for livelihood. This is a painful experience to which they are subjected. In their confrontation with the temporary watchers who are aliens to the place in the forest, they are treated disgracefully. Alienation from the forest which was their ancestral home, and the general resource crunch in their lives in recent years, have led Kattunaykans to utter desperation and helplessness.

VI. Summary and Conclusions

This case study of household response to agrarian distress in Kappikunnu has revealed a number of interesting insights. Like other parts of Wayanad, the study region also has witnessed considerable immigration of farmers from Central Kerala. Most of this migration took place in the fifties and sixties. The migrants acquired bulk of the land either by purchase or by encroachment and sought its subsequent regularisation by grant of *pattayams* or titles to lands. In this process the original inhabitants of the area, namely, the scheduled tribes were deprived of their ancestral and traditional rights to access the forest and land resources for livelihood. The migrants developed a productive agrarian economy consisting of cash crops like pepper, coffee and ginger and a range of food crops. The soil was highly fertile and yield levels of crops like pepper was very high. The prices of cash crops (especially pepper) were favourable in the 1980s and 90s. This had contributed to the economic prosperity of the region. However, the intensive use of

land and the incorrect cultivation practices followed by most farmers resulted in the ecological degradation of land. The economic and environmental shock during the first half of the present decade has diminished the regional prosperity and has created conditions of agrarian distress.

The short and long-term strategies developed by households to cope with agrarian distress varied across different socio-economic groups. The farmers reduced their consumption and farm expenditures, and also attempted to diversify the cropping pattern inclusive of the introduction of new crops like vanilla. However, the diversification has been attempted mainly by farmers owning the middle and large holdings. Other forms of response noted are: (i) the shift (though very limited) towards organic farming; and (ii) development of animal husbandry and dairying. In the case of casual agricultural labour and marginal farmer households, migration to other places for employment (both seasonal and long-term) has been one of the coping strategies. Poor households have participated in the activities of SHGs as a means to improve their livelihood. Though SHGs has also tried taking up group activities such as lease farming, such attempts did not reach a level in which it could contribute to increase in incomes of a large majority of the members. Some segments of the tribal community have been depending increasingly on forests for their livelihood.

The mitigation measures by the state, especially the public distribution system, have definitely helped the poor to cope with the distress conditions. Interventions by the panchayat, especially in the improvement of physical infrastructure like roads, hospitals, schools and housing have helped the households to cope more effectively with distress. However, in general, the implementation of development programmes and the functioning of the *Grama Sabha* has been far from satisfactory.

Some of the other insights emerging from the study are the following:

(a) It is evident from the analysis of livelihood outcomes and livelihood assets that land continues to be the most important asset determining livelihood outcomes. Unfortunately, bulk of the poor in the area, namely the scheduled tribes, was dispossessed of their traditional access to land. As revealed in the analysis of livelihood assets, the possession of land has a predominant influence on the development of other assets. Within the backdrop of this finding their collective action for access to land is fully justified. It is the responsibility of the state to distribute as much land as possible by identifying surplus revenue and forest land to this community. However, given the fact that the potential for redistributing land is limited, alternative ways of improving their other livelihood assets need to be considered;

(b) A significant step needed in this context is to change their human assets. As we noted in the study, public provision of education to the tribal children and creating condition in which they could utilize the same becomes absolutely necessary;

(c) In general, managing agrarian distress requires public provision of education, health and other social safety measures. Unfortunately, the public provisioning of collective needs is damaged and defeated by corruption, nepotism and political interference. The situation is further aggravated by the reduction in expenditure on welfare institutions by the state. Contrary to the widespread belief, the suicides reported in the study area are not merely by farmers but also by other categories of households, especially the casual agricultural labour households. The poor are more prone to commit suicides than the better off segments of rural households. While indebtedness is definitely one of the contributing factors, there appears to be other contributing factors that are equally important. The present study did not look into such factors. It is sufficient to note at this stage that debt relief measures alone would not help arrest suicides. It is the responsibility of the state to intercede in order to sustain the income levels of the population by increasing productivity and income from agriculture and also by creating the opportunities for non-farm employment.

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APPENDIX

Appendix A**Distribution of households according to occupation and size of samples selected**

Main occupation	No. of households	Sample size selected
Cultivators (farming)	202	22
Livestock (farming)	9	
Casual Agricultural labour	343	34
Casual Non-agricultural labour	67	10
Trade / Business/transport/ Commerce	13	
Regular salaried/Wage paid employment	14	
Others	17	
Forest collection	19	16
Total	684	82

Appendix B**Stratification of farming households**

Size of holding (in cents)	(Cultivator) Farming	
	Total households	Sample size selected
0 - 50	15	3
51 - 100	36	3
101 - 200	61	6
201 - 300	39	4
301 & above	60	6
Total	211	22

Appendix C

Concepts and Definitions

Household: A group of persons living together and taking food from a common kitchen constitutes a household. There can be more than one family under the same roof cooking separately; in such cases, they are considered as separate households even if they are close relatives. In the household temporary visitors are excluded, but temporary stay away are included. E.g. A son or daughter residing in a hostel for studies is excluded from the households of their parents, but a resident domestic servant will be considered as a household member.

Household member: A person living in the household for majority of days during the last reference period is considered a household member. However, a person taking food with his family but sleeps elsewhere due to shortage of space in that house is also considered a household member. But if a person of the family works somewhere else and comes to the house once in a while during the reference year, he is not considered as a household member. His earnings sent to the house is considered as remittance.

Head of household: An adult household member who makes important decisions in the house. He/She may or may not be an earner and may or may not possess wealth, but should be the prime decision maker concerning the house.

Household size: The size of the household is the total number of persons in the household.

Reference period: For collecting data on consumption expenditure, two types of reference period was adopted. For food and other monthly expenditure, reference of last 30 days was taken so as to minimise the recall bias. For items like clothing, footwear, furniture, household utensils, household maintenance, etc; the reference period taken was 365 days.

For determining the occupation and activity status, the reference period taken was also 365 days.

Household occupation: The households in the study area are classified mainly into 5 groups based on their main source of income during the reference period.

Usual activity: The usual activity of a person is determined on the basis of various activities pursued by him/her during a reference period of 365 days, adopting "relatively longer time" criterion. The usual activities classified are (i) Working, (ii) Employment seeker, (iii) Student, (iv) Household affairs (these persons may or may not do household chores, e.g. housewives, unmarried daughter, etc.), (vi) Disabled/Sick person, (vii) Too young and too old person.

Workforce: Population involved in any kind of gainful work.

Work seekers: Persons not working, but seeking work (unemployed).

Labour force: Workforce plus work seekers.

On the basis of the usual activity the population has been classified into two: (i) in the labour force and (ii) out of the labour force. Out of the labour force includes: students, persons involved in household affairs, disabled/sick persons, too young and too old persons.

Household consumer expenditure: The expenditure incurred by a household on domestic consumption during the reference period is the household's consumer expenditure. The household consumer expenditure is the total of the monetary values of consumption of various items (purchased as well as home grown).

Value of consumption: Consumption out of purchase is evaluated in terms of the purchase price. Consumption out of home produce is evaluated in terms of farm prices. Value of consumption out of gifts, loans, free collection, exchange of goods and services is imputed at the average local retail prices prevailing during the reference period.

Monthly per capita consumption expenditure (MPCE): For a household, MPCE is its 30 days total consumer expenditure divided by the size of the household. A person's MPCE is understood as that of the household to which he or she belongs.

Migration: Permanent shift of the place of work and place of residence. These migrant persons are not considered as household members.

Seasonal migration: A person moving out of the village for work for more than 30 days is considered as seasonal migrant. He is a household member.

Poor households: Those households having MPCE below Rs. 500 is considered as poor.

Marginalised communities: Marginalised households are identified through asset pentagon analysis. While analysing the pentagon plot we found that a group of households lie inside the pentagon plot for poor (in the innermost pentagon). Even though these households also belong to the poor household group, they show homogeneity in terms of the asset poverty holding much less assets than the other poor households. These households are from Paniyan and Kattunayakan communities.

Weight Estimation

As the survey was a stratified sample survey we estimated all the parameters using appropriate weights. The estimation procedure is as follows:

$$\bar{X} = \frac{1}{N} \sum_i^n \sum_j^m \frac{N_i}{n_i} X_{ij}$$

Where \bar{X} estimate of the characteristic of the population,

N_i - population size in the i^{th} stratum,

N - total population,

n_i - sample size in the i^{th} stratum,

X_{ij} - observed value of the characteristic of the j^{th} unit in the i^{th} stratum.

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