

**Working Paper
392**

**AGRARIAN DISTRESS AND RURAL
LIVELIHOODS
A STUDY IN UPPUTHARA PANCHAYAT
IDUKKI DISTRICT, KERALA**

**K.N. Nair
R. Ramakumar**

November 2007

Working Papers published since August 1997 (WP 279 onwards)
can be downloaded from the Centre's website (www.cds.edu)

AGRARIAN DISTRESS AND RURAL LIVELIHOODS
A STUDY IN UPPUTHARA PANCHAYAT
IDUKKI DISTRICT, KERALA

K.N. Nair
R. Ramakumar

November 2007

This paper was prepared as part of a Research Project on “Coping Strategies in Some Fragile Areas in South India: Threats, and Opportunities of Economic Globalisation and State Decentralisation”. The study was planned and executed by a team led by K.N. Nair with active support from Vineetha Menon, Ramakumar, R. Mahesh, and V.N. Jayachandran. We are grateful to other members of the study team for their support and to Urs Geiser, P.R.G. Nair and S. Neelakantan for comments and editorial assistance. Again, Krishnakumar C.S. and Jayakumari, L provided support to bring out this version. The research for this study received financing from the Swiss National Science Foundation (SNSF) and Swiss Development Cooperation (SDC) through NCCR North-South and the Development Study Group, Institute of Geography, University of Zurich. Responsibility for the contents and the opinion expressed rests with the authors.

ABSTRACT

This study examines the impact of agrarian distress on the different socio-economic groups, the strategies of livelihood adopted by households and the local institution in shaping these strategies. The study is based on the data collected from in-depth socio-economic enquiries conducted in Upputhara Panchayat in Idukki District. An important conclusion of the study is that the strategies of livelihood framed in response to a shock could vary across households depending on the extent of their asset ownership. Households in Upputhara achieved diversification of livelihoods in three major ways: through diversifying their cropping pattern, through diversifying their local occupations and through migration.

The study showed that (a) in formulating coping strategies, households benefited from increased access to a number of public institution created through public action in earlier years; (b) access of households to the different welfare institutions was declining in recent years; and (c) the livelihood systems of people remained extremely vulnerable. Obviously, strengthening the livelihood systems of households would require sustaining their livelihood assets and income by reversing these state policies and making effective of the functioning of the local institutions like the Panchayat.

Key words: Agrarian Distress, Livelihood Risks, Coping Strategies ,
Kerala

JEL Classification: Q, Q 00

I. Introduction

The most striking indicator of agrarian distress in Kerala is the agricultural income at the state level. Official estimates show that the real agricultural income in Kerala started falling after 1999-2000. This was also accompanied by a fall in the relative proportion of agricultural income in the total state income. The proximate cause of agrarian distress in Kerala was the sharp fall in the prices of plantation crops, especially coconut, rubber, coffee, tea, pepper and cardamom. Together, these six crops accounted for about 60 percent of the gross cropped area in 2000-01. In the second half of the 1990's these commodities have been subjected to frequent fluctuations. Earlier, a prolonged decline in their prices has never been experienced in the state. The downward trend experienced after the mid 1990s in the prices of these plantation crops of Kerala has been the reflection of a downward spiral in the prices of these commodities at the international level (Nair and Menon, 2004).

During the Post-WTO period, the movement of domestic prices of these commodities appears to be more strongly correlated to the movement of its international prices. As shown in a recent study (Subramanian, 2007), the unit prices of these commodities have shown a strong downward trend with high degree of volatility thereby bringing increased risk, shock and vulnerability to the growers. To add injury to this, recent years have also witnessed adverse weather conditions (especially sharp fall in rain fall) thereby resulting in decline in crop

yields. Because of the difference in cropping pattern and agro-climatic conditions, the impact of price fluctuations and weather related factors has been felt differently across different regions in the state.

The present study examines, its impact on the different sections of the rural population and the livelihood strategies that households adopted to cope with distress. The analysis of the coping strategies of households also examines, how public and private institutions responded to the agrarian distress and how households negotiated with these institutions to meet their ends. The study is mainly based on primary data collected from one of the Panchayats– Upputhara– in the district of Idukki in the state.

The organisation of the study is as follows: Section I provides a description of the study area, issues taken up for research and the methodological frame work. In Section 2, the extent and nature of the agrarian distress in the selected area are discussed. The composition of households by assets owned and their extent are analysed in Section 3. Section 4 contains a discussion of the evolution of the different coping strategies employed by the households. In Section 5, we provide the concluding remarks.

I.1. The Study Area, Research Questions and Methodology

Among all the districts in Kerala, Idukki has the highest level of Net Domestic Product (NDP) from agriculture. At current prices in 2000-01, the NDP from agriculture in Idukki was Rs 124,935 lakh. Idukki also makes the highest relative contribution of agriculture to NDP among all the districts of Kerala. The share of NDP from agriculture in the total NDP in Idukki in 2000-01 was 42.5 per cent as against 16.8 percent for the State as a whole. Idukki also records the highest per capita income, Rs 26,028 in 2000-01 among all the districts in Kerala, the corresponding State average being Rs 19,951. Any setback to the agricultural economy would therefore adversely affect the district economy and its individual cultivating households. Consequent to the sharp fall in the prices of most

agricultural commodities grown in the district, the NDP from agriculture in Idukki district fell in absolute terms by about 7 percent from Rs 63,744 lakhs in 2000-01 to Rs 62,767 lakhs in 2001-02 and to Rs 59,294 lakhs in 2002-03¹. The decline in the NDP from agriculture in Idukki was particularly due to its dependence on pepper, cardamom, tea and coffee whose prices sharply declined from the late-1990s through the early 2000s. These four crops accounted for 57 per cent of the gross cropped area in Idukki in 1998-99.²

The specific ways in which rural households in Idukki district responded to the agrarian distress were different from those of other districts such as Wayanad. Wayanad was also a district which heavily depended on cash crops (the contribution of agriculture to Wayanad district's NDP being 37.5 per cent in 2000-01). There were suicides by farmers on a significant scale over a short period (see the accompanying NCCR reports on Cherumad and Pulpalli panchayats in Wayanad). In Idukki, instances of suicides due to agrarian distress have been scarcely reported. It appears from this that there exist location specific factors that provide some degree of robustness to households in this district that helped them to cope better under conditions of risk and vulnerability. In the present exercise, we intend to examine these factors and the household responses to distress by conducting a case study of Upputhara Panchayat.

I.2. The Study Area

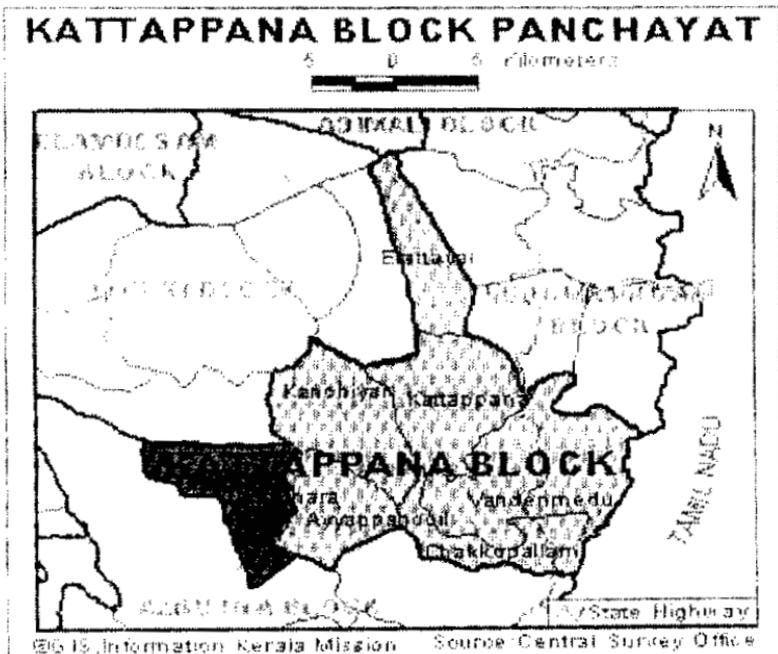
Upputhara panchayat, belonging to the block panchayat of Kattappana, is situated in the southern part of Idukki district in the Peermade taluk (see Map). Upputhara panchayat includes the revenue village of Upputhara in full and the revenue villages of Wagamon and Elappara villages in part. The panchayat is bordered by the Periyar River

1 Source: Economic Review, Government of Kerala, various issues

2 Apart from Idukki and Wayanad, in no district of Kerala did the share of total area occupied by these four crops account of more than 10 per cent of the gross cropped area.

in the east, the Meenmutti Lake in the west, the Chinnar River and the Karintharuvi River in the south and the Upputhara-Valakode Road and the Kakkathode protected forests in the north. Upputhara is located in the Western Ghats region of Kerala that borders on the neighbouring State of Tamil Nadu. Geographically, Upputhara is divided into six types of land forms: mountains, highly steep land, moderately steep land, valleys, marshy lands and rocky lands. Of these six land forms, about 40 percent of the total area is classified under valleys. Next in importance are marshy lands, slightly steep land, mountains, very steep land and rocky lands, in that order. Valleys and marshy lands together accounted for 62 per cent of the area. Owing to the presence of large tracts of land with undulating topography, agriculture in Upputhara is faced with several challenges such as soil erosion.

Map of Upputhara panchayat



The entire region around Upputhara remained uninhabited till about the early part of the 20th century. Upputhara was one of the regions to which migration of farmers from other parts of Kerala first took place. A group of seven Christian households came to Upputhara in 1910 from the Meenachil taluk of Kottayam district (Upputhara Panchayat, 1996) after acquiring licence from the Government of Travancore to establish tea plantations. The first migration to begin cultivation of crops outside the plantation segment took place, however, only later by the mid-1930s. This type of migration to regions outside the plantation segment was mainly steered by a policy of the Government of Travancore to distribute *pattas* (possession rights) to migrant farmers in previously uninhabited areas. The largest flow of migrants into Upputhara and its surrounding regions took place in the 1950s.

Farmers who migrated into Upputhara after the 1930s were primarily involved in the cultivation of coffee, pepper and a few tuber intercrops. Tea was cultivated only in large plantations. From the cultivation of only a few crops in the 1950s, the cropping pattern in Upputhara became diversified significantly by the 1990s. Data for the panchayat for the year 1996-97 showed that the cultivation of tea accounted for the largest area – about 59 per cent of the gross cropped area. Pepper, cultivated in 17 per cent of the gross cropped area, was the second most important crop in terms of cultivated area. Coffee (8.1 per cent of the gross cropped area) and cardamom (4 per cent of the gross cropped area) were the other main crops. Cultivation of banana, tapioca and coconut were also practised.

There were 15 wards in the panchayat comprising an area of 135 sq km. In 2001, 7,002 households resided in the panchayat with a total population of 28,953. Scheduled castes formed about 15 per cent of the population in that year. There was a sizeable population of Catholic Christians in the panchayat who played a major role in its social life.

Ward 8 (known as Mattuthaavalam) is the central focus of our in-depth study in the Panchayat. There were two reasons for selecting this ward. (1) This was the site of another study (a study of workers in the tea plantations) conducted by one of the collaborators, and (2) the agriculture in the ward was reported to be more diversified than the rest of the panchayat.

A significant proportion of the work force in Upputhara is engaged in agriculture. Nearly 42.3 per cent of the main workers in Upputhara were employed in the sector “Livestock, forestry, fishing, plantation, orchard and other activities.” The second important source of employment was “agricultural labour”, accounting for 24 per cent of the main workers employed. At the third place was “cultivation”³, which employed 15 per cent of the main workers. Together, about 82 per cent of the main workers in Upputhara panchayat were employed in these three sectors. It is evident from this that any adverse impact on the cash crop segment of Upputhara’s economy was likely to affect the majority of workers.

I.3. Research Questions

In the context of Upputhara, the questions taken up for investigation were the following:

3 The Census of India defines a cultivator on the basis of a list of crops cultivated. This list *does not include* crops classified as “plantation crops”, such as tea, coffee, pepper, cardamom, coconut, rubber, arecanut and cashew. Workers who grow plantation crops are classified as “other workers” and added to the category “Livestock, forestry, fishing, plantation, orchard and other activities.” This actually indicates that within agriculture, most of the main workers were employed in the cultivation of these plantation crops. A large majority of the female main workers, were employed in tasks related to the cultivation of cash crops. This was due to the large number of female workers employed in the tea plantation sector in tasks such as plucking. The proportion of female main workers employed in the non-agricultural sector was lower than that of male main workers employed in that sector. Evidently, a large number of male main workers were employed in the service sector of “ Trade and commerce” and the “Manufacturing, processing, and repair activities in industries other than household industry.”

- (a) How has the agrarian distress affected the economy of the panchayat in general and the different socio-economic groups in the panchayat in particular? What are the social and cultural issues emerging from the agrarian distress?
- (b) How do the old and the new institutions in the panchayat help in cushioning the agrarian distress? What have been the roles of these institutions in the livelihoods of households across different socio-economic groups?
- (c) How have households responded to the distress? How successful have been the households from different socio-economic groups in the negotiation of various institutions in managing their livelihood strategies?
- (d) How have the old institutions in the panchayat transformed to adapt to the distress scenario? To what extent have new institutional arrangements evolved in the panchayat?
- (e) At the analytical level, the study intends to throw some light on the manner in which institutions are treated in the sustainable livelihood framework. The general tendency is to treat it as one of the elements of social capital that forms part of the fivefold assets of the livelihood framework. However, access to the asset bundle is very much determined by institutions. Institutions undergo change, as a result of changes in the state policies, and would affect the portfolio of livelihood assets and outcomes. Therefore, in the unfolding of the livelihood framework institutions should be treated independent of the assets bundle. By bringing in institutions explicitly into the analysis we intend to bring out more sharply the linkages between institutions livelihood assets and outcomes.

I.4. The Methodology

This study analyses both secondary and primary data. Secondary data were collected from official reports of the government as well as

from different public and private institutions functioning in the study area. A detailed survey of households was made in the month of November in 2004 first to list them. In that survey, we collected information about age, sex, religion and caste of all members of the 420 households in the ward. We also collected information on the extent of land ownership and the occupational characteristics of the members of the households.

Employing the house-list survey as a sample frame, we extracted a 20 per cent sample of 84 households for a detailed socio-economic survey. Households were divided into five strata based on the occupations that provided them their main source of income. These five strata were (a) cultivation; (b) wage employment in agriculture; (c) wage employment in non-agriculture; (d) self-employment in trade or business; and (e) salaried employment in professional or technical jobs. Households in the first two occupational strata (*viz.*, cultivation and wage employment in agriculture) were further classified on the basis of the extent of their land ownership. From each stratum and sub-stratum, proportional samples were drawn in order to obtain a sample that constituted 20 per cent of the total number of households in the ward. In the final results presented in this paper, the sample estimates have been projected for the total population in the ward using suitable weights.

The sample households were surveyed using a structured questionnaire. Data were collected on the basis of socio-economic features of the household, their occupational distribution, assets, consumption expenditure, indebtedness, details on land-leasing practices and land transfers, crops cultivated, accessibility to and utilisation of the services of public and private institutions including that of the panchayat. A census-type survey of Self Help Groups (SHGs) in the ward was conducted in which information on activities undertaken and the basic socio-economic profile of its members was collected. We also conducted detailed interviews with farmers and 'focus groups' of farmers in the

panchayat to understand the functioning of different institutions and the historical features of the livelihood of households.

Agrarian distress first sets foot in the lives of households directly dependent on agriculture as a source of livelihood. These households comprise farmers and agricultural labourers. Farmers experience income fall due to reduction in receipts from product sales. Agricultural labourers experience income fall from reduction in wage rates or in the number of days of employment. These two sets of households constitute the most vulnerable victims of agrarian distress. Other socio-economic groups also experience a fall in income, but mainly from the linkage effects of the agrarian distress. In order to understand the manner in which households cope and adapt to conditions of risk and vulnerability, comprehension of their access to livelihood assets is necessary. To make this analysis meaningful we have classified the sample households into the following categories.

- (i) *Household Set 1* consists of all households for which income from cultivation formed the only source of income. They are (105 out of 420 households) the most vulnerable under agrarian distress.
- (ii) *Household Set 2* (77 out of 420 households) consists of all households for which income from agricultural labour was main source. The extent of vulnerability would be even larger than that for Set 1 households.
- (iii) *Household Set 3* (38 out of 420 households) consists of all households for which income from non-agricultural manual labour was the main source of income. Even though these households are not directly affected by the agrarian crisis, non-availability of any alternative source of income made them more vulnerable in crisis situations than households that had more than one source of income.
- (iv) *Household Set 4* (200 out of 420 households) consists of all households that had more than one source of income. These

households, of course, are less vulnerable than households under sets 1, 2 and 3, due to their diversified income portfolio.

As a result of the specific paths through which agrarian relations have evolved in Upputhara, landlessness was not a widespread phenomenon. So it was difficult to identify households that had manual labour as the *only* source of income. All households in our study area had at least one plot of cultivated land, *albeit* quite small for most of them, in which they cultivated commercial crops. *All households that were classified under Household Set 2 owned land, but of less than 50 cents each.* However, eight households classified under Household Set 3 had more than 50 cents of land each. Hence, we decided to exclude them and to include only households that owned less than 50 cents of land. In other words, *all households included in Household Set 3 comprise labourers performing non-agricultural tasks which is the major source of their income, but owned less than 50 cents of land each.* The eight households excluded from Household Set 3 were brought under Household Set 4. As ownership of land below 50 cents did not provide any significant earnings, we have assumed that the extent of vulnerability of households in Household Sets 2 and 3 is in no way substantially mitigated by their dependence on the additional source income, namely, cultivation.

II Agrarian Distress in Upputhara

II.1. The extent of Agrarian Distress

The sample households were asked whether they had experienced a decline in income during the five years immediately preceding the date of survey (see Table 1). An overwhelming majority of the respondents (92 per cent) reported that they did. 96 percent of the households reported that the major cause of the decline was fall in the yield of their crops.

Table 1. Households that perceived an agrarian distress in the last five years, Ward 8, Upputhara panchayat, 2005 (in number and per cent)

Question	Number of respondents who answered			
	Yes	No	No answer	Total
Have you experienced a decline in income during the last five years?	386(91.9)	14(3.3)	20(4.8)	420(100.0)
Have you experienced a decline in agricultural yields during the last five years?	402(95.7)	14(3.3)	4(1.0)	420(100.0)

Note: Figures in the parenthesis denote percentages to the row total.

About 84 per cent of the households reported that the decline in incomes was also due to fall in the prices of their output (Table 2).

Table 2. Reasons for a decline in income in the last five years as perceived by surveyed households, Ward 8, Upputhara panchayat, 2005 (in number and per cent)

Reason for decline in income	Number of households that gave the reason	Share of households in total (%)
Decline in prices of output	18	4.3
Decline in crop yields	25	6.0
Decline in prices of output and decline in crop yields	354	84.3
Reduction in area planted	10	2.4
No answer	13	3.1
All	420	100.0

According to a majority of the households (53.3%), the decline in the output was mainly due to climatic factors (Table 3). Drought and reduction in the application of inputs were the main causes of the decline. About 31 per cent of households gave reduction in inputs as the main reason. Reductions in inputs was either in the form of lower doses of fertilisers and pesticides applied or lower number of person-days of labour employed.

Table 3 Reasons for a decline in the yield of crops cultivated as perceived by surveyed households, Ward 8, Upputhara panchayat, 2005 (in number and per cent)

Reason for decline in crop yields	Number of households that gave the reason	Share of households in total (%)
Climatic factors (drought)	224	53.3
Pests and diseases	37	8.8
Poor quality of seeds sown	5	1.2
Decline in the use of fertilisers or pesticides	90	21.4
Decline in the use of labour input	46	11.0
No answer	18	4.3
All	420	100.0

The fall in the application of inputs was primarily due to fall in incomes from output sales experienced in the previous year and the resultant fall in realized incomes. An equally important reason for reduction in the application of inputs was the sharp increase in their prices⁴. Clearly, with the prices of all the major crops declining and the

4 The data, presented in Figure 7, show an increase in the prices of major agricultural inputs in the 1990s in India during 1993-94 to 2002-03.

prices of all the main agricultural inputs rising, cost tended to far exceed receipts, imposing thereby a heavy burden on cultivators.

A fall in the output prices and crop yields occurred at a time when soil fertility in the agricultural sector of Upputhara was steadily on the decline. The decline of soil fertility was due to the specific topographical features of the region. Owing to the fact that large areas of the study region were covered by mountains and slopes, erosion of top-soil during rainy seasons was a routine phenomenon. Soil erosion led to decline in the productivity of crops over time. Officials of the Department of Agriculture told us that intensive cultivation of land with a view to maximising production practised by cultivators during periods of rising prices of cash crops was another reason for the long-term decline in soil fertility in the region. Further, many of the new crops planted in the region were highly water-intensive. As a result, the decline in annual rainfall experienced in recent years turned out to be the forerunner for a fall in crop yields at unprecedented rates. This decline in product prices and the occurrence of droughts have struck the farmers at a time when independent constraints were being encountered by them in their attempts at raising the levels of productivity in agriculture.

II.2 Consequences of Distress

One of the most visible consequences of agrarian distress is the rising level of repayment overdue of agricultural loans in the region. The local branch of the Idukki District Co-operative Bank, the Upputhara Service Co-operative Bank, the Malanad Service Co-operative Bank and a branch of the Federal Bank, the four organised banking institutions that served the population of the panchayat, experienced default in repayment of agricultural loans. But time series data were made available to us only by the Upputhara Service Co-operative Bank and the Malanad Service Co-operative Bank. The data show that in the two co-operative credit societies, the share of overdue on loan repayment to the total amount of loans advanced to agriculture sharply increased after the late-

1990s (see Table 4). For the year 2004-05, the level of overdue had climbed to over 26 per cent. Managers of the other banks from which data were not made available to us confirmed similar trends in their branches also.

Table 4 Overdues on Agricultural Loan Repayment: Upputhara Service Co-operative Bank and Malanad Service Co-operative Bank, Upputhara Panchayat, 1998-99 to 2004-05 (in per cent)

Year	Percentage of loan amount advanced to agriculture that was overdue	
	Upputhara Service Co-operative Bank	Malanad Service Co-operative Bank
1998-99	n.a.	9.8
1999-00	14.5	12.3
2000-01	14.7	12.7
2001-02	15.0	16.3
2002-03	17.9	13.2
2003-04	18.3	18.7
2004-05	28.0	26.3

Source: Records of the Upputhara Service Co-operative Bank and the Malanad Service Co-operative Bank, Upputhara.

The consequences of agrarian distress in the study area were also reflected in a number of socio-economic and cultural dimensions. Some of these are listed below:

- (a) The past five years have seen a sharp decline in the levels of economic activity in Upputhara. Till about 2000, a vibrant Sunday market for commercial agricultural crops had functioned in the main street in Upputhara town. The main road used to be so congested on market days that it was even difficult to walk along the road. This market had totally disappeared in a short span of four to five

years owing to fall in trade of goods and services. The business of several restaurants slumped after the prices of cash crops started falling. While about 60 to 70 customers on an average used to turn up for lunch five years earlier, the number dwindled to about 25 to 30 persons in the past three years. Drivers of taxi cabs in the panchayat too have lost their business to a significant extent. The number of taxi trips has fallen to one-half of what they were five years ago. Given the importance of agriculture in the economy of Upputhara, and the seriousness of the shock experienced by agriculture since the mid-1990s, it is not surprising that the crisis produced negative linkage effects on such a wide scale.

- (b) The number of persons attending counselling sessions in the local panchayat in the past five years has increased. Persons approached counsellors with three kinds of problems: family disputes, financial difficulties and mental illnesses. Counsellors working in the study area reported that about 25 per cent of all the cases that they dealt with were in one way or the other related to the agrarian distress. Financial difficulties associated with fall in prices and crop losses landed many families in disputes and mental illnesses. The consumption of liquor was on the increase in families affected by the agrarian distress.

III. Access to Livelihood Assets

Access to assets is a *dynamic* phenomenon, as the quantum and composition of asset ownership changes over time. Changes in asset ownership take place in many ways: as a result of individual initiative and effort; in response to challenges of livelihood; as a result of changes in social relations; as an outcome of state policies and as a consequence of the interventions of institutions and organisations. These *mediations* in the determination of the levels of asset ownership take place in the larger context of changes in the national and international economic trends. Thus, a discussion on the asset base of households has to include

the ways in which access to assets is influenced by policies, trends, institutions and organisations.

III.1. Access to land

Land, of course, is the most important asset of rural households. While landlessness was not a widespread phenomenon in the study area, the degree of inequality in the distribution of ownership of land was high. Among the surveyed households in different Household Sets, access to land was relatively higher among Household Sets 1 and 4. The extent of land owned by households in Sets 2 and 3 was considerably lower (Table 5). Households in Set 1 – the cultivators – were the richest in land assets, the average area of land owned by them being about three acres per household; this set controlled 60 per cent of the land owned by all the households together. On the other hand, households earning their income solely from agricultural labour (Set 2) owned only 1.2 per cent of the total area of land owned by households. The average area of land owned was also correspondingly lower for households in Sets 2 and 3.

Table 5 Ownership Distribution of Land among Household Sets: Upputhara Panchayat, 2005

Type of Household Set	Total area owned (in acres)	Share of area owned in total (%)	Average size of holdings (acres)	Size of the smallest holding (acres)	Size of the largest holding (acres)
Set 1	277.5	60.2	2.9	0.47	7.96
Set 2	5.7	1.2	0.2	0.07	0.33
Set 3	4.1	6.1	0.3	0.07	0.48
Set 4	174.6	32.5	1.2	0.05	3.45
All	461.9	100.0	1.7	0.05	7.96

Note: Set 1: Cultivators as main income; Set 2: Agricultural labours as main income; Set 3: Non-agriculture labours as main income; Set 4: Several income sources

The pattern of land ownership may be traced back to the history of agricultural settlement in the High Ranges, the policy of the state towards the settlers and the organised agitations of settler groups over land rights.

As noted earlier, the migration of farmers into the non-plantation segment of Upputhara's agriculture began only by the mid-1930s. The number of settlers who came into the region was small to begin with, though the number steadily rose over time. Most of the settler households were from the plains downhill. The story of the development of agriculture in the High Range forests, which had remained uncultivated for ages and were marked by highly undulating topography, is one of hard and relentless struggles against nature. Land had to be cleared and reclaimed for cultivation braving adverse weather conditions and attack of wild animals. To escape from the attacks of wild animals, settlers lived in small houses built on tree tops (*erumadams*). To make things more difficult, there were outbreaks of malaria and plague in the 1940s leading to the death of a large number of settlers. The elderly population of Upputhara recollect an incident in which three members of a household dying of malaria and being buried in one grave. Many migrants returned home, unable to cope with such adversities.

Even though the conditions of living were highly unfavourable, land was not at all a scarce factor of production during the initial years of settlement. In such a situation, settlers collected lands in many ways. First, settlers took possession of revenue lands which they found cultivable. Those who had the wherewithal to invest large amounts in land development enclosed larger areas of land than those who had less investible funds. The extent of land ownership depended also on the ability of settlers to mobilise and bring in labour for agricultural employment from other areas. Secondly, accumulation of land took place by acquiring the land of early settlers, who were incapable of coping with the adverse conditions of life, abandoned their developed or partly

developed lands and returned home. Thirdly, a section of powerful settlers accumulated land through force by evicting other settlers, who were relatively weak.

Agrarian relations in Upputhara, thus, developed in ways considerably different from those of other regions of Kerala. As noted earlier, mobilisation of large numbers of labourers was essential for the development of agriculture in large areas of land. While a part of this labour force came from other parts of Kerala, the majority were brought from the neighbouring State of Tamil Nadu. The settler farmers provided possession of small plots of land to labourers mobilised for cultivation, which they were free to inhabit and cultivate. This was employed as an incentive for workers to stay on in the High Ranges, so that the difficulties of frequent mobilisation of labourers could be avoided. As a result, large numbers of agricultural labour households turned out to be owners of relatively small plots of land. The specific ways in which agrarian relations evolved in this area influenced the absence of landlessness on a wide scale and the persistence of inequality in land ownership.

The role of the state was also another important factor that influenced the pattern of landownership. The land cultivated by settlers in the High range regions had been earlier given to them on long-term lease (*Kuthakapattom*) from the Government of Travancore, either for a period of 12 years or for 30 years. Once the period of the lease ended, the government was free to lease the land out to other persons. As a result, there was no security of tenure for the lessees. In 1932, the Government of Travancore passed an order abolishing the *kutthakapattam* system, thus providing security of tenure to all lessees of public and private lands. The 1932 order proved an important incentive to farmers to enter lands previously left uncultivated. This order supplied an important impetus for the influx of settlers into Upputhara in the 1930s.

After the formation of the present-day Kerala State in 1956, land reforms were implemented throughout the State. Though technically not

falling under the provisions of the land reforms Act, a large number of *pattayams* (possession rights) were distributed to peasants who had occupied land to develop agriculture. The first distribution of *pattayams* to settler farmers in Kerala was organised in Rajakkad in Idukki district in 1958 by the first government under the chief ministership of E. M. S. Namboodiripad. Over the years, successive State governments in Kerala organised several “*pattaya melas*” to distribute ownership rights over lands occupied by settlers in the region. Thus, while the policies of the Government of Travancore had helped to attract settlers into High Range regions, the policies of the State Governments that came to power in Kerala after 1957 provided legal rights to the lands occupied by settlers. Households that cultivated both large and small plots of land in Upputhara (including households that laboured in the large farms) obtained such rights.

The policy of the state to provide security of tenure, and later the rights of possession, to households was not an action that came from above. These policies were forced on the state by the struggles of farmers’ groups and political parties⁵. By the time of *pattayam* distribution of the late 1950s, the farmers’ movement had grown in strength and widened its base. The earliest mass organisation of farmers in the High Ranges was the *Devikulam Karshaka Sangham* formed in 1955.⁶ This *Sangham* led a series of protests against the frequent threats of eviction issued by the Forest Department as well as the clauses in the lease agreement proscribing fixed investments in land. *Pattayam* distribution was thus a policy forced on the state by a series of farmers’ movements.

5 According to Michael Tharakan (1984) the 1932 order of the Government of Travancore was the result of a series of struggles waged by farmers’ organisations in the High Range region. The leader of the first farmers’ group to take up this demand was Thelliyil Yacob Kathanar, who once led a large demonstration of farmers from this region to Trivandrum demanding security of tenure of tenants. The Kathanar’s organisation was formed as part of a movement of rich peasants in central Travancore for possession rights.

6 This *Sangham* merged with the *Kerala Karshaka Sangham* after the State formation in 1957.

In sum, access to land for peasants and agricultural labourers in Upputhara was associated with a number of factors: actions of the state, actions of farmers' groups and political parties and the specificities of developing agriculture in the High Range-region. However, access to land has been also shaped by the market process of purchase and sale through the functioning of a developed land market. In this context the data collection from the household survey showed that there was a sharp rise in the number of households that sold land as well as the extent of land sold by households after 2000 in the area (Table 6). Among the total number of sales of land reported between 1980 and 2005, about 48 per cent of the sales was done after 2000. Out of the total area of land sold between 1980 and 2005, about 54 per cent was sold after 2000. Sale of land had taken place even prior to 2000; but they were mainly small plots of land and the transactions involved mainly small amounts. But the average area per sale of land after 2000 was significantly higher. The data on sale of land during the period shows the desperate state to which a section of our sample households were pushed into. The sale of land in the market is, thus, another coping strategy. When a livelihood system turns unstable and the asset base of the household is weakened, then the possibility of succumbing to another shock is heightened.

Participation in the land lease market

In 2005, about nine per cent of households in Upputhara had leased-in land for cultivation. The extent of leasing-in land has been increasing in recent years. Financial difficulties constituted the major reason for the increase.

As may be seen in Table 7, the majority of households which leased-in land belonged to the lower consumption expenditure groups. About 53 per cent of the households that leased-in land had an *monthly per capita expenditure* (MPCE) of less than Rs 2000; nearly 87 per cent of the households that leased-in land had an MPCE of less than Rs 3000. No household that had an MPCE of more than Rs 4000 participated in the lease market.

Table 6 Number of households that sold land and the area of land sold by them between 1981 and 2005, by Household Sets, Ward 8, Upputhara Panchayat, 2005

Type of household set	Item	Period of sale of land					
		1981-85	1985-90	1990-95	1995-2000	After 2000	All periods
Household Set 1	Number of sellers	0(0.0)	6(35.3)	0(0.0)	0(0.0)	11(64.7)	17(100.0)
	Total area sold (acres)	0(0.0)	5.4(27.0)	0(0.0)	0(0.0)	14.6(73.0)	20.0(100.0)
Household Set 2	Number of sellers	5(23.8)	0(0.0)	0(0.0)	5(23.8)	11(52.4)	21(100.0)
	Total area sold (acres)	3.2(19.9)	0(0.0)	0(0.0)	4.0(24.5)	9.0(55.6)	16.2(100.0)
Household Set 4	Number of sellers	5(8.8)	9(15.8)	9(15.8)	10(17.5)	24(42.1)	57(100.0)
	Total area sold (acres)	2.5(3.2)	13.5(17.1)	6.9(8.8)	17.0(21.6)	38.7(49.2)	78.6(100.0)
All Household Sets	Number of sellers	10(10.5)	15(15.8)	9(9.5)	15(15.8)	46(48.4)	95(100.0)
	Total area sold (acres)	5.7(5.0)	18.9(16.4)	6.9(6.0)	21.0(18.3)	62.3(54.2)	114.8(100.0)

Note: Figures in parenthesis denote shares to row total; No household in Set 3 reported land sales during the period under consideration.

Table 7 Distribution of households that leased in land, by MPCE size-classes, 2005

MPCE size-classes (Rs)	Number of households that leased-in land	Proportion of households that leased-in land (%)
< 1000	5	13.2
1000-2000	15	39.5
2000-3000	13	34.2
3000-4000	5	13.2
4000-5000	0	0.0
>5000	0	0.0
All classes	38	100.0

Table 8. Distribution of households that leased-in land, by size-classes of holdings leased-in, 2005

Size-classes of holdings leased-in (cents)	Number of households that leased-in land	Proportion of households to total (%)	Average size of holdings leased-in (cents)
< 10	5	14.1	10
11 to 50	18	47.1	37
51 to 100	11	28.2	65
101 to 200	4	10.6	150
> 200	0	0.0	0
All size-classes	38	100.0	53

Note: 1 acre = 100 cents.

Secondly, as Table 8 shows, about 61 per cent of the leased-in lands were of the size class of less than 50 cents. Nearly 89 per cent of the holdings which leased-in were of the size class of less than an acre. The average size of holdings leased-in was only 53 cents. Thus, the predominant pattern of land leasing in Upputhara in 2005 was of households in the lower consumption expenditure groups leasing-in small

plots of land of an average size of half an acre for cultivation. In view of the fact that the intensity of leasing has been rising in recent years, it may be inferred that during the period of agrarian distress, households in the lower consumption expenditure groups tried to supplement their current sources of income by income from cultivable land, and attempted to gain access to small plots of land.

III.2. Organisational Support in Agriculture

Krishi Bhavans: *Krishi Bhavans* are the offices of the Department of Agriculture at the panchayat level. They were established in 1987 in order to make planning for agricultural development more location-specific by making a panchayat as the lowest working unit (Jinraj, 1999). Jinraj has termed the *Krishi Bhavan* arrangement a “single window approach for agricultural development” that integrated and “brought under one roof” all the earlier agricultural development schemes which had been functioning under different departments (ibid, p. 9).⁷ From 1996-97, the *Krishi Bhavan* started functioning under the concerned panchayat office.

Krishi Bhavans are under the charge of Agricultural Officers, assisted by two or three Agricultural Demonstrators. The Agricultural Officer is under the direct control of the local panchayat. Under the system of decentralisation implemented from 1996-97, each panchayat prepared plans and projects for the development of its agricultural sector; the Agricultural Officer is expected to provide technical assistance to the

7 The activities of the *Krishi Bhavan* included the following: (a) planning and implementing programmes for agricultural development for the panchayat; (b) involving farmers in the planning and implementation of programmes; (c) creating the basic infrastructure for improvement of production and productivity of crops; (d) ensuring timely availability of good quality inputs and credit for farmers; (e) taking special interest in the development of crops and regions that had been previously neglected; (f) enabling farmers to secure remunerative output prices by promoting collection, storage, processing and marketing on co-operative basis; and (g) monitoring the progress of agricultural development based on physical achievements on a regular basis (Jinraj, 1999).

panchayat in the preparation of plans and projects. All agricultural projects of the panchayat are implemented through the *Krishi Bhavan*. The Agricultural Officer takes part in development planning, works as the agricultural extension worker, and is also the person who collects feedback of farmers to be transmitted to research centres.

The *Krishi Bhavan* in Upputhara panchayat is an active centre of agricultural development programmes in the panchayat. It implements government schemes too. In 2005, the Upputhara *Krishi Bhavan* implemented more than 30 schemes pertaining to different crops.

Western Ghat Development Scheme: The Western Ghat Development Scheme (WGDS) is a scheme sponsored by the Ministry of Rural Areas and Employment of the Government of India from 1974.⁸ The WGDS aims at the integrated development of the Western Ghat region⁹. The Western Ghat region has sensitive environmental and ecological features owing to its topographical specificities including large areas of tropical forest area. Studies have shown that these features have to be preserved in order to ensure sustainable development of the region. The WGDS was initiated to address the major environmental problems of the region, namely, deforestation, landslides, and soil and water erosion. The objective of the WGDS was to design solutions to these problems and integrate these solutions to the broader agricultural development policies of the government.

8 While the Government of India contributes 80 per cent of the financial requirements of WGDS, 10 percent is contributed by the panchayat and 10 per cent is mobilised from the beneficiaries.

9 The Western Ghat region is a long mountainous stretch in the western and southern parts of India that extends to about 1600 km in length and 80 to 100 km in breadth. It includes regions in the States of Maharashtra, Karnataka, Goa, Tamil Nadu and Kerala. Its stretch begins at the point of origin of the Tapti River in the Dhule district of Maharashtra and ends at Agastheeswaram in the Kanyakumari district of Tamil Nadu. As of 1991, a population of about 49 million resided in this stretch.

While different sub-schemes under the WGDS were implemented in Upputhara panchayat from 1974, it was only from 2000-01 that major investments took place under the scheme. Developmental activities under the WGDS based on watershed-based development plans were undertaken. In Upputhara panchayat, five micro-watersheds were identified under the scheme. The Mattuthaavalam ward that constitutes our study area belonged entirely to the Mathaipara micro-watershed scheme. Data on the number and extent of conservation structures built in this watershed are given in Table 9. The data suggest that, (a) substantial number of households were assisted to construct important soil and water conservation structures; (b) under the scheme assistance for a variety of productive farm investments was made by households, such as distribution of inputs, purchase and rearing of livestock and the construction of vermin-compost units. An important linkage effect from the activities under the scheme was the generation of a large number of person-days of work for the local population.

Focus group discussion with farmer groups revealed the beneficial impact of the scheme. Soil and water erosion have been reduced wherever conservation structures were built. Stone bunds were identified as extremely strong soil conservation structures. Technically, the prevention of the erosion of soil and of the run-off of water has led to conservation of fertile topsoil and increase in crop yields. The farmers listed several other benefits too: increase in planting density of crops which have almost doubled in a few farms. Productivity of crops increased, especially in tea gardens after the digging of trenches. In some of the plots in which conservation structures were built, crops have withstood severe droughts unlike in earlier years. The plants grown on the soil bunds (to keep the soil bound together) have helped in increasing the availability of fodder. More irrigation to crops has become possible in plots in which wells were dug and drinking water is now collected from much nearer locations than before. WGDS has benefited households individually and led to environmental sustainability of the region as a whole.

Table 9. Major physical achievements under the Mathaipara watershed scheme of WGDS, Upputhara Panchayat, 2000-01 to 2002-03

Item	Number of/Area under/Amount disbursed for different conservation structures in		
	2000-01	2001-02	2002-03
Total measurement for stone bunds constructed (m ²)	8,686	18,356	17,424
Number of households that received subsidy to construct stone bunds	59	105	83
Total measurement for soil bunds constructed (m ²)	12,596	4,192	-
Number of households that received subsidy to construct soil bunds	50	18	-
Number of households that received subsidy to construct trenches	75	19	-
Number of households that received subsidy to develop springs	25	21	-
Number of households that received subsidy to stabilise stream banks	2	14	-
Number of households that received subsidy for constructing			
Ferro cement tanks*	-	-	41
Number of households that received seedlings of vanilla	-	-	94
Number of households that received assistance for vegetable cultivation	-	-	156

Number of households that received subsidy to purchase cows	15	25	-
Number of households that received subsidy to construct cattle-sheds	15	14	25
Number of households that received subsidy to construct calf-units	-	16	-
Number of households that received subsidy to purchase poultry	24	12	-
Number of households that received subsidy to purchase pigs	14	-	20
Number of households that received subsidy for vermin-compost units	-	-	30
Total amount of subsidy disbursed (Rs)	576,442	1,063,895	1,406,250

Source: Records of the implementing agencies, Upputhara.

Note: (a) Mathaipara watershed fully covered the sample ward and parts of two other wards also; (b) * - Ferro cement tanks are structures for rainwater harvesting.

In 2000-01 and 2001-02, the government designated the Peermade Development Society, an NGO, as the implementing agency of WGDS. From 2002-03, the panchayat and the *Krishi Bhavan* were designated as the implementing agencies, with technical assistance sought from the Peermade Development Society as and when required. Major changes have come about in the implementation of WGDS subsequent to the transfer of responsibility to the panchayat and the *Krishi Bhavan*.

First, transparency in the execution of the scheme improved. Prior to the taking over by the Panchayat, a Watershed Committee of five members used to run the scheme. One member was a representative of the Society and the other four members were nominated from four regions in the catchments area of the watershed. After the panchayat became the implementing agency, the Watershed Committee was expanded to include 24 members with five representatives of the SHGs, nine farmer representatives selected from different land size-classes, all the elected ward representatives under the watershed, the Panchayat President (Chairman), the local Agricultural Officer (Convenor) and three representatives of NGOs.

Secondly, the selection of the beneficiaries of the scheme became a more democratic process. The beneficiaries had been earlier decided by the Peermade Development Society from among the applications collected from the public by the Watershed Committee. There was complaint from a section of the farmers that no proper announcements inviting applications were made. The announcements allegedly were made selectively in SHGs functioning under the Society during special functions of the Church (the Society was controlled by the Catholic Church). The farmers also complained that in the first two years, this scheme was actually believed to be a programme of the Peermade Development Society, and not of the government. However, now under the panchayat, beneficiaries are selected in *Grama Sabhas* in which all households in the catchments area of the watershed participated. The announcements for the selection meetings are

now made in every SHG meeting as well as through posters in the panchayat, *Krishi Bhavan* and the offices of farmers' organisations. It is widely felt that after the panchayat has taken over, the selection of beneficiaries is made without complaints.

Thirdly, the type of schemes being implemented by the panchayat reflect the needs of the beneficiaries more than was the case ever before. When the Peermade Development Society was the implementing agency, the schemes were conceived and implemented by it. It used to just report about it to the Watershed Committee; the Committee had no power to alter the schemes to suit local requirements. Under the panchayat, the Watershed Committee has more power to decide the types of schemes to be implemented. However, some farmers were of the opinion that the Committee, while deciding the type of schemes, need to guard against the tendency to dilute the major objective of the WGDS, namely, soil and water conservation. They are of the opinion that "popular" schemes reflect the domestic requirements of beneficiary households for help in water conservation and are less important for soil conservation and improvement.

Two important conclusions can be drawn from the preceding discussion. First, the implementation of WGDS has made a significant contribution to the development of agriculture and the improvement of the livelihoods of the households in Upputhara region. Second, the transfer two years back of the responsibility of implementation from an NGO to the panchayat has had a major democratising influence on the running of the scheme.

III.3. Access to education and health

Education and health are two most important components of "human capital" owned by individuals or households.

Educational achievements

Upputhara showed high levels of educational achievements. The effective rate of literacy in the panchayat was 90 per cent in 2001:

ninetyfour per cent for males and 86 percent for females. Data from schools functioning in the panchayat showed that of all the students at the lower primary level (Classes I to IV), 22.6 per cent were of scheduled castes and scheduled tribes. The corresponding shares at the upper primary level (Classes V to VII) and high school level (Class VIII to X) were 23 per cent and 19.8 per cent respectively. The combined share of the scheduled caste and the scheduled tribe population in the total population of the panchayat was about 22.5 per cent. According to our survey in 2005, the educational achievements of the population appear to have improved further. Only five per cent of the population was illiterate (Table 10). About 48 per cent of the population had education of the secondary level or above. About 85 per cent of the population had education beyond the lower primary level.

Table 10 Distribution of the adult population in the surveyed households by educational achievements, Ward 8, Upputhara Panchayat, 2005

Level of education	Educational Status of members of Households (Number)	Percent
Illiterate	61	4.9
Literate, but below primary	122	9.7
Completed primary	469	37.4
Completed secondary	319	25.5
Above secondary	282	22.5
All levels	1,253	100.0

The achievements in the field of education in Upputhara may be traced to the socio-economic characteristics of the first-generation settlers who had migrated from educationally developed regions of Kerala. Tharakan (1984) has argued that among the Syrian Catholic households of central Travancore, commercialisation of agriculture and the

consequent financial gains in the early part of the 20th century led to major improvements in their educational status. Most of the settlers were literate. It was only natural that they wanted good education for their children.

Settler households of Upputhara made strong demand for schools. The first primary school in the panchayat was established in 1927 by the settlers with the help of the local Church. Alongside, the settlers exerted pressure on the Government to establish public schools through mass petitions to Ministers and to Heads of the Education Department. In 1954, a government primary school for scheduled caste students and in 1957, a government primary school for scheduled tribe students, were established. In 1995-96, there were 13 schools in the panchayat, of which four were government schools, six government-aided schools, and three private unaided schools. Public investment in schooling, thus, played a major role in the spread of education in Upputhara¹⁰.

The majority of students from the deprived sections of the population in Upputhara attended government schools in 2005. Among our surveyed households, a higher share of students from scheduled caste households attended Government schools than students from more privileged communities (Table 11). While only 16 per cent of all students in the surveyed households attended government schools, 52 per cent of all students from scheduled caste households attended government schools.

10 In the panchayat in 1995, there were four Lower Primary Schools (Classes 1 to 4), two Lower-cum-Upper Primary Schools (Classes 1 to 7), one High School (Classes 8 to 10), two Upper Primary-cum-High Schools (Classes 5 to 10) and one school with all Classes from 1 to 10. The overall student-teacher ratio in the schools was 30:4.

Table 11. Proportions of students attending different types of educational institutions in the surveyed households, Ward 8, Upputhara Panchayat, 2005, in per cent

Type of school attended	Scheduled caste students			All students		
	Male	Female	All	Male	Female	All
Government schools	44.8	100.0	52.0	18.2	14.3	16.0
Aided schools	26.5	0.0	23.0	58.4	55.0	56.4
Unaided schools	28.3	0.0	25.0	23.4	30.7	27.6
Total	100.0	100.0	100.0	100.0	100.0	100.0

The positive achievements of the people of Upputhara in the field of school education appears to be mere threat due to the policy of closing down ‘uneconomic’ schools. A government school in the panchayat – the Cheenthalar Lower Primary School – was declared “uneconomic” in 2005. Cheenthalar is a region with a substantial scheduled tribe population and the closure of this school is certain to affect the schooling prospects of the children from this most backward community¹¹ in the panchayat.

Alongside the closure of uneconomic schools, the state has been also encouraging the establishment of unaided schools and self-financing colleges, where the costs of education are substantially higher than in public institutions. Parents in Upputhara face severe problems in sending children to the private unaided educational institutions. Apart from much higher levels of tuition fees, the private institutions also levy “capitation fees” (or donation) for admissions. In private schools near Upputhara, the average amount collected as donation was Rs 5000 for admissions to Class 11. For

11 In a speech criticising the closure of “uneconomic” schools in Kerala, R. V. G. Menon pointed out that hardships caused due to the closure would be the greatest for students from the hilly regions (see *The Hindu*, March 10, 2002). It is always the poorest section of the population that always experiences first the adverse effects of structural adjustment. In Upputhara also, the closure of the uneconomic schools would be felt first by the poorest socio-economic group, the scheduled tribes.

admissions in self-financing colleges, the minimum amount of donation was Rs 20,000. In addition to tuition fees and the donations, students have to meet expenses on hostel rooms and food, as daily commuting to these colleges is inconvenient. Thus the recent economic policies of stabilisation and structural adjustment threaten to undermine the achievements made in the past in the spread of education in Upputhara.

Health and nutrition outcomes

According to the data available from the panchayat office, the health indicators in Upputhara were comparable with the corresponding indicators at the State-level. In 1996-97, the death rate (per 1000) in the panchayat was 4.2, which was lower than the death rate for Kerala as a whole. For the same year, the crude birth rate (per 1000) was 3.2 in the panchayat. The presence of own hygiene toilets is an important determinant of health and sanitation status of a household. According to our survey in 2005, only seven per cent of the surveyed households did not have own latrines. About 62 per cent of the surveyed households had their own water-sealed latrines.

During the initial years of settlement of migrants in Upputhara, government investment in the health sector was low. A PHC had been established by the government in Upputhara as early as in 1948. After the formation of the present State of Kerala in 1956, government public health centres (PHC) were established on a large scale. Upputhara PHC functioned in 2005 too, and it had seven sub-centres functioning in different wards of the panchayat. An average number of 150 persons per day sought medical attention at this PHC during the period of our survey. The PHC had a laboratory and a pharmacy attached to it. The government has also established a Homeo dispensary in the panchayat. Apart from the state-owned PHC and the Homeo dispensary, two private allopathic dispensaries, two Ayurvedic dispensaries, one Homeo clinic and a few small clinics attached to the Church also functioned in the panchayat. Two additional dispensaries operated within the plantations.

Members of our sample households reported that when the services of the PHC were found unsatisfactory, or when the facilities in them were found inadequate, they visited private hospitals situated in the neighbouring Ayyappankovil panchayat. For more specialised health care, they visited the privately owned Mission Hospital in Kattappana Town 30 km away or the government-owned Taluk Hospital in Kanjirapally or the government-owned Medical College Hospital at Kottayam.

The efficiency of functioning of the government-owned centres of health care in the panchayat was found to have deteriorated over the past 10 to 15 years. According to doctors and well-informed people, the PHC in the panchayat had been functioning in an exemplary manner till about 1990. In that period there were only 30 beds in the PHC, but the average number of inpatients admitted was above 50. During the 1990s, however, the number of doctors and nurses in the PHC decreased and the facilities for giving health care degenerated. As a result, the number of inpatients admitted fell in the 1990s. In the early 1990s the inpatient facility remained completely dormant and was shut down in the PHC due to lack of staff and facilities. During those years, the panchayat witnessed major protests from the people, who demanded reopening of inpatient facilities. In 2004, the inpatient facility was resumed. In 2005 the maximum number of patients admitted, however, stood at a very low level of five persons. Other patients were referred by doctors to hospitals in nearby regions.

Weakening of public welfare institutions affects poor households first. They are also the most affected. Upputhara in the 1990s is a case in point. Owing to deterioration in the functioning of the PHCs, households were forced to depend increasingly on private hospitals and clinics. While medical attention in the PHCs is provided free of cost, medical attention of private hospitals and clinics are provided at a cost. The worst affected in this transition are poor households and backward caste households for whom the PHCs is the only affordable institution of health care.

Costs of health care rose for our surveyed households. With the agrarian distress leading to reduction in household incomes, increasing costs of health care became an additional, and significant, burden, particularly on poor households.

Apart from hospitals and clinics, the Public Distribution System (PDS) and the *Anganwadis* were the two other institutions that played a significant role in improving the levels of nutrition in the panchayat, and in improving health outcomes.

Public distribution system (PDS)

The wide coverage of the PDS in Kerala is one among its most important features. Till 1996-97, the PDS in Kerala was universal in character. All households with ration cards were eligible to purchase commodities from the ration shops at subsidised prices. Even today a number of households own a ration card. According to secondary data, about 97 per cent of the households in Kerala owned a ration card in 2000 (Suryanarayana, 2001). Among our surveyed households in Upputhara, the corresponding share was lower at 84.1 per cent in 2005.

In 1996-97, the universal character of the PDS was dismantled. Instead, a Targeted Public Distribution System (TPDS) was introduced whereby households were divided into two categories: Below Poverty Line (BPL) households and Above Poverty Line (APL) households. Only households classified as BPL were eligible for the purchase of commodities at subsidised prices from the ration shops. The APL households were eligible to purchase commodities from ration shops, but they had to pay the full “economic cost” of the commodities. The households were initially classified as BPL and APL on the basis of an income survey conducted in 1993-94 for a totally different purpose. In 2001-02, a new survey was conducted specifically to classify households into BPL and APL.

Targeting is the most important instrument used under the policy of structural adjustment in the provision of social security assistance. Targeting reduces the burden of the state with respect to social assistance because it narrows down the “eligible” proportion of the population to a minimum. The introduction of the TPDS has given rise to major issues in the functioning of the food distribution system in Kerala.

First, there are major problems associated with the classification of households based on a survey conducted in one year, which classification is then followed for many succeeding years. It is likely that incomes of rural households, especially rural labour households, undergo considerable changes over time. A household may be non-poor in the year of the survey, but may turn out to be poor in another year due to uncertainties in the labour market. Also, the poverty lines that are adopted represent incomes at near-destitution level. A household that earns an income just above the destitution poverty line cannot be declared ineligible supposing that they do not require social security assistance. These problems, however, have been allowed to persist in the TPDS (for a detailed discussion, see Swaminathan, 2000).

Second, although every State in India conducted its own surveys to classify households into BPL and APL, the total quantity of commodities supplied by the FCI to each State was fixed using another criterion. The Government of India drew its estimates of the proportions of the income-poor in each state from the quinquennial rounds of the National Sample Surveys (NSS). The quantity of commodities supplied by the Centre to the States was fixed as per the requirements of this proportion of the income-poor only. For instance, the number of income-poor in Kerala was estimated, as per NSS data, at about 10 per cent of the population in 1999-2000. According to the State government, this was a gross underestimate, and the number of income-poor constituted about 42 per cent of the population. But the FCI provided commodities to Kerala at subsidised prices only for the requirements of 10 per cent of

the population. In order to meet the requirements of the remaining eligible share of the population, the State government had to bear an annual financial burden of about Rs 480 million. Such a heavy burden was difficult to bear every year, especially when most State governments in India were under great fiscal strain.

Third, when the PDS system had been universal, the institutional network of rations shops was created throughout the State. The ration shops were private outlets. The owner of a ration shop received a profit of Rs 0.20 on the sale of every one kg of rice. The viability of running such an outlet in the earlier years rested in the large quantum of business that was transacted. The introduction of TPDS has destroyed their financial viability. Under TPDS, the quantum of transactions had declined significantly affecting the viability of the units. The reason was the increase in prices for APL households. The ration shops began charging full economic cost for commodities purchased by APL households. So the issue prices of those commodities to those households rose to levels very close to their market prices. As a result, APL households did not find it attractive or convenient to buy any commodity from rations shops. One ration shop owner in Upputhara reported that under the universal PDS, he used to sell about 60 quintals of rice every week. The quantity of rice sold under the new TPDS regime had come down to less than 20 quintals a week. As the business is becoming less viable, this ration shop owner is planning to close down shop and to switch on to another business of hiring out chairs and tables for ceremonies and other festive occasions.

In sum, targeting under the recent policies of economic reform threatens to destroy the institutional network of subsidised food grain supply for the poor in the region. This is a turn of events which portends the possibility of ruin of PDS itself.

Anganwadis

Anganwadis are public centres of childcare at the local level. *Anganwadis* were established in 1975 under the Integrated Child

Development Scheme (ICDS) of the Government of India. The objective of *anganwadis* was to provide nutrition and basic health care to lactating mothers and children in the age group of 0 to 6 years. The expected result is the elimination of malnutrition, reduction of infant mortality rate and reduction in the levels of morbidity. One *anganwadi* was supposed to cater to the needs of a population of 1000 in rural and urban areas and a population of 700 in tribal areas. An *anganwadi* centre has an *anganwadi* worker and a helper as staff. All *anganwadi* workers receive specialised training under the ICDS scheme.

In ward 8 where our survey was conducted, there were three *anganwadi* centres. On an average, 25 households had registered themselves in each of the three *anganwadi* centres in the ward. In one of these centres at Mathaipara, the majority of children who attended were from scheduled caste households. The two important activities undertaken on a regular basis in the *anganwadis* were “general feeding” and “supplementary nutrition.” A “Mothers Meeting” was held at the centres every month to assess the centres’ activities. Recently, the *anganwadi* workers realised that the levels of attendance in the centres were declining, as some private nurseries in the region began teaching English alphabet to children. To address this problem, *anganwadi* workers also started teaching English alphabet to the children in *anganwadi* on a limited scale.

From 1996-97, under the government’s decentralisation programme, panchayats took control of the management of *anganwadis*. A Welfare Committee with a representative of the ward as President and a local resident as the Secretary managed an *anganwadi* in one of the wards. *Anganwadi* workers and our interviewees in Upputhara told us that this change in control has improved the functioning of the centres in many ways. First, the *anganwadi* has since then shifted into a new building of its own from its old rented building. Second, funds for the *anganwadis* are released in time, a change which facilitated the centres to carry out activities without delay and with better efficiency. Third,

supervision of the centres by a committee of local people has helped to increase the transparency of its functioning. Popular supervision has also helped to spread information about its activities and to conduct campaigns more effectively.

III. 4. Access to credit

In Upputhara, the organised credit sector included scheduled commercial banks, primary co-operative societies, district co-operative banks and state-owned financial institutions. The organised sector¹² has a substantial presence in the rural credit market. Within the organised sector, co-operatives were the largest advancing agency; about 35 per cent of the total amount borrowed by the sample households was from co-operatives. In 2005, about 75 per cent of the total amount borrowed (and outstanding as on the date of the survey) by the surveyed households was from the organised sector (Table 12).

The dominance of the commercial banking system in the credit market of Upputhara may be traced back to the policy of “social and development banking” followed in India since 1969, when 14 private banks were nationalised. Studies have shown that the flow of credit to the rural areas in India increased significantly under this policy.

The importance given to co-operation by political movements in central Travancore of the period since independence strengthened the co-operative system in Upputhara. A large number of co-operative credit

12 Compared to other States in India, the organised sector of credit has a very strong presence in the rural credit markets of Kerala. Another distinguishing feature of the rural credit markets in Kerala is that co-operative credit societies advance a large share of the credit supplied by the organised sector (Ramakumar, 2005).

Table 12. Amount borrowed by the surveyed households on loans outstanding as on the date of survey, by source of borrowing, Ward 8, Upputhara Panchayat, 2005

Source of borrowing	Amount borrowed (Rs)	Amount borrowed as proportion of total loans (%)
Commercial banks	4,349,900	25.5
Co-operatives	5,146,400	34.6
Financial institutions	3,290,000	15.1
<i>Total : Organised sector</i>	<i>16,365,819</i>	<i>75.3</i>
Moneylenders	1,715,815	7.9
Friends and relatives	2,226,910	10.2
Other sources	1,435,541	6.6
<i>Total: Informal sector</i>	<i>5,378,266</i>	<i>24.7</i>
Grand Total	21,744,085	100.0

societies were formed during this period among settler communities. The political parties also played a major role in their formation¹³.

The co-operative credit societies in and around Upputhara were formed between the 1940s and the 1960s with the active participation of

13 Michael Tharakan (1984), who has done extensive research in this region made a few insightful remarks in the course of an interview on this aspect: In the 1950s and the 1960s, in the Christian centres of central Travancore, recognition as a political leader required the presence of a few important attributes...first, one had to be educated up to say, the high school stage. While in school, he had to be known as a good orator who had secured several prizes in elocution competitions; *secondly, one had to be a co-operator in his native place. Most of the leading political leaders from this region were master co-operators too;* thirdly, one had to be close to the Church and involved in its activities...*The popularity of the idea of co-operation in the political domain was probably due to the influence of the Gandhian principles of village reconstruction, where co-operative work had a central role to play* (emphasis added).

political movements. The Upputhara Service Co-operative Society, formed in 1949, was the first credit society to be formed in this panchayat. Apart from this society, a branch of the Idukki District Co-operative Bank and the Malanad Service Co-operative Bank functioned in the panchayat in 2005. Over the years, the co-operative credit societies received substantial encouragement and assistance from the State government.

During the period of agrarian distress, the dependence of households in Upputhara on informal sources of credit did not increase. Actually they used the organised credit system more intensively in their attempts to cope with the distress. The policies of the organised credit sources in the panchayat, especially co-operatives, assisted the households in such attempts. We shall highlight five points in this regard.

First, data on the major sources of credit for the sample households in 2005 did not show any significant dependence on informal sources of credit. In 2005, only about 25 per cent of the total loans of the households was raised from informal sources. Loans from “friends and relatives”, were interest-free loans. Excluding loans from friends and relatives, the share of the total loans from informal sector was only about 15 per cent. Private moneylenders advanced 8 per cent of the loans to households.

Secondly, the total amount of loans from the two important co-operative credit societies in Upputhara actually increased during the period of agrarian distress. An important reason for the rise in the advances after 2001 was the implementation of the debt-relief policies of the government by the organised credit sector. When widespread reports of agrarian distress began to emerge in the Press, political parties began agitations for debt relief. As a result, the government announced a series of debt-relief measures. Defaulting borrowers were allowed to reschedule or restructure their loans. Borrowers were allowed freedom to remit the interest amount that had fallen in arrears and to sign up for new loans for higher amounts of principal. In other words, the new loan

provided was usually for higher amounts, higher than the earlier loan renewed¹⁴. The banks also offered a one-time settlement scheme. Here, borrowers were allowed to repay the principal and the interest that had fallen as overdues and thus clear the loans. The interest on the overdue amounts and all penal interests were waived. All these policies of relief contributed to the creation of a situation which prevented the indebted households from dependence on informal sources of credit, especially for consumption requirements.

Thirdly, households borrowed large amounts from the organised sector of credit on the security of gold during the period of the agrarian distress. The provision for gold loans was present in the organised system. This was utilised by households. The amount of total gold loans advanced by the organised sources rose sharply after the late-1990s. Time series data for the amount of gold loans was available only for the two important co-operative credit societies in the study area: the Upputhara Service Co-operative Bank and the Malanad Service Co-operative Bank. Between 1999-2000 and 2004-05, the amount of gold loan advanced increased nine-fold in the Upputhara Service Co-operative Bank and by more than two-fold in the Malanad Service Co-operative Bank.

Among the sample households, about 11 per cent of the total loan amount was raised through gold loans in 2005. About 37 per cent of the amount borrowed by pledging gold was for the purpose of repaying outstanding debts and 35 per cent for meeting consumption requirements. About 12 per cent of the loan amount was utilised for meeting medical expenses. While gold loans were the most preferred method for repayment of outstanding debts, and for meeting consumption requirements and emergency needs, the second most preferred method was loans from

14 For instance, many loans of Rs 5000 were allowed by these societies to be rescheduled as new loans of Rs 10,000. The borrowers had to pay the interest due on the loan of Rs 5000, and were then provided with a new loan of Rs 10,000. Where the borrowers were not in a position to pay the interest dues, the interest dues were deducted from the new loan of Rs 10,000 before advancing.

private moneylenders. The presence of a strong organised sector minimised the need for depending on the informal sector.

Fourthly, the specially designed lending policies of a public bank in the region – the State Bank of Travancore (SBT) –succeeded in reducing significantly the dependence of traders on private moneylenders. Before 2003-04, Tamil migrant money lenders were an important source of credit to local traders, the average rate of interest charged by them being 25 per cent per annum. In 2003-04, the SBT initiated a scheme called “Traders Special” in association with the *Vyapari Vyavasayi Ekopana Samithi* (a traders’ union) and the Chambers of Commerce at the town and the district levels. The bank mobilised traders and offered them loans at more favourable terms and conditions than of the moneylenders. The rate of interest charged was 10 per cent per annum. Loans up to Rs 200,000 were advanced under the scheme. Loans of less than Rs 50,000 could be repaid in 36 monthly instalments. Traders in the panchayat reported that the activities of Tamil moneylenders in the region were almost eliminated by this scheme. This example illustrates the potential that organised agencies have in assisting borrowers during periods of distress through well-designed and flexible lending policies.

Fifthly, the organised sector credit institutions in Upputhara started to channel their credit to poorer households using micro-credit through Self-Help Groups (SHGs). SHGs formed in the panchayat advanced a large amount of loans to their members. A large proportion of the amount advanced by SHGs constituted loans re-routed to borrowers from public banks and co-operative credit societies. The easy availability of credit from SHGs was an important reason for a large number of SHG members desisting from depending on informal sources of credit.

III.5. Access to physical assets

Physical assets of a household include assets produced or procured in order to generate flows of monetary or non-monetary benefits. There could be two types of physical assets: assets owned exclusively by a

household; and assets owned collectively or owned by the state. Assets owned by the household include buildings, houses, latrines, consumer durables, tools and machines. Assets owned collectively or by the state include mainly infrastructural facilities such as roads, irrigation canals, electricity and piped water.

The access to physical assets of the types mentioned above was high among our sample households (Table 13). About 81 per cent of the houses owned by them were *pucca* buildings with roof and walls made of non-earthen materials. About 85 per cent of the houses had separate kitchens. And nearly 92 per cent of the households had own latrines. About 66 per cent were electrified too.

Table 13 Details of physical and infrastructural assets of households, Ward 8, Upputhara Panchayat, 2005

Item	Households	
	Number	Percent
(a) Type of houses		
Pucca	339	80.7
Semi-katcha	45	10.7
Katcha	10	2.4
Temporary shed	26	6.2
All house types	420	100.0
(b) Availability of separate kitchens		
with separate kitchen	354	84.3
without separate kitchens	66	15.7
(c) Type of latrine		
Water-sealed	259	61.7
Open pit	127	30.2
No latrine	34	8.1
All households	420	100.0
(d) Electricity connection		
Number of electrified houses	277	66.0
Number of non-electrified houses	143	34.0

Public institutions played a major enabling role in raising the levels of access of households to physical and infrastructural assets. The State government and the panchayat provided direct grants to needy households to construct houses/buildings and latrines. Among our sample households, 16 percent, mostly belonging to the lower consumption expenditure groups, received grants from the panchayat during the period 1996-97 to 2004-05 for constructing houses and latrines (see Table 14). About 44 percent of the households that received grants had MPCE between Rs 1000 and Rs 2000. Nearly 66 per cent of households that received grants for house construction and about 40 percent of households that received grants for construction of toilets were those with MPCE between Rs 1000 and Rs 3000.

The organised credit sector in the region provided loans to households for construction of houses at reasonable terms and conditions. About 25 per cent of the sample households had taken loans from the organised credit network in the panchayat for purposes of construction or repair of houses or construction of latrines, in 2005.

With the assistance of public institutions, some NGOs also act as facilitating agencies for improving the housing conditions and sanitation facilities in households. For instance, the Malanad Development Society (MDS) has helped households to avail the subsidies for house construction distributed by the Kerala State Housing Board. In addition, the MDS contributed an amount of its own. Another NGO, the Vikas Yojana Social Service Society (VIKAS) has provided subsidies in 10 villages in Idukki district (inclusive of Upputhara village) to households for constructing 215 houses and 900 water-sealed latrines under its Community Health Programme during the period 1989-2003.¹⁵ VIKAS

15 Separate figures for Upputhara about the exact number of houses and latrines for which subsidies were distributed were not available.

Table 14 Distribution of households which received panchayat grants for construction of houses and latrines and which benefited from new panchayat projects on road construction and supply of drinking water, by MPCE size-classes

MPCE size-classes (in Rs)	Households			
	which received grants from the panchayat for		which benefited from the new panchayat projects on	
	House construction	Toilet construction	Road construction	Drinking water provision
<1000	0 (0.0)	0 (0.0)	5 (2.3)	5 (9.1)
1000-2000	20 (44.4)	5 (20.0)	55 (25.0)	20 (36.4)
2000-3000	10 (22.2)	5 (20.0)	55 (25.0)	15 (27.3)
3000-4000	10 (22.2)	10 (40.0)	50 (22.7)	0 (0.0)
4000-5000	0 (0.0)	0 (0.0)	20 (9.1)	5 (9.1)
>5000	5 (11.1)	5 (20.0)	35 (15.9)	10 (18.2)
All	45 (100.0) <i>(10.7)</i>	25 (100.0) <i>(5.6)</i>	220 (100.0) <i>(52.4)</i>	55 (100.0) <i>(13.1)</i>

Notes: (a) Figures in parenthesis denote percentages to column totals; (b) Figures in italicised parenthesis denote percentages to total number of households; (c) The total number of households in the MPCE size-class of less than Rs 1000 was only 14.

acted also as a facilitator of the distribution of subsidies by government agencies such as the Kerala State Housing Board and made contributions of its own by way of grants for house construction.

Almost all the infrastructural assets in the region have been created by government efforts. The first major road in Upputhara was built by the state in 1945 to transport timber from the surrounding forests. The first major road in ward 8 was built in 1955 by voluntary effort of settlers; but its upgradation and extension was carried out under a food-for-work scheme of the government. A transport bus service was launched on this road in 1975. In 1980, the government constructed a bridge (crossway) across the Periyar River connecting the panchayats of Upputhara and Ayyappankovil which has immensely helped the development of the panchayats. In early days, this route had passed through private roads running through plantations. The plantations used to levy a toll on vehicles entering their roads. Several new roads have come up in the panchayat in recent decades. A telephone network was laid out in Upputhara in 1980 which has been extended since then. Electricity reached Upputhara in 1990 as part of the Rural Electrification Programme (REP) of the government.

More recently, after the introduction of the decentralisation programme in 1996-97 the panchayats have created numerous infrastructural assets in the region. About 52 per cent of the sample households reported that they benefited by the construction of new roads by the panchayat (Table 14) About 13 per cent of the households received drinking water for the first time in their houses through the new projects initiated by the panchayat. Among them, about 73 per cent belonged to the MPCE size-classes of less than Rs 3000 (Table 14). About 10 per cent of households felt happy that new street lights were installed by the panchayat on the roads leading to their houses.

In conclusion, our sample households had fairly high levels of access to physical assets, including infrastructural assets. Households

belonging to the lower consumption expenditure groups received substantial support from the state in the creation of physical assets. The state has also made significant contribution to the creation of infrastructural assets in the panchayat.

III.6. Access to non-governmental organisations and social networks

In Upputhara, members of the sample households participated actively in different organisational fora: political parties, trade unions, NGOs, Church, co-operatives, reading clubs, sports clubs and SHGs. About 78 per cent of the adult members of these households were members of at least one organisation (Table 15). The largest participation was in two forms of organisation: SHGs and co-operatives. Both these organisational forms facilitated access of households to credit.

Table 15 Membership of members of sample households in different social organisations

Item	Number of members	Proportion of members (%)
Number of household members who were members of SHGs	470	36.1
Number of household members who were members of co-operatives	465	35.8
Number of household members who were members of political organisations, including trade unions	156	12.0
Number of household members who were members of any other form of organisation	209	16.1
Number of household members who were members of at least one form of social organisation	1298	100.0
Average number organisations in which a household was participant	3.1	

The third single largest organisational form in which household members participated was political parties and trade unions. The important political parties active in Upputhara were the Indian National Congress (INC), the Communist Party of India (Marxist) (CPI (M)) and the Communist Party of India (CPI). The Left trade union movement was deep-rooted in the region in the large tracts of land under plantations and had been active among the plantation workers even during the pre-independence period. It was through the trade unions in the plantations that political parties mobilised people of Upputhara, even in areas outside plantations mainly around the demand for *pattayams* for farmers. Over the years, they played a key role in forcing the government to distribute *pattayams* to farmers. The *pattayam* conferred security of ownership to the household and enhanced its creditworthiness.

The Church was the most important religious forum among our sample households. As the majority of the settlers at Upputhara were Catholic Christians, who used to regularly attend Mass in their native places. From the 1920s, Catholic priests used to visit the region for prayer service every week. A thatched hut used to function as the Church in those years. In 1936, an improved building was constructed for the Church and a priest was appointed for regular prayer service. In the Mattuthaavalam, a separate Church (*Edavaka*) was established in 1959. In 2005, this Church had one nunnery attached to it.

There is, of course, no membership in a Church and as such, it was difficult to ascertain the level of participation in Church activities.

Apart from religious activities organised by the Church, a number of other institutions also functioned under the auspices of the Church in the panchayat. Three important institutions controlled by the Church were the Peermade Development Society, the Malanad Development Society (MDS) and the Vikas Yojana Social Service Society (VIKAS). These institutions functioned as NGOs and were involved in activities such as organising agricultural development schemes, SHGs, tea-processing and financing of self-employment schemes.

Peermade Development Society (PDS)

The Peermade Development Society was established in 1975 as the social service unit of the Kanjirapally Diocese of the Roman Catholic Church. The Society organised activities for the development of marginal farmers, women, children and scheduled tribes in the district of Idukki. The first unit of the Society in Ward 8 was established in 1991. The most important activity of the Society in Upputhara was that of the nodal implementing agency of the Western Ghat Development Scheme (WGDS), which task it took up in 2000-01 and 2001-02. From 2002-03, the panchayat took up the functions of the nodal agency, while the Society continued to provide co-operation and technical assistance to the scheme.

Apart from the work related to the WGDS, PDS was also involved in organising the procurement and marketing of organic agricultural products, especially organic tea. The Society organised a “Farmers’ Consortium” of 1649 farmers for the promotion and marketing of organic pepper, cardamom and ginger; the “Tea Growing Farmers’ Consortium” had 1300 farmers as members. Procurement of organic products was made only from member-farmers. The Society ran a factory – the Sahyadri Organic Tea Factory – in Peermade to process the procured organic tea leaves and undertook export of organic tea on a significant scale.

The Society had 1638 SHGs under its supervision in the panchayat. Of them, about 1000 SHGs were linked to public banks or co-operative credit societies. About 400 SHGs started micro-enterprises using loans from banks. An important characteristic of the SHGs under the Society was that they were not encouraged to register under the *Kudumbasree*¹⁶ scheme of the panchayat. As a result, the activities of these SHGs remained insulated from the planning process of the panchayat.

16 Kudumbasree is the name of the Kerala Government’s poverty eradication programme, which literally means ‘prosperity of the family’.

Malanad Development Society

The Malanad Development Society (MDS) was established in 1977 as the social service unit of the Kanjirapally Diocese of the Roman Catholic Church. The major objective of MDS was to “enhance the quality of life of farmers, women, children and marginalised communities through decentralised institution-building, participatory development processes and the application of sustainable technologies.” The activities of the MDS included facilitating the delivery of benefits from the state to rural households, providing finances to rural households for different activities, organisation of SHGs and technical assistance to small rural enterprises.

The most important activity of the MDS in Ward 8 was the organisation in 1994 of a milk co-operative called the Malanad Milk Society. This society also provided loans to households to purchase livestock and construct cowsheds. Apart from organising the milk society, MDS also provided a subsidy of Rs 500 for every household that established a biogas plant at home. The MDS provided training to members of SHGs to manufacture soaps, and supplied raw materials free of cost. It also distributed sewing machines to young women as assistance for self-employment. It also distributed pressure cookers, thermal cookers and CFL bulbs to optimise energy consumption.

Just as in the case of the Peermade Development Society, the activities of the MDS were also largely divorced from the activities of the panchayat. SHGs functioning under MDS were discouraged from registering themselves with the panchayat’s *Kudumbasree* scheme.

Vikas Yojana Social Service Society

The Vikas Yojana Social Service Society (VIKAS) was established in 1981 by the CMI Church at Kottayam. Even though the head office of VIKAS was in Puthupally in Kottayam, most of its activities were carried out from a sub-office situated in the panchayat of Ayyappankovil that

was adjacent to Upputhara panchayat. VIKAS's activities included the promotion of income-generating programmes (like distribution of livestock and plant seedlings), educational programmes, women's welfare programmes and community health programmes among rural households.

A major activity of VIKAS in recent years has been the implementation of the Kattappana Integrated Development Project (KADEP) that aimed at the "integrated development of rural areas." The KADEP began in 1989 and ended in 2003. The KADEP was implemented in 10 villages including Upputhara village in Idukki district; three villages in this list belonged to Upputhara panchayat. Each village was treated as a "centre" for the project, and one such centre functioned in the Mattuthaavalam ward that we surveyed. After KADEP ended in 2002-03, VIKAS has not financed any new income-generating programme.

In 2005, organisation of SHGs was the most important activity of VIKAS. About 550 SHGs have been organised in different centres. At the Mattuthaavalam centre, 34 SHGs functioned in 2005, of which 12 were male SHGs and 22 female SHGs. According to VIKAS, its current focus is on equipping the SHGs to make full use of the SHG schemes of the government. A feature of SHGs organised by VIKAS is their dual membership; these SHGs were registered with VIKAS as well as the *Kudumbasree* scheme of the panchayat. In this way, the activities of VIKAS's SHGs were linked to the planning process of the panchayat.

Thus it is observed that the activities of NGOs contributed to improvement in the livelihoods of households in our study area. The activities of some of the major NGOs, however, remained insulated from the developmental organs of the government like the panchayats. This has led to the duplication of several developmental schemes. For instance, both the panchayat as well as an NGO in the same region ran schemes for the distribution of agricultural seedlings, thus defeating the objectives of both the schemes and resulting in avoidable wastage of funds.

Coordination among the different agencies functioning in a region is therefore essential. The planning process of the decentralised local bodies was in fact aimed at such coordination. Two major NGOs in the study area have however preferred to function independent of the activities of the panchayat.

Apart from these NGOs, there were also several other voluntary organisations functioning in the panchayat: reading clubs, sports clubs and cultural organisations. There were also units of the *Young Men's Christians Association* (YMCA), the *Kerala Sastra Sahitya Parishad* (KSSP) and the *Christians Youth Ministries* (CYM) in the panchayat. The important sports clubs that functioned in the panchayat were the Saima Arts and Sports Club, the Upputhara Santosh Club and the Navathara Arts and Sports Club.

Summing up

Our analysis in this section showed that public action was a significant determinant of the levels of access of the households in Upputhara to different types of assets. The access of households to these assets began with the occupation of land by settlers in the region. In the subsequent periods important investments and organisational interventions were made by the state. The struggles by political organisations and the facilitating roles that social reform movements and social organisations played in the past several decades were also important. It is significant to note that institutions that form part of the state, political and civil organisations have contributed to enhancing the access to various livelihood assets to households. The state policy of reforming education, health and other social sector activities has adversely affected the ability of these welfare institutions. Given this background, the extent to which such conditions have enabled the households in the study area to design their livelihood strategies in response to the agrarian distress requires understanding. This is attempted in the section that follows.

IV. Agrarian Distress and Household Strategies

In the literature on household responses to livelihood shocks, a crucial distinction is made between *adaptive strategies* and *coping strategies* (Davies, 1993; Rennie and Singh, 1995). Adaptive strategies are strategies consciously adopted over a period of time as a response to long-term trends. Coping strategies are primarily short-term responses to unanticipated shocks and stresses. One of the important methodological issues involved in studies on strategies is the distinction between these two strategies, even while appreciating their complementary relationship. Ongoing strategies as a response to long-term changes may be useful in framing effective responses to short-term crises. And many short-term responses may actually contribute to the evolution of strategies of livelihood in the long run.

IV.1. Strategies of diversification

Studies on rural livelihood have focussed on diversification as the most important household strategy in times of crisis. Diversification is defined here as an increase in the number of sources of income of a household over a base period. Studies on rural India have shown that diversification as an economic strategy has predominantly been a forced choice for workers and marginal farmers, as their incomes from earlier source/s of income had fallen or had become inadequate to meet their costs of living (Ghosh and Bharadwaj, 1992; Sen, 1998). Ghosh and Bharadwaj write that diversification for rural households in India has historically been a “last resort rather than an attractive alternative of livelihood” (ibid, 154). Writing about the sharp increase in the extent of migration (a form of livelihood diversification) in rural India, Ghosh (2005) notes that “a very substantial part...is distress-led, driven by the complete collapse of rural employment generation, the economic difficulties of cultivation and also the inadequate employment opportunities in towns.”

This view of diversification stands apart from another view which looks at diversification not as a forced choice but as a conscious strategy of spreading risks. While these studies do not deny an element of force in the design of household economic strategies, the crucial distinction that they make is to see diversification as a stabilising factor in the livelihoods of households. As a result, these studies arrive at policy conclusions that advise governments to actively promote diversification as an economic strategy. What these studies do not take into account is the fact that in a forced context, diversification by vulnerable households need not necessarily serve as a stabilising strategy. As a distress-led strategy, diversification may actually lead to an intensification of instability.

Our analysis of the process of diversification of livelihoods in Upputhara is focussed on the following questions: What is the extent of diversification of livelihoods among households in Upputhara? What are the types of households that have diversified their income portfolios? What are the different ways in which diversification is taking place? How sustainable are the strategies of diversification adopted by households?

In Table 16, we have presented the distribution of households in each Household Set. It is striking that occupational diversification, in terms of earning income from more than one occupation, has not been an important characteristic of our sample households. More than half of all the households (about 52 per cent) earned their income from a single occupation only. About one-fourth of the households earned their income solely from cultivation (Table 16).

An important feature of households in Household Set 4 is that they mostly represented the lower consumption expenditure classes (or were “poorer” households). In Table 18, the distribution of households in different Household Sets by consumption expenditure groups is shown. Even though the number of households in Set 4 constitute 48 per cent of

all the sample households, the share of Set 4 households within the lowest two MPCE size-classes of < Rs 1000 and Rs 1000-2000, was more than 60 per cent. The share of households from Set 4 was smaller in the higher consumption expenditure groups, while the share of households from Set 1 was higher in the higher consumption expenditure groups.

Table 16. Distribution of households, by Household Set

Type of Household Set	Number of households	Share of households (%)
Set 1	105	25.0
Set 2	77	18.3
Set 3	38	9.0
Set 4	200	47.6
All	420	100.0

Note: Set 1: Cultivators as main income; Set 2: Agricultural labours as main income; Set 3: Non-agriculture labours as main income; Set 4: Several income sources

The majority of households that had a diversified income portfolio belong to the lower consumption expenditure classes. In Table 18, households in different MPCE size-classes are classified according to the number of occupations from which the households earned income. About 56 per cent of the households that had three sources of income were from the MPCE size-class Rs 1000-2000. Another 41 per cent of the households with three sources of income were from the MPCE size-class Rs 2000-3000. On the other hand, the share of households from these two MPCE size-classes was lower among two sources of income households or one source of income households, in that order.

Table 17 Distribution of surveyed households, by size-classes of MPCE and Household Sets(in percentage)

MPCE size-classes (in Rs)	Proportion of households belonging to				
	Household Set 1	Household Set 2	Household Set 3	Household Set 4	All households
<1000	0.0	115.5	20	64.5	100.0
1000-2000	13.5	15.0	11.3	60.2	100.0
2000-3000	28.4	14.7	18.7	38.2	100.0
3000-4000	30.8	13.2	7.0	49.0	100.0
4000-5000	40.4	9.5	5.1	45.0	100.0
>5000	46.9	8.3	4.5	40.3	100.0
All	25.0	18.4	9.0	47.6	100.0

Table 18. Distribution of households by the number of sources of income, by MPCE size-classes, Ward 8, Upputhara Panchayat, 2005 (in per cent)

MPCE size-classes (in Rs)	Share of households with income from			
	One source	Two sources	Three sources	All households
<1000	2.5	4.8	0.0	3.3
1000-2000	16.5	29.6	55.9	25.5
2000-3000	18.5	31.2	41.2	26.0
3000-4000	17.5	11.3	2.9	13.6
4000-5000	17.5	8.1	0.0	11.9
>5000	26.8	15.1	0.0	19.8
All	100.0	100.0	100.0	100.0

Households in the lower consumption expenditure groups, to which the majority of households with diversified income portfolios belonged,

had another important characteristic. They belonged also to the lower land-size-classes (Table 19). About 65 per cent of all the households in the MPCE size-class Rs 1000-2000 owned less than 50 cents of land each. And about 60 per cent of the households in the MPCE size-class Rs 2000-3000 owned less than one acre of land each. Thus, most of the households in the lower consumption expenditure groups were households that owned small and marginal landholdings of less than one acre.

Table 19. Distribution of households by land size-classes and MPCE size-classes, Ward 8, Upputhara Panchayat, 2005 (in per cent)

MPCE size-classes (in Rs)	Share of households in each land size-class (in cents)					
	<50	51-100	101-200	201-300	>300	All
< 1000	0.0	100.0	0.0	0.0	0.0	100
1000-2000	64.8	15.7	12.3	7.2	0.0	100
2000-3000	23.4	36.4	12.6	15.9	11.7	100
3000-4000	46.5	0.0	41.9	11.6	0.0	100
4000-5000	32.1	0.0	15.5	18.3	34.1	100
> 5000	26.8	13.4	18.9	21.1	19.8	100
All	35.5	18.6	17.0	15.4	13.4	100

IV. 2 Diversification of employment

Data are available from the Census of India on the number of *main workers*¹⁷ employed in different occupations. These data were used at the level of the panchayat for 1971, 1991 and 2001. For 2001, however, data are available only for selected categories within each industrial class.

Overall, the work force structure in Upputhara seems to have been stable over the period 1971 to 1991. Agriculture was the major source of employment to main workers in both these years.

¹⁷ According to Census of India, 2001, Main workers are defined as persons who had worked for the major part of the reference period (i.e, 6 months or more).

However, certain changes took place in the occupational distribution of workers between 1991 and 2001. First, there was a rise in the share of main workers employed in cultivation (excluding plantation crops). In 1991, about 15 per cent of the main workers were employed in cultivation; in 2001, the corresponding proportion rose to 18 per cent. While the shares of both male and female main workers in cultivation rose, the share of female main workers rose faster.

Secondly, the share of main workers employed in agricultural labour (excluding work in plantations) fell between 1991 and 2001. The fall was prominent for both male and female main workers.

Thirdly, the proportion of main workers employed in all the sectors other than cultivation and agricultural labour rose from 61 per cent in 1991 to 68.4 per cent in 2001. For male main workers, the increase was from 53 per cent to 63 per cent, while for female main workers, the increase was from 79 per cent to 81 per cent. A large number of main workers employed in “Livestock, forestry, fishing, plantations, orchards and other activities” would also be employed in agriculture (by virtue of being related to the plantation crops). A more disaggregated analysis is possible only on a limited scale due to non-availability of data. One cannot say, therefore, whether the increase really represented an increase in the share of non-agricultural main workers between 1991 and 2001. One could speculate, however, that *if* the share of main workers employed in “Livestock, forestry, fishing, plantation, orchard and other activities” did not undergo any significant change between 1991 and 2001, the observed change should represent a rise in the share of main workers employed in non-agricultural occupations.

A larger proportion of workers were employed in the non-agricultural sector than what one could have speculated from the Census data for 2001. About 38 per cent of all the primary workers in our survey had some form of non-agricultural employment or other as their primary occupation (Table 20). Among all the non-agricultural workers, the

majority was employed in some form of non-agricultural manual work. About 23 per cent of all the primary workers were employed as non-agricultural manual workers. The share of primary workers employed in agriculture (cultivation and agricultural labour, including plantation labour) was only about 62 per cent. Thus, our data suggest a more rapid expansion in non-agricultural employment for workers than what the data from the Census of India would suggest.

Table 20 also shows that a majority of all the primary workers belonging to Schedule Castes, (about 51 per cent) reported non-agricultural manual labour as their primary occupation. Only 16 per cent of the SC primary workers were employed as agricultural labourers. SC workers in the study area had been historically agricultural labourers in paddy fields and plantations. Our data for 2005, thus, suggest a shift in the employment profile of SC workers (from agricultural to non-agricultural employment) in the study area.

Sources of non-agricultural employment

Construction work under WGDS: Our observations and interviews suggested that one of the major sources of non-agricultural manual labour for workers in the study area after 2000-01 was the construction activities related to the WGDS. We have already seen that a large number of households benefited from the construction of soil bunds, stone bunds, ferro-cement tanks and the stabilisation of stream banks under WGDS. Most of these construction activities were undertaken through contract labour; family labour was scarcely used, as skilled labour was required to construct soil and water conservation structures. Contractors, who received special training in the construction of soil and water conservation structures, undertook these works. According to contractors, the majority of the workers required for the construction work were mobilised locally.

To estimate the number of person-days of labour generated through construction activities related to the WGDS, we requested a local

Table 20: Distribution of workers in the surveyed households, by primary occupation and caste, ward 8, Upputhara Panchayat, 2005

Primary occupation	All persons		SC persons		OBC persons	
	Number	Percent	Number	Percent	Number	Percent
Cultivation	192	34.7	15	24.6	54	21.4
Wage employment in agriculture	149	26.9	10	16.4	87	34.5
Wage employment in non-agriculture	128	23.1	31	50.8	53	21.0
Self-employed in trade or business	52	9.4	0	0.0	38	15.1
Government servants	19	3.4	5	8.2	10	4.0
Others	14	2.5	0	0.0	10	4.0
Total	554	100.0	61	100.0	252	100.0

contractor to supply details about the average number of workers required to complete a unit of each type of work. Applying these figures on to the total construction work undertaken under WGDS in the Mathaipara watershed between 2000-01 and 2003-04, we made an estimate of the number of person-days of labour generated. The results are in shown in Table 21.

Activities under WGDS in the study area generated a large number of labour-days in the non-agricultural sector after 2000-01. Over a period of four years, 13,048 person-days of labour were thus created. The largest number of labour-days was generated in the construction of stone bunds.

Table 21. Employment generation through construction activities under WGDS, 2000-01 to 2003-04

Type of construction	Extent of construction in the surveyed ward, 2000-01 to 2003-04	Extent of work undertaken by a worker per day	Total person-days generated, 2000-01 to 2003-04
Stone bunds (m ²)	52,020 m ²	6 m ²	8,670
Soil bunds (m ²)	25,778 m ²	15 m ²	1,718
Trenches (number)	9,150 numbers	18 numbers	508
Stabilisation of stream banks (m ³)	700 m ³	1 m ³	700
Rain water harvesters (tanks) (number)	121 numbers	12 numbers	1,452
Total	-	-	13,048

Source: Records of implementing agencies of WGDS in Upputhara; Interview with Tomy, a contractor who undertook construction work under WGDS in the study area.

In sum, the expansion in non-agricultural employment opportunities through a government-funded agricultural infrastructure development scheme came as a major support for poor households during a period of severe agrarian distress.

Migration: In the literature on livelihood studies, migration is not usually seen as a type of diversification. Instead, migration is studied as a separate strategy of coping with livelihood crisis. For instance, Scoones (1998, cited in Ellis (2000) divides the strategies of diversification into three types: agricultural intensification or extensification, livelihood diversification and migration. We have not used this type of division of strategies in this study. In our view, migration can very much serve as a strategy of diversification of income sources for a household. If one member of a household migrates for work while other members stay back, it is in our view a strategy of diversification of incomes for the household. If one worker in a household migrates for work during one season in a year and works locally during the other seasons, it is in our view a diversification of income sources for that individual worker as well as for the household. In this study, we have studied the phenomenon of migration as a strategy of diversification of incomes, that is, a strategy of increasing the number of sources of income for the household.

An important feature of the livelihood of households in the study area was the employment of a large number of study area workers in places outside the district. About 23 per cent of the sample households (95 out of 420 households) reported that at least one member of the household had migrated out for work in 2005.

A few characteristics of migration among the members of our sample households can be noted. First, migration to work in a salaried job was a phenomenon limited to the three uppermost consumption expenditure groups (Table 22). No migrant member from any household with MPCE less than Rs 3000 worked in salaried jobs. Secondly, all migrants from households with MPCE of less than Rs 3000 were

employed as non-agricultural manual labourers. In the size-classes of MPCE above Rs 3000 also, the majority of migrant workers were employed in some form of non-agricultural manual work. The major types of non-agricultural labour undertaken by the migrants were carpentry, masonry, loading and unloading, construction work, painting, plumbing and electrical work.

Thirdly, women from our surveyed households migrated only for home-nursing or domestic work. The number of female migrants who were working as home-nurses or domestic workers formed about 21 per cent of all migrant persons (Table 22). At the houses where they were employed, both home-nursing and domestic work entailed labour in household chores on all days. Home-nursing involved special responsibilities such as taking care of the aged, ailing or disabled persons in the households concerned. In some cases, home-nursing was but a modern name for domestic work.

One of the most important destinations of migrant male workers from our study area was the famous Hindu temple site at Sabarimala, and its precincts downhill. The shrine at Sabarimala is open only for a few weeks in a year. A very large number of devotees throng in the hills and the hill shrine at that time. So, abundant seasonal employment opportunities emerge. They include employment in shops and restaurants, transport of materials from Pampa to Sabarimala, loading and unloading at Pampa and Sabarimala and carrying trolleys that transport persons from Pampa to Sabarimala and back. These jobs are undertaken by migrant workers from different parts of the State and outside. Pampa is about 70 km away from Upputhara and is an important destination for male workers migrating for work for short periods.

Siby, one of the migrants from Mattuthaavalam to Sabarimala reported that he has been going to Sabarimala and Pampa for work annually since 1994. Siby, who owns an acre of land in Mattuthaavalam found income from land inadequate to meet his requirements at home.

Table 22: Distribution of members of sample households who had migrated for work in the previous year, by occupation, by MPCE size-classes, 2005 (in percentage)

MPCE size-classes (Rs)	Share of migrant household members undertaking each occupation (%)				
	Salaried job	Non-agricultural labour			All jobs (2+5)
		Non-agricultural casual labour	Home-nurse /domestic servant	All non -agricultural labour (3+4)	
1000-2000	0.0	100.0	0.0	100.0	100.0
2000-3000	0.0	72.8	27.2	100.0	100.0
3000-4000	45.9	54.1	0.0	54.1	100.0
4000-5000	20.5	40.2	39.4	79.5	100.0
>5000	33.1	51.9	15.0	66.9	100.0
All classes	21.4	57.6	21.0	78.6	100.0

So he goes to work at Pampa in the pilgrimage season every year (60 days) and five days in every remaining month when the temple is kept open. Siby transports people in his trolley from Pampa to Sabarimala and brings them back. For operating a trolley, four workers are required. A group of four workers were paid Rs 860 in 2005 to transport one person from Pampa to Sabarimala and back. Out of this amount, Rs 60 had to be remitted to the temple management (*devaswam*), and the remaining Rs 800 was shared equally by the four workers. On an average, he brought home an amount of Rs 25,000 at the end of a 60-day season. In the five days that he worked every other month at Pampa, he earned a net amount of Rs 2000 on an average. His average annual income earned as a migrant was Rs 45,000.

Siby also spoke about the changes taking place to the extent and pattern of migration from Mattuthaavalam to Pampa in recent years. From 1994 until 2000, only three or four persons used to go to Pampa for work every year from Mattuthaavalam. From 2000, the number of migrant workers rose sharply. In 2004, about 30 to 35 persons from Mattuthaavalam travelled with Siby's group to Pampa. A clear link exists between the rising number of migrants and the falling incomes from cash crop cultivation after 2000. Siby's own case was an example; between 1994 and 2000, Siby went to work in Pampa only for the 60-day season. From 2000, he started going to work in Pampa for five day periods in every remaining month also. After 2000, the main reason for his spending of more number of days at Pampa was inadequate income from cultivation at home.

Siby also told us that a recent tendency among migrant workers at Pampa was to physically exert themselves more in order to earn more income. He himself started undertaking two trolley trips per day in the past four years. The majority of the migrant workers in Pampa were engaged in carrying materials on their back from Pampa to Sabarimala. One such trip with loads fetched Rs 120 for a worker; and Siby knew

many workers who regularly carried three to four loads every day to earn additional income.

Women of Upputhara worked as home-nurses in different parts of Kerala. Ammini has been working as home-nurse for the past five years. Ammini's family has a 1.5 acre plot of land, and her husband is a non-agricultural manual worker. She has three daughters. The income earned by her husband and the income received from cash crop cultivation were adequate to run the household until about 1999. From 1999, however, the prices of the major cash crops raised by them began to fall. Two of Ammini's daughters had to be married off, and therefore Ammini decided to go to work. She had heard about home-nursing from a few of her friends at the Church. Ammini contacted the priest at the local Church and requested him to help her find a job as home-nurse. The priest sent her to a seminary at Kothamangalam (in the adjacent Ernakulam district), which acted as an agency for the employment of home-nurses. Through the seminary, Ammini got work as a home-nurse to take care of an old couple in a house in Perumbavoor (also in Ernakulam district).

Ammini received Rs 2500 per month and free food at her new job. According to her, she was treated well by the household and was not asked to do any work beyond what she was supposed to do. However, she said that there were a number of other households that forced home-nurses to do a number of household chores, such as washing clothes, cleaning utensils and cooking. The number of such malpractices was particularly high in cases in which private agencies acted as intermediaries. Ammini planned to continue working as home-nurse till her household's financial situation improved.

There were also a few rare cases of physical harassment of home-nurses at their work places. New problems arose in households from which housewives migrated to take up jobs as home-nurses. Children in some of these households were not being adequately taken care of after their mothers left for work. In many cases, the education of the children got adversely

affected. In one case, the young daughter of a home-nurse was lured into sexual relationships during the absence of her mother away on work.

In sum, migration was an important way in which households in Upputhara diversified their income portfolios during times of agrarian distress. Both men and women left their homes to work at far away locations. Most migrants were employed as non-agricultural manual labourers. The conditions at the work place were often gruelling and migration was associated with major socio-economic hardships for members of the families left behind.

IV.3. Membership in SHGs

As noted earlier, the formation of SHGs in 2005 was the most important group activity entered into by sample households. In Ward 8 of Upputhara alone, there were 50 SHGs operating in 2005. The total membership in these SHGs was 664, with an average of 13 members per group (Table 23). In other words, 35 per cent of the population of Ward

Table 23: Number of SHGs and details of SHG membership, Ward 8, Upputhara Panchayat, 2005

Registration type	Number of SHGs	Proportion of number of SHGs (%)	Number of members	Proportion of members (%)
<i>Kudumbasree</i> and VIKAS	20	40.0	265	39.9
<i>Kudumbasree</i>	13	26.0	173	26.1
SNDP	5	10.0	66	9.9
PDS	4	8.0	54	8.1
<i>Kudumbasree</i> and PDS	4	8.0	49	7.4
<i>Kudumbasree</i> and TSSS	2	4.0	28	4.2
TSSS	2	4.0	29	4.4
Total	50	100.0	664	100.0

Note: PDS - Peermade Development Society; SNDP Yogam – Sree Narayana Dharma Paripalana Yogam; TSSS – Thiruvalla Social Service Society.

8 were members of SHGs. Out of the 50 SHGs, 37 were exclusively of women. About 78 per cent of all the SHGs were registered with the *Kudumbasree* scheme of the Panchayat. Thus the SHGs were getting integrated with the planning process of local bodies.

There were three kinds of activities that SHGs organised: mobilisation of small savings, making small loans and establishment of small-scale productive activities. A part of the loans issued was for productive activities organised by individual borrowers.

Supply of credit and mobilisation of savings by SHGs

SHGs had achieved some success in the area in mobilising small savings and advancing loans. As Table 24 shows, each SHG mobilised Rs 37,273 on an average from its members as on the date of the survey. The best performers with respect to savings mobilisation were SHGs registered exclusively with *Kudumbasree*. Each SHG had, on the average, Rs 29,635 as credit outstanding. SHGs under the Peermade Development Society had an outstanding credit of Rs 77,188 per group. The high levels of credit outstanding for some SHGs (such as those registered with the Peermade Development Society and VIKAS) were not exclusively the savings of its members; they also consisted in part, of loans raised from banks. NGOs have acted as facilitators for channelling bank loans to SHGs.

The levels of savings and credit outstanding per member were not very high. On an average, a member had a cumulative savings of Rs 2,807 and outstanding credit worth Rs 2,232 (Table 25). These figures show that the role of SHGs as mobilisers of savings or suppliers of credit in the study region was limited. The average amount of credit availed from SHGs per member was too small an amount to suffice for investment in a small-scale industrial unit. However, the savings mobilised, and the credit made available from SHGs, did act as a shield of protection to households. For instance, the availability of credit from SHGs helped households meet immediate consumption needs in times of distress, thus

Table 24 Distribution of SHGs by Registration type according to Cumulative savings, credit outstanding and bank credit availed, Ward 8, Upputhara Panchayat, 2005

Registration type	Savings (Rs)		Credit outstanding (Rs)		Total bank credit availed (Rs)	
	Total	Average	Total	Average	Total	Average
<i>Kudumbasree</i>	530,664	108,389	236,095	27,008	350,000	125,417
<i>Kudumbasree</i> and TSSS	43,500	21,750	24,750	12,375	-	-
PDS	179,155	44,789	308,750	77,188	760,000	190,000
PDS and <i>Kudumbasree</i>	212,420	53,105	142,084	35,521	150,000	37,500
SNDP Yogam	18,020	3,604	6,650	1,330	-	-
TSSS	35,639	17,820	69,700	34,850	50,000	25,000
VIKAS and <i>Kudumbasree</i>	844,239	42,212	693,743	34,687	685,000	34,250
Total	1,863,637	37,273	1,481,772	29,635	1,995,000	39,900

saving them from falling victims to the exploitation of informal sources of credit. One major private moneylender in Upputhara reported that his gold loans had significantly declined after the year 2000 due to the expansion of SHG credit for households.

Table 25 Cumulative savings and credit outstanding per member, of SHGs, by registration type, Ward 8, Upputhara Panchayat, 2005.

Registration type	Cumulative savings per member (Rs)	Credit outstanding per member (Rs)
<i>Kudumbasree</i> and VIKAS	3,186	2,618
<i>Kudumbasree</i>	3,067	1,365
SNDP	273	101
PDS	3,318	5,718
<i>Kudumbasree</i> and PDS	4,335	2,900
<i>Kudumbasree</i> and TSSS	1,554	884
TSSS	1,229	2,403
Total	2,807	2,232

Productive activities initiated with SHG loans

The most important productive activity undertaken by SHGs was the leasing-in of land for cultivation. In all, there were 42 cases of leasing-in of land by different SHGs in our study area. Crop-wise details of leasing-in of land by SHGs are given below (Table 26)

Table 26 Number of SHGs with lease cultivation, 2005

Crop cultivated	Area cultivated	Number of SHGs
Tapioca	27 acres	20
Banana	7.5 acres	9
Ginger	4 acres	6
Vegetable	0.75 acres	4
Pea	1 acre	2
Cardamom	0.10 acres	1

It is clear that leasing-in of land for cultivation would have acted as a supplementary source of the income of the SHG members.

In all, individuals in Ward 8 purchased 43 goats, 26 pigs, 62 cows, 6 calves and 403 hens using loans from SHGs. Eleven households constructed cowsheds using the SHG loans. One SHG established a poultry farm of 50 hens. Two SHGs were involved in the production and sale of *pappad* and sweets. One SHG member purchased an auto rickshaw and another established a telephone booth. These are the activities undertaken in Ward 8 using loans from SHGs as on the date of survey.

It was clear that SHGs were formed in the area in recent years as one of the livelihood strategies of the vulnerable to cope with agrarian distress. Almost all the SHGs here were started after 2000. Before 2000, there had been only 7 SHGs functioning in the ward. In the year 2000, 14 SHGs were registered and by 2003, 17 SHGs more were registered. In 2004, 12 SHGs were registered. The rapid increase in the number of SHGs from 7 in 2000 to 50 in 2005 illustrates that the households have been looking for benefits by becoming SHG members.

IV.4. Other household responses

There has been a clear tendency on the part of the sample households to reduce the number of hired workers in their farms after agrarian distress began. The amount of non-labour inputs, such as fertilisers, was also reduced. Part of the reason for the reduction was the sharp rise in their prices from the late-1990s. In the same period output prices of their crops were falling.

About 33 per cent of the households reported that they reduced the number of workers in their farms after 2000 (Table 27). Reduction was done in different ways. Some farmers simply did not undertake tasks such as tilling and manuring in their farms after 2000. Some others reduced the number of workers hired for specific operations, with the result that the quality of work suffered. About 26 per cent of the sample

households reportedly increased the number of person-days of family labour after 2000. A large part of this increased input of family labour consisted of female labour. Female members of the households, thus, took up additional responsibilities in farm operations after agrarian distress set in. The overall outcome was a decline in the number of days of employment available for agricultural workers. Thus, the coping strategies undertaken by one group of households adversely affected the livelihood of another group that was actually more vulnerable.

Table 27: Changes in the extent of hiring labour and use of family labour between 2000 and 2005

Item	Number of households	Proportion of households in total (%)
Farmers who reduced the number of casual farm workers hired, after 2000	139	33.1
Farmers who reduced the number of regular farm workers hired, after 2000	10	2.4
Farmers who increased the number of person-days of family labour, after 2000	107	25.5

There have been other types of responses too to agrarian distress. Some households have reportedly sent their children (especially daughters) to job-oriented courses as a reaction to the travails of agrarian distress. Such courses included nursing and computer programming. Their experience of long term tendency of agricultural prices to fall has made these households expect further fall in agricultural prices. So they believe that agriculture would not serve as a stable source of income in the long term. They want their next generation therefore to diversify into vocations outside agriculture. However, as the number of seats available for such vocational courses in government colleges were low, admissions had to be sought in self-financing colleges in which the costs

of education were significantly higher. Mobilisation of finances for education in self-financing colleges forced many parents to borrow heavily, resulting in higher debt burdens. That was borne in anticipation of higher future incomes from the earnings of the next generation and brighter days to come.

A few households shifted to organic farming, especially in tea growing, after agrarian distress began. From 2003, the Peermade Development Society initiated a scheme of procurement of organic tea leaves from farmers. The rise in demand for organic tea products in the international market, and the higher prices that organic tea products fetched served as a motivation for the Society to procure organic tea leaves. The Society established a separate processing unit in its factory for organic tea leaves, and those products were specially marked for export. The higher prices encouraged many farmers to shift to cultivation of organic tea. It, however, was unclear whether the levels of productivity in organic forms of cultivation of tea were significantly different from those of cultivation of inorganic tea.

Diversification of crops

Diversification of the cropping pattern was a continuous activity within the agricultural sector of Upputhara right from the days of the initial settlement to the area. The number of crops grown in the panchayat region has steadily expanded over the past five decades (see Table 28). Only coffee and pepper were grown in the 1950s. Farmers started planting tea in the 1960s and cardamom in the 1970s. The cultivation of crops, and the extent of the area cultivated, increased over time. This was in tune with the changes in prices of crops and institutional facilities available in the marketing and processing of products. The diversification of the cropping pattern was always a part of the adaptation as well as coping strategies of the households in the region.

Table 28: A rough sketch of changes in the cropping pattern, Ward 8, Upputhara, 1950 to 2005

Period	Changes in the cropping pattern and remarks on it
1950s	Coffee and pepper were the only major crops. Some intercrops like <i>kachil</i> (yam) were also cultivated.
1960s	The area cultivated with coffee and pepper continued to increase. Some cultivators began planting tea. However, there were serious constraints to the expansion of tea growing outside the plantations. There were no tea factories outside plantations, and the tea factories attached to plantations refused to buy tea leaves from peasant farmers.
1970s	Farmers began planting cardamom. The area cultivated with tea grew very slowly. The area under coffee and pepper increased.
1980s	The area cultivated with cardamom increased sharply. By 1985, MDS established a tea factory in the region and PDS started procuring tea leaves from farmers. As a result, the area under tea increased rapidly after 1985 and spread to the wastelands of the region.
1990s	The area cultivated with all crops continued to increase, especially tea and cardamom.
After 2000	Some farmers started planting vanilla. With the fall in the prices of other major cash crops, the area cultivated with vanilla increased rapidly.

Source: Interviews with members of the older generation of farmers in the study area.

Note: MDS – Malanad Development Society; PDS – Peermade Development Society.

At the time of the survey in 2005, Upputhara had a well-diversified cropping pattern. Even in small-holdings a large number of crops were cultivated. The pattern or the level of a household's consumption expenditure did not determine the number of crops grown. In Table 29, the mean, the median and the mode of the number of crops grown by households in each MPCE size-class are given. In every consumption expenditure group, the mean of the number of crops grown was between 8 and 10. The median and the mode of the number of crops did not significantly vary with the MPCE size-class to which the households belonged.

Table 29: Mean, median and mode of the number of crops grown by the surveyed households, by consumption expenditure groups, 2005

MPCE size-classes (Rs)	Descriptive statistics for the number of crops grown		
	Mean	Median	Mode
< 1000	9.8	9	-
1000-2000	8.3	8	6
2000-3000	9.1	9	11
3000-4000	8.7	9	9
4000-5000	7.9	8	8
>5000	9.8	9	9
All classes	8.4	9	9

However, there were significant differences in the number of crops grown across households in different Household Sets. For households with cultivation as the only source of income – Household Set 1 –, the mean number of crops grown was 11, a number which was considerably higher than the mean number of crops grown by households in other Sets (Table 30).

Table 30: Mean, median and mode of the number of crops grown by the sample households, by Household Sets, 2005

Type of Household Set	Number of crops grown		
	Mean	Median	Mode
Household Set 1	11.1	11	9
Household Set 2	6.5	6	6
Household Set 3	3.9	4	4
Household Set 4	8.4	8	4
All households	8.4	8	8

These findings from Table 30 may be read along with the data in Tables 17 and 5. Set 1 households, by definition, earned their income only from cultivation. Data in Table 18 showed that there was a significantly large proportion of Set 1 households in the higher consumption expenditure groups than in the lower consumption expenditure groups. Data in Tables 30 and 6 suggest that the reason for the large proportion of Set 1 households in the higher consumption expenditure groups was the higher average size of landholdings owned by them as well as the higher average number of crops grown by them. Thus, diversification for households that earned these incomes only from cultivation was through diversification of the cropping pattern.

Diversification of cropping pattern and the fall in cash crop prices:

In Table 31, we give the number of households that reported planting of at least one new crop in every five-year period after 1980.

It is seen that the number of households that planted at least one new crop every five years increased sharply after the mid-1990s. Between 2000 and 2005, an overwhelming number of households (120) planted a new crop in their holdings compared to only 29 households in the period between 1995 and 2000.

Table 31: Number of households that planted at least one new crop and the most important reason for planting new crops, Ward 8, Upputhara Panchayat, 1981 to 2005

Period	Number of households reporting planting of at least one new crop	Most important reason given for planting new crops
1981-1985	11	Prices of the crop were attractive
1985-1990	0	-
1990-1995	10	Prices of the crop were attractive
1995-2000	29	Decline in prices of crops grown
2000-2005	120	Decline in prices of crops grown

Secondly, the reasons cited by the households for deciding to plant new crops changed noticeably after 1995. Till the mid-1990s, the most important reason for planting a new crop was the appeal of its high price. Post-1995, however, crop diversification became a phenomenon driven primarily by distress. Our sample households cited fall in the prices of the crops earlier grown (leading to a fall in income) as the most important reason for shifting to new crops after 1995.

In Table 32, data on the area under each newly planted crop by the households after 1980 are shown. The data showed that 268 acres were planted with new crops and it accounted for about one-third of the estimated owned area by the sample households. Tea, pepper and cardamom were the important newly planted crops from the 1980s till the late-1990s. Tea accounted for about 45 per cent of the newly planted gross cropped area. Tea, pepper and cardamom together accounted for about 84 per cent of the gross cropped area newly planted after 1980. The periods when these crops were planted in new areas corresponded with the periods when the prices of these crops were high and rising. Data presented in the first section of this study show that the domestic prices of tea and pepper were rising till about 1997-98. Domestic prices

of cardamom were also rising till the early 2000s. The prices of all the three crops fell afterwards, and corresponding to that the area newly planted with these crops ceased to increase.

Table 32: Area under each crop newly planted by the sample households, during 1981 to 2005

Crop	Area newly planted (acres)	Share in total area (%)
Tea	121.7	45.4
Pepper	65.4	24.4
Cardamom	38.9	14.5
Vanilla	20.0	7.5
Coconut	8.0	3.0
Manjiyam	4.0	1.5
Vegetables	4.0	1.5
Ginger	1.4	0.5
Tapioca	1.8	0.7
Banana	1.8	0.7
Coffee	1.5	0.5
All crops	268.4	100.0

The fourth important crop in terms of area planted, was vanilla. It was planted in about eight per cent of the gross area newly planted after 1980. Vanilla was introduced into the cropping pattern of the panchayat only in the late-1990s. It gained immediate popularity among farmers. The most important reason for its rapid adoption was its rising prices, particularly during a period in which prices of all other crops in region were falling. In 1995-96, the domestic price of processed vanilla stood at Rs 2,000 per kg; it rose to Rs 8,000 per kg in 2001-02. In 2002-03 and

2003-04, the domestic price shot up to Rs 15,000 per kg¹⁸. Such a huge rise in price led to the planting of large areas with vanilla in the study area; in ward 8 of Upputhara panchayat alone an area of 20 acres was newly planted with vanilla. Vanilla could be quickly planted because there were special schemes of the Spices Board (a government undertaking) to supply vanilla seedlings and to train farmers and extension personnel in the processing of vanilla beans. Vanilla seedlings were also distributed through WGDS which distributed to 94 households vanilla seedlings in Ward 8, after 2000-01.

While planting of vanilla certainly helped relieve farmers of their distress in the short run, it remains to be seen whether the high prices for vanilla would continue, especially when production in Madagascar, the major exporting country, has been increasing rapidly since June 2004. Vanilla prices have already fallen sharply to Rs 1,640 in January 2005 and to Rs 1,618 in April 2005.

V. Conclusion

In the present study, the impact of the agrarian distress on the different socio-economic groups, the strategies of livelihood adopted by households and the role of local institutions in shaping those strategies are investigated.

The strategies of livelihood adopted by households were associated with the levels of access they had to different types of assets. Landlessness was not a widespread phenomenon in the study area; most households owned small plots of land. The evolution of such a pattern of

18 A large proportion of the domestic production of vanilla is exported. The rise in the price of processed vanilla in the early 2000s, till 2003-04, was primarily due to a significant fall in the production of vanilla in Madagascar, which is the most important vanilla-exporting country in the world. The fall in production in Madagascar was owing to major crop losses due to a cyclone that hit that country in the year 2000.

landownership is traced to the specific features of agricultural settlement in the region in the 1940s and 1950s, backed up by agitations by farmers' organizations for possession of rights over land and the legislative actions of the state that provided *pattayams* to settler households. Nevertheless, inequality in land ownership was very high across socio-economic groups. The *Krishi Bhavans*, and the agricultural offices of the government, provided institutional support for cultivation. Different schemes of the state implemented through elected panchayats, such as the Western Ghat Development Scheme (WGDS), were found to be major contributors to the building of agricultural infrastructure in the study area.

Achievements in education, health care and sanitation of the households were traced to public action which demanded schools and health care centres and to public investments in education and health care. Access to credit for households was facilitated by the dominant presence of organised sector institutions of credit, especially co-operative credit societies. Investments made and assistance provided by the state directly and through the local bodies increased the access of households to physical assets. Some schemes of the government contributed prominently to the building up of agricultural infrastructure. Many NGOs that functioned in the panchayat played a facilitating role in routing the benefits offered by the state to the needy sections of the population.

The decline of net incomes from cultivation which was accompanied by decline in the levels of access to many types of assets caused the households to experience the agrarian distress acutely. Owing to the fiscal squeeze on the government at the same time, the development expenditures of the state declined. Owing to increased presence of private players, costs of education and health care rose in this same period. PDS also was being downgraded. Thus, households already facing agrarian distress were compelled to face other difficulties in getting access to crucial assets and welfare institutions. This process increased their economic burdens.

An important conclusion is that the strategies of livelihood framed in response to a shock could vary across households depending on the extent of their asset ownership. Households in Upputhara achieved diversification of livelihoods in three major ways: through diversifying their cropping pattern, through diversifying their local occupations and through migration. It appeared that crop diversification has been adopted as a livelihood strategy only for households for the larger size of holdings. For small and marginal farmers and labourers who owned little land, they had to search for other strategies.

Diversification of employment was achieved by taking up work locally in areas other than agriculture, as non-agricultural manual labourers. An increase in the proportion of workers employed in the non-agricultural sector has been observed in recent years. A state-funded agricultural infrastructure development scheme (WGDS) was being implemented in the study area in which a large number of additional person-days of local labour were generated.

A type of diversification resorted to as the last resort was migration. With the agrarian distress setting in, the number of male and female workers migrating from the study area began to rise sharply. A section of male workers migrated to nearby places such as Pampa and Sabarimala, to seek work as casual labourers. Female workers migrated to work as home nurses in the nearby towns and cities.

Households borrowed more during the time of distress than earlier. The average level of debt burden of households rose during the distress. A very large number of households raised loans on the security of gold during the period of distress. However, households were able to depend on the strong organised credit sector functioning in the panchayat to meet rising credit requirements. As a result, dependence on the informal sector of credit hardly increased. The terms and conditions of loans raised from the organised sector were more reasonable than those from the informal sector. Nevertheless, the rise in the total debt burdens of

households showed that insecurity of livelihood increased after distress set in. The number of SHGs in the study area increased sharply after 2000. While the formation of SHGs was part of an independent campaign of decentralization promoted by the state, it would be safe to say that the benefits from membership in SHGs have acted as a protective shield against vulnerability of households during times of agrarian distress.

In sum, the study showed that (a) in formulating coping strategies, households benefited from increased access to a number of institutions created through public action in the earlier years; (b) access of households to the different welfare institutions created through public action was declining in recent years as a result of the policies of structural adjustment; and (c) the livelihood system of the households remained extremely vulnerable. Obviously strengthening the livelihood systems of households would require sustaining their livelihood assets and income by reversing these state policies that adversely affects them.

In the context of the present study in Upputhara, it may be concluded that livelihood risks require a revision of the policies of agricultural trade liberalisation, ensuring the availability of agricultural inputs to farmers at reasonable prices, raising the levels of public investment in agriculture, and the establishment of a comprehensive social security system for the population. It also requires strengthening and making effective the functioning of local institutions like the panchayat.

The findings of the study also reveals the need to refine the analytical framework of the sustainable livelihood approach. As revealed from the study, in the access to livelihood assets, institutions have worked as a crucial factor. Institutions have been undergoing changes under the pressure of macro and meso level policies and the changes in the structure of governance. Some of the policies have been contributing to exclusive growth (like decline in the quality of the welfare institutions), some other policies especially strengthening the panchayats and local governance systems have been facilitating inclusive growth by providing

assets to the poor. Institutions in this context can be considered as part of the structure within which the five fold assets are jointed together. However, it can be also considered as an asset that people can draw upon under conditions of risk and vulnerability. In such situations, these institutions functions like social networks and relationships. Another issue in which the present study raises some concern is the concept of diversification. The diversification of employment through migration as described in the study is forced diversification for smoothening household incomes. The diversification of cropping pattern revealed in the study has been not for minimising risk, but taking risk in anticipation of higher returns to investment. Therefore diversification should not be advocated as a strategy for reducing distress, without looking at its long term impact on the household livelihood system.

***K. N. Nair** is Fellow & Director at the the Centre for Development Studies, Thiruvananthapuram. His research interests include Agriculture and Rural Development, Decentraliazation and Local Level Development, Science and Society, Economic Policy and Planning and Institutional Economic analysis.*

Email: knn@cds.ac.in

***R. Ramakumar** is Assistant Professor at the Tata Institute of Social Sciences, Mumbai. His research interests include Agricultural Economics, Development Economics and Rural Development.*

Email: rr@tiss.edu

References

- Davies, S. (1993), “Are Coping Strategies a Cop Out?”, *IDS Bulletin*, 24 (4), pp. 60-72.
- Ellis, Frank (2000), *Rural Livelihoods and Diversity in Developing Countries*, Oxford University Press, Oxford.
- Ghosh, Jayati (2005), “Migration and Public Policy”, in <http://www.macrosan.com/cur/jun05/cur180605Public_Policy.htm>.
- Ghosh, Jayati and Krishna Bharadwaj, (1992), “Poverty and Employment in India”, in Bernstein, H., B. Crow, and H. Johnson, (eds.) *Rural Livelihoods: Crisis and Responses*, Oxford University Press, Oxford, pp. 139-164.
- Jinraj, P. V. (1999), “Performance evaluation of the *Krishi Bhavan* set-up in Kerala”, Discussion Paper, Kerala Research Programme on Local Level Development, Centre for Development Studies, Trivandrum.
- Nair, K. N. and Vineetha Menon, (2004), “Reforming agriculture in a globalising world – The road ahead for Kerala”, IP6 Working Paper No. 3, Development Study Group, Department of Geography, University of Zurich – Irchel, Switzerland.
- Ramakumar(2005) ‘Formal Credit and Rural Worker Households in Kerala: A Case Study of a Malabar Village’. In *Financial Liberalization and Rural Banking in India*, eds V.K. Ramachandran and M. Swaminathan, 326–54. New Delhi: Tulika Books.
- Rennie, K. and N. Singh, (1995), “Participatory Research for Sustainable Livelihoods: A Guide Book for Field Projects”, International Institute for Sustainable Development, Manitoba, Canada.
- Scoones, I. (1998), “Sustainable Rural Livelihoods: A Framework for Analysis”, Working Paper No. 72, Institute of Development Studies, Sussex.

- Sen, Abhijit (1998), “Rural labour markets and poverty”, in R. Radhakrishna and Alakh N. Sharma (eds.), *Empowering Rural Labour in India: Market, State and Mobilisation*, Institute of Human Development, New Delhi.
- Subramanian, K. K (2007), “Impact of the Plantation crops of South India: Export Performance and Price Instability”, Unpublished paper, Centre for Development Studies, Thiruvananthapuram.
- Suryanarayana, M. H. (2001), “Economic Reform Versus Food Security: Kerala’s Gordian knot”, *Journal of International Development*, 13 (2), pp. 239-254.
- Swaminathan, Madhura (2000), *Weakening Welfare: The Public Distribution of Food in India*, LeftWord Books, New Delhi.
- Tharakan, P.K. Michael, (1984), “Socio-Economic Factors in Educational Development: Case of Nineteenth Century Travancore”, *Economic and Political Weekly*, 19 (45-46).
- Upputhara Panchayat(1996), Panchayat Development Report 1996(*Panchayat Vikasanarekha*)

CENTRE FOR DEVELOPMENT STUDIES
LIST OF WORKING PAPERS
[New Series]

The Working Paper Series was initiated in 1971. A new series was started in 1996 from WP. 270 onwards. Working papers beginning from 279 can be downloaded from the Centre's website (www.cds.edu)

- W.P. 391 PULAPRE BALAKRISHNAN**, *Visible Hand: Public Policy and Economic Growth in the Nehru Era*. November 2007
- W.P. 390 SUNIL MANI**, *The Growth Performance of India's Telecommunications Services Industry, 1991-2006 Can it Lead to the Emergence of a Domestic Manufacturing Hub?* September 2007
- W.P. 389 K. J. JOSEPH, VINOJ ABRAHAM**, *Information Technology and Productivity: Evidence from India's Manufacturing Sector*. September 2007
- W.P. 388 HRUSHIKESH MALLICK**, *Does Energy Consumption Fuel Economic Growth In India?* September 2007
- W.P. 387 D. SHYJAN**, *Public Investment and Agricultural Productivity: A State-wise Analysis of Foodgrains in India*. July 2007
- W.P. 386 J. DEVIKA**, *'A People United in Development': Developmentalism in Modern Malayalee Identity*. June 2007.
- W.P. 385 M. PARAMESWARAN**, *International Trade, R&D Spillovers and Productivity: Evidence from Indian Manufacturing Industry*. June 2007.
- W.P. 384 K. C. ZACHARIAH, S. IRUDAYA RAJAN** *Economic and Social Dynamics of Migration in Kerala, 1999-2004 Analysis of Panel Data*. May 2007.
- W.P. 383 SAIKAT SINHA ROY** *Demand and Supply Factors in the Determination of India's Disaggregated Manufactured Exports : A Simultaneous Error-Correction Approach*. May 2007
- W.P. 382 SUNIL MANI** *The Sectoral System of Innovation of Indian pharmaceutical industry*. September 2006
- W.P. 381 K. J. JOSEPH, GOVINDAN PARAYIL** *Trade Liberalization and Digital Divide: An Analysis of the Information Technology Agreement of WTO*. July 2006.

- W.P. 380 RUDRA NARAYAN MISHRA** *Dynamics of Caste-based Deprivation in Child Under-nutrition in India.* July 2006.
- W.P. 379 P.L.BEENA,** *Limits to Universal Trade Liberalisation: The Contemporary Scenario for Textiles & Clothing Sector in South Asia.* March 2006.
- W.P. 378 K.N. NAIR, VINEETHA MENON,** *Lease Farming in Kerala: Findings from Micro Level Studies.* November 2005.
- W.P. 377 NANDANA BARUAH,** *Anti Dumping Duty as a Measure of Contingent Protection: An Analysis of Indian Experience.* October 2005.
- W.P. 376 P. MOHANAN PILLAI, N. SHANTA** *Long Term Trends in the Growth and Structure of the Net State Domestic Product in Kerala.* October 2005.
- W.P. 375 R. MOHAN, D. SHYJAN** *Taxing Powers and Developmental Role of the Indian States: A Study with reference to Kerala.* August 2005.
- W.P. 374 K. C. ZACHARIAH, S. IRUDAYA RAJAN.** *Unemployment in Kerala at the Turn of the Century: Insights from CDS Gulf Migration Studies.* August 2005.
- W.P. 373 SUNIL MANI,** *The Dragon vs. The Elephant Comparative Analysis of Innovation Capability in the Telecommunications Equipment Industry in China and India.* July 2005
- W.P. 372 MOTKURI VENKATANARAYANA** *On The Non-Random Distribution of Educational Deprivation of Children in India.* July 2005
- W.P. 371 DIBYENDU S. MAITI** *Organisational Morphology of Rural Industries in Liberalised India: A Study of West Bengal.* June 2005
- W.P. 370 SUNIL MANI,** *Keeping Pace with Globalisation Innovation Capability in Korea's Telecommunications Equipment Industry.* March 2005.
- W.P. 369 V.R. PRABHAKARAN NAIR,** *Determinants of Fixed Investment: A Study of Indian Private Corporate Manufacturing Sector.* March 2005.
- W.P. 368 J. DEVIKA,** *Modernity with Democracy? : Gender and Governance in the People's Planning Campaign, Keralam.* February 2005

- W.P. 367 VINEETHA MENON, ANTONYTO PAUL, K N NAIR** *Dynamics of Irrigation Institutions: Case study of a Village Panchayat in Kerala.* February 2005
- W.P. 366 VIJAYAMOHANAN PILLAI N.** *Causality and Error Correction in Markov Chain: Inflation in India Revisited.* December 2004.
- W.P. 365 R. MOHAN.** *Central Finances in India - Alternative to Procrustean Fiscal Correction.* November 2004.
- W.P. 364 SUNIL MANI.** *Coping with Globalisation Public R&D Projects in Telecommunications Technologies in Developing Countries.* November 2004.
- W.P. 363 K C ZACHARIAH, S IRUDAYA RAJAN.** *Gulf Revisited Economic Consequences of Emigration From Kerala, Emigration and Unemployment.* September 2004.
- W.P. 362 M. VENKATANARAYANA.** *Educational Deprivation of Children in Andhra Pradesh, Levels and Trends, Disparities and Associative Factors.* August 2004.
- W.P. 361 K. P. KANNAN, VIJAYAMOHANAN PILLAI N.** *Development as a Right to Freedom: An Interpretation of the Kerala Model.* August 2004.
- W.P. 360 VIJAYAMOHANAN PILLAI N.** *CES Function, Generalised Mean and Human Poverty Index: Exploring Some Links.* July 2004.
- W.P. 359 PRAVEENA KODOTH,** *Shifting the Ground of Fatherhood: Matriliney, Men and Marriage in Early Twentieth Century Malabar.* May 2004.
- W.P. 358 MRIDUL EAPEN.** *Women and Work Mobility: Some Disquieting Evidences from the Indian Data.* May 2004.
- W.P. 357 K. RAVI RAMAN.** *The Asian Development Bank Loan for Kerala (India): The Adverse Implications and Search for Alternatives,* March 2004.
- W.P. 356 VIJAYAMOHANAN PILLAI N.** *Liberalisation of Rural Poverty: The Indian Experience,* March 2004.
- W.P. 355 P.L.BEENA** *Towards Understanding the Merger-Wave in the Indian Corporate Sector: A Comparative Perspective,* January 2004.
- W.P. 354 K.P. KANNAN AND R. MOHAN** *India's Twelfth Finance Commission A View from Kerala,* December 2003.

- W.P. 353 K.N. HARILAL AND P.L. BEENA** *The WTO Agreement on Rules of Origin Implications for South Asia*, December 2003.
- W.P. 352 K. PUSHPANGADAN** *Drinking Water and Well-being In India: Data Envelopment Analysis*, October 2003.
- W.P. 351 INDRANI CHAKRABORTY** *Liberalization of Capital Inflows and the Real Exchange Rate in India : A VAR Analysis*, September 2003.
- W.P. 350 M.KABIR** *Beyond Philanthropy: The Rockefeller Foundation's Public Health Intervention in Thiruvithamkoor, 1929-1939*, September 2003.
- W.P. 349 JOHN KURIEN** *The Blessing of the Commons : Small-Scale Fisheries, Community Property Rights, and Coastal Natural Assets*, August 2003.
- W.P. 348 MRIDUL EAPEN,** *Rural Industrialisation in Kerala: Re-Examining the Issue of Rural Growth Linkages*, July 2003.
- W.P. 347 RAKHE PB,** *Estimation of Tax Leakage and its Impact on Fiscal Health in Kerala*, July 2003.
- W.P. 346 VIJAYAMOHANAN PILLAI N,** *A contribution to Peak load pricing theory and Application*. April 2003.
- W.P. 345 V.K. RAMACHANDRAN, MADHURA SWAMINATHAN, VIKAS RAWAL** *Barriers to Expansion of Mass Literacy and Primary Schooling in West Bengal: Study Based on Primary Data from Selected Villages*. April 2003.
- W.P. 344 PRADEEP KUMAR PANDA** *Rights-Based Strategies in the Prevention of Domestic Violence*, March 2003.
- W.P. 343 K. PUSHPANGADAN** *Remittances, Consumption and Economic growth in Kerala: 1980-2000*, March 2003.
- W.P. 342 D NARAYANA** *Why is the Credit-deposit Ratio Low in Kerala?* January 2003.
- W.P. 341 MRIDUL EAPEN, PRAVEENA KODOTH** *Family Structure, Women's Education and Work: Re-examining the High Status of Women in Kerala*. November 2002.
- W.P. 340 J. DEVIKA,** *Domesticating Malayalees: Family Planning, the Nation and Home-Centered Anxieties in Mid- 20th Century Keralam*. October, 2002.
- W.P. 339 M PARAMESWARAN,** *Economic Reforms and Technical Efficiency: Firm Level Evidence from Selected Industries in India*. October, 2002.

- W.P. 338 PRAVEENA KODOTH**, *Framing Custom, Directing Practices: Authority, Property and Matriliney under Colonial Law in Nineteenth Century Malabar*, October 2002.
- W.P. 337 K.NAVANEETHAM**, *Age Structural Transition and Economic Growth: Evidence From South and Southeast Asia*, August 2002.
- W.P. 336 PULAPRE BALAKRISHNAN, K. PUSHPANGADAN, M. SURESH BABU**, *Trade Liberalisation, Market Power and Scale Efficiency in Indian Industry*, August 2002.
- W.P. 335 J.DEVIKA**, *Family Planning as 'Liberation': The Ambiguities of 'Emancipation from Biology' in Keralam* July 2002.
- W.P. 334 E. ABDUL AZEEZ**, *Economic Reforms and Industrial Performance an Analysis of Capacity Utilisation in Indian Manufacturing*, June 2002.
- W.P. 333 K. PUSHPANGADAN** *Social Returns from Drinking Water, Sanitation and Hygiene Education: A Case Study of Two Coastal Villages in Kerala*, May 2002.
- W.P. 332 K. P. KANNAN**, *The Welfare Fund Model of Social Security for Informal Sector Workers: The Kerala Experience*. April 2002.
- W.P. 331 SURESH BABU**, *Economic Reforms and Entry Barriers in Indian Manufacturing*. April 2002.
- W.P. 330 ACHIN CHAKRABORTY**, *The Rhetoric of Disagreement in Reform Debates* April 2002.
- W.P. 329 J.DEVIKA**, *Imagining Women's Social Space in Early Modern Keralam*. April 2002.
- W.P. 328 K. P. KANNAN, K. S. HARI**, *Kerala's Gulf Connection Emigration, Remittances and their Macroeconomic Impact 1972-2000*. March 2002.
- W.P. 327 K. RAVI RAMAN**, *Bondage in Freedom, Colonial Plantations in Southern India c. 1797-1947*. March 2002.
- W.P. 326 K.C. ZACHARIAH, B.A. PRAKASH, S. IRUDAYA RAJAN**, *Gulf Migration Study : Employment, Wages and Working Conditions of Kerala Emigrants in the United Arab Emirates*. March 2002.
- W.P. 325 N. VIJAYAMOHANAN PILLAI**, *Reliability and Rationing cost in a Power System*. March 2002.

- W.P. 324 K. P. KANNAN, N. VIJAYAMOHANAN PILLAI**, *The Aetiology of the Inefficiency Syndrome in the Indian Power Sector Main Issues and Conclusions of a Study*. March 2002.
- W.P. 323 V. K. RAMACHANDRAN, MADHURA SWAMINATHAN, VIKAS RAWAL**, *How have Hired Workers Fared? A Case Study of Women Workers from an Indian Village, 1977 to 1999*. December 2001.
- W.P. 322 K. C. ZACHARIAH**, *The Syrian Christians of Kerala: Demographic and Socioeconomic Transition in the Twentieth Century*, November 2001.
- W.P. 321 VEERAMANI C.** *Analysing Trade Flows and Industrial Structure of India: The Question of Data Harmonisation*, November 2001.
- W.P. 320 N. VIJAYAMOHANAN PILLAI, K. P. KANNAN**, *Time and Cost Over-runs of the Power Projects in Kerala*, November 2001.
- W.P. 319 K. C. ZACHARIAH, P. R. GOPINATHAN NAIR, S. IRUDAYARAJAN** *Return Emigrants in Kerala: Rehabilitation Problems and Development Potential*. October 2001
- W.P. 318 JOHN KURIEN, ANTONYTO PAUL** *Social Security Nets for Marine Fisheries-The growth and Changing Composition of Social Security Programmes in the Fisheries Sector of Kerala State, India*. September 2001.
- W.P. 317 K. J. JOSEPH, K. N. HARILAL** *India's IT Export Boom: Challenges Ahead*. July 2001.
- W.P. 316 K. P. KANNAN, N. VIJAYAMOHANAN PILLAI** *The Political Economy of Public Utilities: A Study of the Indian Power Sector*, June 2001.
- W.P. 315 ACHIN CHAKRABORTY** *The Concept and Measurement of Group Inequality*, May 2001.
- W.P. 314 U.S.MISHRA, MALA RAMANATHAN** *Delivery Complications and Determinants of Caesarean Section Rates in India - An Analysis of National Family Health Surveys, 1992-93*, March 2001.
- W.P. 313 VEERAMANI. C** *India's Intra-Industry Trade Under Economic Liberalization: Trends and Country Specific Factors*, March 2001
- W.P. 312 N. VIJAYAMOHANAN PILLAI** *Electricity Demand Analysis and Forecasting –The Tradition is Questioned*, February 2001
- W.P. 311 INDRANI CHAKRABORTY** *Economic Reforms, Capital Inflows and Macro Economic Impact in India*, January 2001

- W.P. 310 K. K. SUBRAHMANYAN, E. ABDUL AZEEZ**, *Industrial Growth In Kerala: Trends And Explanations* November 2000
- W.P. 309 V. SANTHAKUMAR, ACHIN CHAKRABORTY**, *Environmental Valuation and its Implications on the Costs and Benefits of a Hydroelectric Project in Kerala, India*, November 2000.
- W.P. 308 K. P. KANNAN, N. VIJAYAMOHANAN PILLAI**, *Plight of the Power Sector in India : SEBs and their Saga of Inefficiency* November 2000.
- W.P. 307 K. NAVANEETHAM, A. DHARMALINGAM**, *Utilization of Maternal Health Care Services in South India*, October 2000.
- W.P. 306 S. IRUDAYA RAJAN**, *Home Away From Home: A Survey of Oldage Homes and inmates in Kerala*, August 2000.
- W.P. 305 K. N. HARILAL, K.J. JOSEPH**, *Stagnation and Revival of Kerala Economy: An Open Economy Perspective*, August 2000.
- W.P. 304 K. P. KANNAN**, *Food Security in a Regional Perspective; A View from 'Food Deficit' Kerala*, July 2000.
- W.P. 303 K. C. ZACHARIAH, E. T. MATHEW, S. IRUDAYA RAJAN** , *Socio-Economic and Demographic Consequences of Migration in Kerala*, May 2000.
- W.P. 302 K. PUSHANGADAN, G. MURUGAN**, *Gender Bias in a Marginalised Community: A Study of Fisherfolk in Coastal Kerala*, May 2000.
- W.P. 301 P. L. BEENA** *An Analysis of Mergers in the Private Corporate Sector in India*, March, 2000.
- W.P. 300 D. NARAYANA** *Banking Sector Reforms and the Emerging Inequalities in Commercial Credit Deployment in India*, March, 2000.
- W.P. 299 JOHN KURIEN** *Factoring Social and Cultural Dimensions into Food and Livelihood Security Issues of Marine Fisheries; A Case Study of Kerala State, India*, February, 2000.
- W.P. 298 D. NARAYANA, K. K. HARI KURUP**, *Decentralisation of the Health Care Sector in Kerala : Some Issues*, January, 2000.
- W.P. 297 K.C. ZACHARIAH, E. T. MATHEW, S. IRUDAYA RAJAN** *Impact of Migration on Kerala's Economy and Society*, July, 1999.
- W.P. 296 P.K. MICHAEL THARAKAN, K. NAVANEETHAM** *Population Projection and Policy Implications for Education: A Discussion with Reference to Kerala*, July, 1999.
- W.P. 295 N. SHANTA, J. DENNIS RAJA KUMAR** *Corporate Statistics: The Missing Numbers*, May, 1999.

- W.P. 294 K. P. KANNAN** *Poverty Alleviation as Advancing Basic Human Capabilities: Kerala's Achievements Compared*, May, 1999.
- W.P. 293 MRIDUL EAPEN** *Economic Diversification In Kerala : A Spatial Analysis*, April, 1999.
- W.P. 292 PRADEEP KUMAR PANDA** *Poverty and young Women's Employment: Linkages in Kerala*, February, 1999.
- W.P. 291 P. K. MICHAEL THARAKAN** *Coffee, Tea or Pepper? Factors Affecting Choice of Crops by Agro-Entrepreneurs in Nineteenth Century South-West India*, November 1998.
- W.P. 290 CHRISTOPHE Z. GUILMOTO, S. IRUDAYA RAJAN** *Regional Heterogeneity and Fertility Behaviour in India*, November 1998.
- W.P. 289 JOHN KURIEN** *Small Scale Fisheries in the Context of Globalisation*, October 1998.
- W.P. 288 S. SUDHA, S. IRUDAYA RAJAN** *Intensifying Masculinity of Sex Ratios in India : New Evidence 1981-1991*, May 1998.
- W.P. 287 K. PUSHANGADAN, G. MURUGAN** *Pricing with Changing Welfare Criterion: An Application of Ramsey- Wilson Model to Urban Water Supply*, March 1998.
- W.P. 286 ACHIN CHAKRABORTY** *The Irrelevance of Methodology and the Art of the Possible : Reading Sen and Hirschman*, February 1998.
- W.P. 285 V. SANTHAKUMAR** *Inefficiency and Institutional Issues in the Provision of Merit Goods*, February 1998.
- W.P. 284 K. P. KANNAN** *Political Economy of Labour and Development in Kerala*, January 1998.
- W.P. 283 INDRANI CHAKRABORTY** *Living Standard and Economic Growth: A fresh Look at the Relationship Through the Non- Parametric Approach*, October 1997.
- W.P. 282 S. IRUDAYA RAJAN, K. C. ZACHARIAH** *Long Term Implications of Low Fertility in Kerala*, October 1997.
- W.P. 281 SUNIL MANI** *Government Intervention in Industrial R & D, Some Lessons from the International Experience for India*, August 1997.
- W.P. 280 PRADEEP KUMAR PANDA** *Female Headship, Poverty and Child Welfare : A Study of Rural Orissa, India*, August 1997.
- W.P. 279 U.S. MISRA, MALA RAMANATHAN, S. IRUDAYA RAJAN** *Induced Abortion Potential Among Indian Women*, August 1997.
- W. P. 278 PRADEEP KUMAR PANDA** *The Effects of Safe Drinking Water and Sanitation on Diarrhoeal Diseases Among Children in Rural Orissa*, May 1997.

- W. P. 277 PRADEEP KUMAR PANDA** *Living Arrangements of the Elderly in Rural Orissa*, May 1997.
- W. P. 276 V. SANTHAKUMAR** *Institutional Lock-in in Natural Resource Management: The Case of Water Resources in Kerala*, April 1997.
- W.P. 275 G. OMKARNATH** *Capabilities and the process of Development* March 1997.
- W.P. 274 K. PUSHPANGADAN, G. MURUGAN** *User Financing & Collective action: Relevance sustainable Rural water supply in India.* March 1997.
- W.P. 273 ROBERT E. EVENSON, K.J. JOSEPH** *Foreign Technology Licensing in Indian Industry : An econometric analysis of the choice of partners, terms of contract and the effect on licensees' performance* March 1997.
- W.P. 272 SUNIL MANI** *Divestment and Public Sector Enterprise Reforms, Indian Experience Since 1991* February 1997.
- W.P. 271 SRIJIT MISHRA** *Production and Grain Drain in two inland Regions of Orissa* December 1996.
- W.P. 270 ACHIN CHAKRABORTY** *On the Possibility of a Weighting System for Functionings* December 1996.

BOOKS PUBLISHED BY THE CDS

Biodiversity, Sustainable Development and Economic Analysis

J. Hans B. Opschoor

CDS, 2004, Rs. 100/\$11

Plight of the Power Sector in India: Inefficiency, Reform and Political Economy

K.P. Kannan and N. Vijayamohanan Pillai

CDS, 2002, Rs. 400/\$40

Kerala's Gulf Connection: CDS Studies on International Labour Migration from Kerala State in India

K.C. Zachariah, K. P. Kannan, S. Irudaya Rajan (eds)

CDS, 2002, pp 232, Hardcover, Rs. 250/\$25

Performance of Industrial Clusters: A Comparative Study of Pump Manufacturing Cluster in Coimbatore (Tamil Nadu) & Rubber Footwear Cluster in Kottayam (Kerala)

P. Mohanan Pillai

CDS, 2001, pp 158, Paperback, Rs. 175/\$18

Poverty, Unemployment and Development Policy : A Case Study of Selected Issues With Reference to Kerala

United Nations, 2000 (reprint), pp 235

(available for sale in India only), Rs. 275

Land Relations and Agrarian Development in India: A Comparative Historical Study of Regional Variations

Sakti Padhi

CDS, 1999. pp 335, Hardcover, Rs. 425/\$48

Agrarian Transition Under Colonialism: Study of A Semi Arid Region of Andhra, C.1860-1900

GN Rao

CDS, 1999. pp 133, Paperback, Rs. 170/ \$19

Property Rights, Resource Management & Governance: Crafting An Institutional Framework for Global Marine Fisheries

John Kurien

CDS & SIFFS, 1998. pp 56, Paperback, Rs. 50/ \$10

Health, Inequality and Welfare Economics

Amartya Sen

CDS. 1996. pp 26, Paperback, Rs. 70/ \$ 10

Industrialisation in Kerala: Status of Current Research and Future Issues

P Mohanan Pillai & N Shanta

CDS. 1997. pp 74, Paperback, Rs. 110/ \$ 12

CDS M.Phil Theses (1990/91-1993/94): A Review Vol.II

T T Sreekumar

CDS. 1996. pp 99, Paperback, Rs. 120/\$ 14

Trends In Agricultural Wages in Kerala 1960-1990

A A Baby

CDS. 1996. pp 83, Paperback, Rs. 105/ \$ 12

CDS M.Phil Theses (1975/76-1989/90): A Review Vol.1

G N Rao

CDS. 1996. pp 162, Paperback, Rs. 155/ \$ 18

Growth of Education in Andhra - A Long Run View

C Upendranath

CDS. 1994. pp 158, Paperback, Rs. 135/ \$ 15

Growth of Market Towns in Andhra: A Study of the Rayalseema Region C 1900-C.1945

Namerta

CDS. 1994. pp 186, Paperback, Rs.125/ \$ 14

Floods and Flood Control Policies: an Analysis With Reference to the Mahanadi Delta in Orissa

Sadhana Satapathy

CDS. 1993 pp 98, Paperback, Rs. 110/\$ 12

Growth of Firms in Indian Manufacturing Industry

N Shanta

CDS. 1994. pp 228, Hardcover, Rs. 250/ \$ 28

Demographic Transition in Kerala in the 1980sK C Zachariah, S Irudaya Rajan, P S Sarma, K Navaneetham,
P S Gopinathan Nair & U S Mishra,CDS. 1999 (2nd Edition) pp 305, Paperback, Rs.250/ \$ 28

Impact of External Transfers on the Regional Economy of Kerala

P R Gopinathan Nair & P Mohanan Pillai

CDS 1994. pp 36, Paperback, Rs.30/ \$ 10

Urban Process in Kerala 1900-1981

T T Sreekumar

CDS. 1993. pp 86, Paperback, Rs.100/ \$ 11

Peasant Economy and The Sugar Cooperative: A Study Of The Aska Region in Orissa

Keshabananda Das

CDS. 1993. pp 146, Paperback, Rs.140/ \$ 16

Industrial Concentration and Economic Behaviour: Case Study of Indian Tyre Industry

Sunil Mani

CDS. 1993. pp 311, Hardcover, Rs. 300/ \$ 34

Limits To Kerala Model of Development: An Analysis of Fiscal Crisis and Its Implications.

K K George

CDS. 1999 (2nd edition) pp 128, Paperback, Rs. 160/ \$ 18

Indian Industrialization: Structure and Policy Issues. (No Stock)

Arun Ghosh, K K Subrahmanian, Mridul Eapen & Haseeb A Drabu (EDs).

OUP. 1992. pp 364, Hardcover, Rs.350/ \$ 40

Rural Household Savings and Investment: A Study of Some Selected Villages

P G K Panikar, P Mohanan Pillai & T K Sundari

CDS. 1992. pp 144, Paperback, Rs. 50/ \$ 10

International Environment, Multinational Corporations and Drug Policy

P G K Panikar, P Mohanan Pillai & T K Sundari

CDS. 1992. pp 77, Paperback, Rs.40/ \$ 10

Trends in Private Corporate Savings

N Shanta

CDS. 1991. pp 90, Paperback, Rs. 25/ \$ 10

Coconut Development in Kerala: Ex-post Evaluation

D Narayana, K N Nair, P Sivanandan, N Shanta and
G N Rao

CDS. 1991. pp 139, Paperback, Rs.40/ \$ 10

Caste and The Agrarian Structure

T K Sundari

Oxford & IBH. 1991. pp 175, Paperback, Rs.125/ \$ 14

Livestock Economy of Kerala

P S George and K N Nair

CDS. 1990. pp 189, Hardcover, Rs. 95/ \$ 10

The Pepper Economy of India (No Stock)

P S George, K N Nair and K Pushpangadan

Oxford & IBH. 1989. pp 88, Paperback, Rs. 65/ \$ 10

The Motor Vehicle Industry in India**(Growth within a Regulatory Environment)**

D Narayana

Oxford & IBH. 1989. pp 99, Paperback, Rs. 75/ \$ 10

Ecology or Economics in Cardamom Development**(No Stock)**

K N Nair, D Narayana and P Sivanandan

Oxford & IBH. 1989. pp 99, Paperback, Rs. 75/ \$ 10

Land Transfers and Family Partitioning

D Rajasekhar

Oxford and IBH. 1988. pp 90, Hardcover, Rs. 66/ \$ 10

Essays in Federal Financial Relations

I S Gulati and K K George

Oxford and IBH. 1988. pp 172, Hardcover, Rs. 82/ \$ 10

Bovine Economy in India

A Vaidyanathan

Oxford & IBH. 1988. pp 209, Hardcover, Rs. 96/ \$ 11

Health Status of Kerala

P G K Panikar and C R Soman

CDS. 1984. pp 159, Hardcover, Rs.100/ \$ 11 & Paperback, Rs. 75/ \$ 10

This work is licensed under a
Creative Commons
Attribution – NonCommercial - NoDerivs 3.0 Licence.

To view a copy of the licence please see:
<http://creativecommons.org/licenses/by-nc-nd/3.0/>