Public Housing Schemes for Rural Poor in Kerala: A critical study of their suitability

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G. Gopikuttan*

1. Introduction

Kerala occupies a unique position not only among the States in India but among the developing countries as well in social sector development. The State's human development is comparable with those of the middle-income countries of the world. In addition, Kerala has achieved a high degree of equality in the distribution of human development achievements across gender, space, and social groups. Performance of Kerala in the sphere of social development is often projected as a model to be emulated. The State's accomplishments show that well-being of the people could be augmented and social, political, and cultural conditions improved, even at low levels of income, provided there is appropriate public action (Ramachandran, 1996). Despite the general improvement, pockets of deprivation are visible in all the rural villages of the State. Slum-like human settlements or colonies in rural areas constitute one such example.

There has been a housing boom in Kerala in recent years. House construction being a labour-intensive and capital-light activity, investment in housing has significant multiplier and accelerator effects, which might benefit the weaker sections of society. Even otherwise,

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additions to the housing stock are expected to benefit the poor either through a filtering process or through its trickle down effects. At a time when the boom was at its peak successive governments of the state implemented massive public housing schemes as a support strategy to help the poor. All these have resulted in the palliation of the housing problem in terms of reduction of the difference between the number of houses and the number of households. The average size, quality, and value of houses in rural Kerala are far higher than in the rest of the States in India. Notwithstanding the positive developments, it is worrisome to observe that slums have come up in rural parts of the State. Given the scale of public assistance and the magnitude of private investment, housing problem of all the socio-economic groups should have been already solved in the State.

What is disturbing about the Kerala experience is that both the housing boom and the support-led security strategy seem to have failed to satisfy the needs of the weakest sections of the society. It is observed that those social, economic, and ethnic groups depending on the primary sector for their livelihood are living in extremely poor quality houses. Their habitats are characterised by overcrowding, lack of basic amenities and facilities such as drinking water and sanitation. The rich minority in the villages lives, on the other hand, in luxurious houses with all built-in facilities and conveniences comparable to the standards observed in urban centres of advanced market economies.

Several agencies, public and private, have been active in the State in the housing sector: in financing housing projects, preparing sites and services, evolving cost-effective designs, and monitoring implementation. Unlike in other parts of the country, being a State with an educated population aware of the popular programmes of the government, the major proportion of public housing schemes in Kerala seems to have reached the target groups. Nevertheless, the weakest sections have not received, by and large, the benefits of state intervention. Even those who did could not improve their house quality and amenities due probably to mismatch between their needs and the public provision. Aspirations and needs of the people have undergone dramatic changes since the early 1970s, which proved to be a turning point in the housing history of Kerala. It may appear paradoxical that public policies in housing for the poor do not yield the desired results in a region that is considered a unique model of social development all over the world. Such a paradoxical situation warrants scrutiny and analysis. The present study is an attempt to evaluate the suitability and acceptability of public housing schemes for the poor people and the local conditions and environment in the rural areas of Kerala.

Objectives

The following are the specific objectives:

(i) To study the nature of housing demand of different groups of the rural poor and the mismatch between supply (in terms of public provision) and demand.
(ii) To examine whether the public provision has helped to achieve the desired goals or not.
(iii) To trace the extent to which the ongoing housing schemes make use of the capabilities of the rural poor, locally available resources, and cost-effective technologies.

(iv) To estimate the share of gross investment in public scheme houses as a proportion of gross residential construction investment in the selected panchayats.
(v) To understand the changes in rural housing quality taking place over time.
(vi) To discuss the scope for preparing a time-bound action programme for solving the housing problems of the poor in the selected regions within a time frame by integrating public housing schemes with the ongoing local level participatory development planning (*Janakeeyasoothranam).*

Before proceeding with the discussion, we turn to an overview of the economic aspects of housing.

Economic aspects of housing: An overview

Housing is important in terms of economic development and social welfare. Expenditure on residential construction constitutes investment. Sharp changes in housing activity cause violent fluctuations in aggregate income. Investment in housing promotes employment in the short run and economic growth in the long run. In advanced economies such as that of the USA, about one-fourth of the gross domestic private investment goes to construction of residential buildings (Samuelson and Nordhaus, 1998).

Studies on housing conducted in market economies are of two types: macro-economic and micro-economic. Macro-economic studies have looked into temporal patterns and determinants of housing investment (Bourne, 1981; Berry, 1976; Lewis, 1965; Oshima, 1986).

A few empirical studies are available which offer hypotheses about the relationship between housing investment and stage of economic development (Kuznets, 1960; Strassmann, 1970; Burns, et al, 1977; World Bank, 1984). All these studies have observed strong, positive correlation between the two except perhaps in mature economies. A few have, however, questioned this conclusion and asserted that it is demographic pressures, rather than economic factors, which determine the number of housing units built. Economic conditions influence only the quality of housing, not its quantity (Annez and Wheaton, 1984). There are others who hold that it is 'windfalls', which facilitate housing activity in extremely poor societies. Some scholars have looked at the relationship housing activities *should* have with development due to autonomous factors and interventions by government (Howenstine, 1957; Donnison, 1966).

Micro-economic studies have discussed housing demand in purely neo-classical terms. They estimate preferences or demands for individual housing attributes or housing expenditure functions, under assumptions of competitive market conditions. According to some writers, demand for housing has three elements: political, demographic, and economic (Downs, 1974). Effective demand comes not only from consumers of housing services, but also from providers (landlords) of housing services (on rent), house builders, and owner-occupiers (Stafford, 1978). Obviously, the market conditions, the economic conditions, and the institutional set-up envisaged in this type of studies are irrelevant to the realities of most of the developing world. However, some similarities in the income elasticity of demand for housing as between developing (middle-income) and developed market economies have come

up in a few studies (Malpazzi and Mayo, 1987; Follain, et al, 1980). In the case of poor economies such as India income elasticity calculations of demand for housing are out of place due to the near-absence of house building activities on a large scale undertaken by owners who rent out houses and executed by professional builders. Studies in India on government housing policies should focus on cost of building materials, cost of land, government's lending policies and rate of return to housing and rent control policies (Krishnakumar, 1982).

Housing and well-being

Housing conditions have a direct and positive impact on health status, attitudes, and values of the population concerned (RBI, 1978; UN, 1974; Burns and Grebler, 1977; Roy, 1997).

In India, governments both at the Centre and in the States recognise that provision of shelter to the people is a productive activity essential for human resource development. The national housing policy recognises that provision of shelter in the following terms. It (i) improves the quality of life of the poor, (ii) creates conditions for attainment of better health, hygiene and education, (iii) stimulates economic activity, (iv) enhances productivity, (v) creates employment opportunities, (vi) motivates savings, and (vii) promotes social justice

Evaluation studies on the effectiveness of housing schemes targeted to the poor and the disadvantaged, conducted at the national level, have pointed out that the expected benefits are not realised due to lack of political will, bureaucratic inefficiency, and rampant corruption (Vani, 1998). Further, it appears that government intervention in housing has aggravated dependence and diminished self-reliance of the rural population (Glaeser, 1995).

State intervention in the housing sector had begun in Kerala from the 1950s; till 1970, it was confined to implementation of schemes sponsored by the central government; from the beginning of the 1970s, the central government transferred their housing schemes to the State governments.

Several favourable institutional and structural changes had been occurring in Kerala during the 1960s and the 1970s, which opened up possibilities for better housing particularly for the poor. Among them, the legislation in agrarian relations and the inflows of remittance income from the Gulf emigrants deserve special mention.

The government of Kerala introduced several novel programmes of intervention in the housing sector. The 'One Lakh Housing Scheme' implemented in 1972 was the first of its kind. It was designed to provide permanent dwelling for the landless agricultural labour households that had not received homesteads under the Kerala Agrarian Relations Act. The government implemented the scheme with generous support from voluntary organisations. This programme implemented with participation of local inhabitants, political parties and social and cultural organisations became popular and kindled desire in the hearts of all the houseless poor to become house owners.

In these favourable circumstances, a housing boom began in Kerala in the late 1970s. The share of the construction sector in the Gross Domestic Fixed Capital Formation of Kerala during the last two years of the 1970s was more than 90 percent (Gopikuttan, 1988). Yet, the State economy languished (Ramachandran, 1996).

According to two surveys conducted by Government of Kerala in 1980 and 1981, the annual compound growth rate of new construction leaped up from the pre-boom rate of 0.85 percent to 5.8 percent.

Housing quality was also undergoing more rapid improvements in Kerala than in the rest of India.

Table 1.1 Housing conditions in Kerala and All-India, 1981 and 1991

	Average Number of Rooms per Household, 1981		Proportion of Households living in Pucca houses			
			1981		1991	
	Kerala	All-India	Kerala	All-India	Kerala	All-India
Rural	2.81	2.01	35.07	22.53	51.56	30.59
Urban	3.17	2.11	56.08	64.70	69.06	72.75
Total	2.87	2.03	38.80	32.67	55.97	41.61

Sources: (i) Census, 1981, (ii) CMIE, 1996

Public housing schemes in Kerala have had an impressive record during the past two decades in terms of both investment and physical achievements. Despite impressive gains, a few negative features have also reared their heads. Inequality in housing conditions seems to have widened. The poor have become progressively incapable of self-help and mutual help for solving their housing problems. The degree of their dependence on public (government) support has increased. Modern building materials have gone beyond their affordability. Moreover, availability of traditional building materials has dwindled and gone out of their reach.

One of the positive innovations implemented in Kerala in recent years is the participatory people's planning process launched in 1996. The problems in the housing sector do not seem, however, to have become, less intractable than earlier. An evaluation of the process made by the State Planning Board, for the year 1997-'98, has shown that the highest priority was given to the housing projects for the economically weaker sections in the panchayats. Yet, the problem of housing of the rural poor continues to remain grave.

Approach

The housing boom, which Kerala experienced since the mid-1970s, was the result of several social, cultural, and economic factors. Living of the poor in Kerala remained steeped in

traditional habits, attitudes, and outlook. Exposure to the world outside and income windfalls during the period since the mid-Seventies wrought, however, dramatic changes in a few among them; their desires, aspirations, and preference patterns underwent a revolution. In the new scenario, their first priority went to housing owing to its social and psychological prestige value. When demand for inputs became far in excess of the available supply, housing activities began to show their effects on factor prices and production relations. The effect of changes has been spectacular in sectors and factors in which market forces were strong. Penetration of market forces in all spheres of human activities – a latter-day phenomenon in most rural areas of Kerala – turned out to be detrimental to the interests of the abjectly poor, not having any 'effective demand'. Given the market-determined allocation of resources, public support in the form of partial financial assistance hardly helped the poor to acquire housing.

The house-building process in Kerala, particularly in the rural areas, has not yet become fully market-determined or functionally related either to the operations of the price mechanism or to the price policies of the government. House construction remains, by and large, an activity organised primarily by the consumers themselves. Though the production decisions are not market-directed, allocation of materials and labour for all types of construction is. Demand in excess of supply has led to rise in input prices. Building materials and skilled labour have become relatively scarce owing to the construction boom. The first direct impact of the boom was on the price of basic factors - land and labour - and then on construction materials.

Within a short span of time since the mid-seventies price per unit of land increased from 10 to 20 times. Farmers found it more profitable to convert farmland into real estates for house-sites. Owners of large holdings in city limits sold off house plots at enormously high prices and the windfall so obtained was used to construct new and better houses. Poor farmers who owned small plots in urban periphery sold them and moved to places away from city limits where they could get land at relatively low prices. The households unwilling to invest in risky ventures found it convenient to invest their fortunes in the construction of new houses. Thus, the land market transactions intensified the demand for house construction, which was already high and rising.

The spiralling price rise for land, which was experienced in rural areas also (Vijayam, 1994), lasted till the mid-nineties. The growth of a booming land market has driven out from developed locations several social groups into remote villages and abject poverty locations. Though rural-urban migration was relatively muted (Sreekumar, 1990) there existed phenomenal intra-, and inter-village migration, both from developed locations to backward locations and vice versa (Vijayam, 1994).

Exorbitant increases in the price of land have shattered the hopes of the poor to acquire house plots and construct own houses. Even those who own a plot are not in a position to construct even huts of the traditional type, since the earlier village practice of construction by mutual help has disappeared. Even for such simple construction, they began to look for help from government in the form of grant or subsidy. In addition, the government does lend support to the poor to get their housing needs fulfilled. However, the support is confined to those among them who have entitlements in terms of a minimum house plot and resources.

The more deprived among the poor are thus driven to take shelter in rural slums, euphemistically called labour colonies.

Institutional factors have contributed to the growth of slum-like conditions in rural Kerala. Land reforms provided practically little benefit for the vast body of sub-tenants and landless agricultural workers. These sections were supposed to benefit from redistribution of excess land. However, they did not (Ram Mohan, 1991). Huts of *Kudikidappukar* who got 10 cents of land each around their hutments are at present overcrowded because of population growth and the multiplication of families over time. Many of the newly formed nuclear families do not have the resources to purchase house plots. They are therefore forced to put up residential space in the already over-crowded residential plots of their parents. Clustering of houses within small spaces of 10 cents without any basic facilities creates intra- and inter-family tensions.

The demand for labour in the house construction sector is so high that if all the building materials required were produced within the state itself, the state could have provided full employment to about 10 per cent of its workforce in the housing and housing-induced materials production sectors. One-half of this 10 per cent could have been employed in onsite house construction work alone (Gopikuttan, 1988). Thus, the housing sector opened up a major avenue of non-agricultural employment in rural areas which in turn brought about drastic changes in the wage structure, labour processes, and labour institutions (Harilal, 1986; Krishnan, 1991; Kannan, 1992; Mridul, 1994; Gopikuttan and Sreekumar, 1995). Wage rates of skilled construction workers increased 12-fold during the two decades since the housing boom began in the mid-seventies primarily due to the highly inelastic nature of the supply. The soaring wage rates have attracted large number of construction workers from the neighbouring States (Anand, 1986).

The building boom has brought about drastic changes in the material use pattern in house construction. In earlier times, before the boom, locally available or indigenously produced materials such as timber, stone, rubble, mud-mortar, coconut palms and leaves and tiles were the predominant materials used. People had relatively free access to non-produced materials. Even in the case of produced materials, the cost involved was meagre. Until the early Seventies, thatch was the most popular form of roofing in rural houses. Annual re-thatching done on a self-help or mutual-help basis involved little labour cost. Again, materials of thatch were available in plenty and at low cost. The enormous increase in demand for residential construction unleashed a growing scramble for the available limited supply of materials. Owners of large holdings in which building materials such as trees (for timber), stone, coconut palms, bamboo and grass existed, began to deny free access to them. Their control over the supply of sources enabled them to push up prices of all such materials.

The traditional practice of community co-operation in house-building, re-thatching, and other related activities became obsolete and impracticable in a situation in which labour became a commodity, its price rising and the average size per housing unit getting larger and increasingly ‘modern’. Relative prices of factory-produced inputs declined. Technologies alien to the resource endowments of the region became popular, allegedly for reasons of efficiency, economy, flexibility, and aesthetic appeal. The use of new technologies and materials created

a variety of job opportunities that demanded team work and group efforts. Increased demand for work teams in a highly segmented market with inelastic supply pushed up wage rates to newer heights. Real as well as nominal wages of the informal sector workers increased manifold since the mid-Seventies.

The transformation of the building process and the resultant intrusion of factory-produced materials should be expected normally to manifest their multiplier and acceleration effects on production. Unfortunately, such effects leaked out into the other States and were hardly realised in Kerala. The majority of the house construction materials consumed in Kerala are produced outside the State.

Government programmes of support to the poor for housing seem to have failed to give them houses to the extent or of the types required. However, the public housing schemes showed impressive performance during the past two decades in terms of the magnitude of investment and physical achievements; yet, they could not make even a dent in the housing problems of the poorest sections in the rural areas. More than one-tenth of the housing stock in 1991 consisted of houses constructed with the assistance from public sector agencies in the state. More than nine lakh families benefited from different schemes up to March 1997. However, schemes meant for the poor failed to reach the target groups. Nor did programmes like One Lakh Housing Scheme, Rehabilitation Schemes and Kairali, Indira Awas Yojana and JRY with novel and attractive features, reach the weak and the needy. About one-third of the households in Kerala still do not have liveable houses. However, a rich minority does have big palatial houses with facilities and conveniences comparable to those of urban centres in developed countries.

The present structure of public housing schemes appears to be unsuitable to the needs of the rural poor. Financial assistance, both grants and loans, being given to them is insufficient to command inputs and technology from the market necessary for the construction of a liveable house with the minimum essential facilities. The technology and materials in vogue in the construction sector are beyond the skill levels and affordability of unskilled casual workers. Changes in land use patterns, community labour participation and work culture and market penetration in all spheres of activities, have conspired to deny the poor opportunities for getting reasonable dwellings. Without supporting the poor to empower themselves with entitlements to procure building inputs from the market, it is unlikely that they would achieve the desired goals with the present system of partial financial support.

Given the complexities involved in resource allocation, preference patterns, modes of production, and production relations in the housing sector of Kerala, one cannot capture the entire gamut of the problem either in the framework of the neo-classical or the structural approach. Therefore, it is proposed to attempt here a combination of both the approaches. Demand for and supply of housing, prices of building materials and other inputs, housing investment and its impact and related aspects are considered in a neo-classical framework. The question of poverty, purchasing power, people's preferences, capabilities, and endowments of entitlement are discussed using the structuralist framework. We envisage no serious problems in the integration of the two for making a consistent and meaningful discussion.

Method and data

The focus of our study is on the suitability of public housing schemes for the rural poor. At present, about 25 government and quasi-government agencies are involved in housing for the economically weaker sections (EWS) in the State. Department of Revenue, Rural Development Department, Finance department, SC/ST Development Department, Kerala State Housing Board, Kerala State Development Corporation for SC/STs, Kerala State Co-operative Housing Federation, and Development Authorities are the important agencies. Kerala State Nirmithi Kendra and COSTFORD are the premier agencies involved in the promotion of cost-effective and appropriate building technologies. The State's plan funds for housing are spent through government and quasi-government agencies and departments. The housing schemes of the Rural Development Department are funded by the central government in the form of Block grants and loans.

All the public sector agencies together have assisted 9.3 lakh households in the state till March 1997. Finance to about one-third of the beneficiaries was given through the Revenue Department. Another one-fourth came in the form of assistance from the central government through the Rural Development Department. The two departments together have thus assisted about 5.2 lakh families (56 per cent) till March 1997. Moreover, during the Eighth Plan period, about three-fourths of the Plan fund for housing of the economically weaker sections (EWS) was spent through the Revenue Department alone. Therefore, for the purpose of the present study, it is proposed to choose EWS housing schemes implemented by Revenue and Rural Development Departments. Owing to considerations of availability and access to secondary sources of data, we confine our study to the period since 1985. Our enquiry is limited to Pathanamthitta district.

For this study, we have depended on both secondary and primary sources. Secondary sources comprised government offices at the *taluk*, *panchayat*, and village levels. Information collected from these offices relates primarily to number of housing units sanctioned, names and addresses and caste and community details of the clientele, locations and sizes of plots in which houses were built and dates of sanction and dates of completion of the houses. This work of collection of secondary data was completed by the end of July 1998.

Primary data of a qualitative type were collected by using Participatory Rural Appraisal (PRA) tools and techniques. On the basis of this information, we conducted a survey of households selected purposively to understand the housing conditions in the sample panchayats.

PRA was done in two phases: in the first phase (August 1998), an overview of the physical features of the sample areas – availability of house construction materials, housing patterns, use patterns of building materials, and the quality of housing – was obtained. For this purpose, we employed the following PRA tools: (i) transect walk, (ii) participatory village mapping, (iii) historical time line, and (iv) resources and services inventory. In the second phase (November 1998), the purpose of the appraisal was to obtain information about the living conditions and the economic problems of the backward sections, particularly of those living in poor, slum-like settlements. Information on these aspects was collected only from two

wards each of the three panchayats in the sample: wards 4 and 10 of Kadapra, wards 2 and 5 of Kulanada, and wards 4 and 7 of Ranny-Perunadu. The specific items of information collected were: (i) changes in land use patterns and their repercussions on entitlements; (ii) young mothers' aspirations (about their children's education) and their involvement in achieving their goals; (iii) changes in food habits and health conditions; (iv) working conditions, wage rates, labour participation, and gender differentials; and (v) housing conditions, access to building materials and aspirations and attitudes towards housing. The information collected was crosschecked and verified by discussions with elderly and knowledgeable persons in the localities concerned.

Household survey

For the household survey, a five-stage stratified sampling design was prepared. At the first stage one *Taluk*/Block from each geographical division – lowland, mid-land, and highland – was selected at random. *Panchayats*/Villages, which implemented all the schemes of both the Revenue and Rural Development departments, were selected at random at the second stage. Two wards each with the entire schemes implemented were selected at random from each *panchayat* at the third stage. Special care was taken to include low-lying wards from the low land *panchayat* /village and hilly regions from the highland *panchayat*/village. At the fourth stage, occupied residential houses in the selected wards were classified according to number of rooms. At the final stage, purposive sample housing units from each room category were selected with a view to capturing the different categories of houses – houses constructed under the schemes, new houses (constructed after 1996) and all other categories of houses.

Our aim was to cover in the sample wards, 50 per cent of the scheme houses sanctioned and 50 per cent of the new houses constructed since 1996. Though it was planned to interview heads of 350 households, we could do so only in 331 households. Chart 1 shows the sample design.

The total housing stock in the sample wards in the three *panchayats* is classified according to number of rooms reported in the official records. Purposive sample size was drawn from each room category. The population and the sample of housing units selected from each stratum are given in Table 1.2.

Pre-testing of the survey schedule was done in the first week of December 1998. The household survey was conducted during December 1998 to February 1999. We were able to collect valid and reliable information from 322 households.

This report, based primarily on the field investigation, is presented in eight sections. The geographical features, land use patterns, housing conditions, and the details of houses sanctioned and completed with the assistance of housing agencies in the study area are discussed in the second section. The quality of housing and the socio-economic conditions of the sample households is the theme of the third section. The focus of the fourth section is on a comparison of house quality, income, consumption, savings, housing investment, and sources of funds for investment of the beneficiary households with those of a control group.

Chart 1. Design of Sample for Data Collection

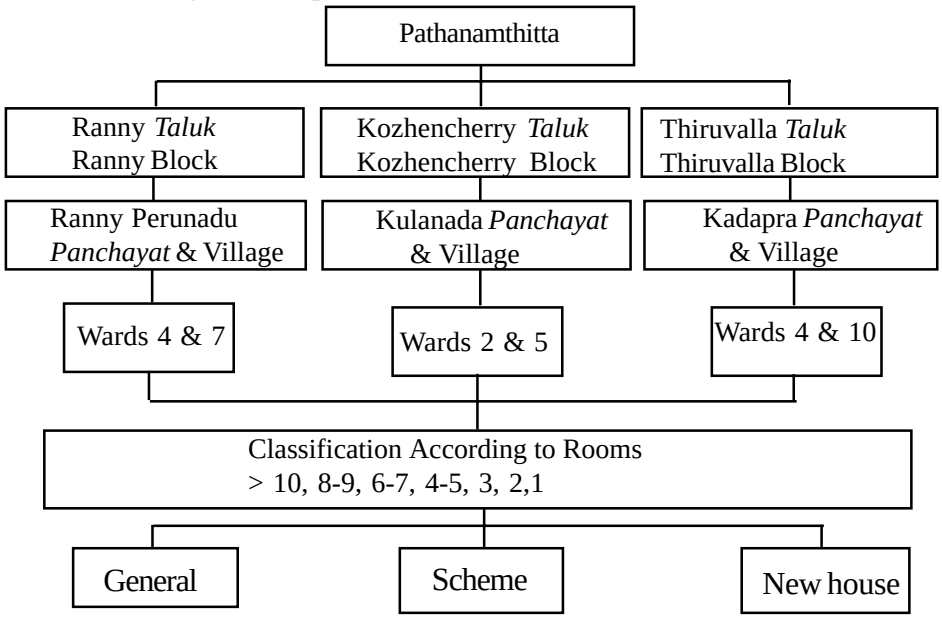


Table 1.2 Total number and the sample size of houses selected from the wards according to number of rooms and panchayats

No. of Rooms	Kadapra		Kulanada		Perunadu		Total	
	Popul-ation	Sample	Popul-ation	Sample	Popul-ation	Sample	Popul-ation	Sample
10+	10	5	6	3	7	4	23	12
8-9	8	6	54	8	15	5	77	19
6-7	87	12	235	15	70	15	442	42
4-5	208	22	474	25	189	20	871	67
3	144	20	212	20	143	20	499	60
2	122	25	265	30	403	40	790	95
1	317	25	119	20	169	10	605	55
Total	896	115	1365	121	1096	114	3357	350

The control group chosen constituted households with their heads employed as rural casual workers. An estimate of the average annual housing investment in the study region is presented in section 5. The suitability and acceptability of housing schemes to the local conditions and to the beneficiary households evaluated on the basis of evidences is discussed in section 6. On the basis of the finding that the present pattern of partial financial assistance is unsuitable to mitigate the housing problem of the rural poor, a framework for an alternative approach is presented in section 7. A brief summary of the discussion and the broad conclusions that emerge are presented in the concluding section.

2. Study Region

In order to evaluate the appropriateness of the public housing schemes for the rural poor we have selected the housing programmes implemented by two major departments of the Government of Kerala in the Pathanamthitta district. Pathanamthitta district was selected for three major reasons: Since the terms and conditions of public assistance, beneficiary selection, building rules, financial assistance per unit and building process are the same across the districts, Pathanamthitta may be considered, as any other district, a representative sample. Secondly, being a relatively new district the chances of getting dependable secondary data would be brighter in this district. Thirdly, since the principal investigator belongs to this district he is in a position to mobilise the services of voluntary organisations and individual volunteers for collecting data from primary sources of information.

There are four major physiographic zones in the State: the highlands, the middle zone, the lowland plain, and the coastal plain. The highland zone is part of the Western Ghats, and forms, in general, the eastern border of Kerala. In the midland region, hill ranges extend westward from the highland zone and disappear in lowland plains that get wider as the altitude declines. These are productive laterite tracts. The lowland zone varies between 20 and 100 km in width, and ends in the narrow coastal plain (Ramachandran, 1996). Pathanamthitta consists of all the physiographic zones except the coastal plain. The district consists of 5 *Taluks*, 9 Development Blocks, 54 *Panchayats*, and 68 Villages. Though the sample *panchayats* - Kadapra, Kulanada, and Ranny-Perunadu - chosen for intensive investigation belong to the three different physiographic zones, we could not collect detailed information form the eastern-most parts of the district. Therefore, the study region is confined to the two midland zones – the hilly and the plain.

Economy and society

(i) Kadapra[1]

Kadapra near Niranam in Kuttanad (14.7 sq.km in area with a population of 21800 persons in 1991) is one of the most ancient settlements in Kerala finding a place not only in the old writings of this country but also in the accounts of the ancient Roman travellers. Niranam, as an important port from where pepper and other spices were exported to the Roman Empire, had very early contacts with foreigners. Originally the village was a centre of high caste Hindus especially Namboothiris. Nevertheless, in the first century of the Christian era itself a good section of the Hindu population of the village became Christians. Hindus and Christians have lived here in harmony for about 2000 years.

Kadapra became a part of Pathanamthitta district formed in 1985. A major part of the village remains submerged under water for three or four weeks in a year. Till recently byroads in the area were only partly motorable and that too only during the fair whether. There was bus service along the main road connecting the village to Thiruvalla and Mavelikkara – the nearby towns – but buses and passengers used to be ferried across the river at Pulikeezhu and Pannai. Other vehicles were extremely rare.

Since the river is deep and runs smooth along the flat country and all its branches afford excellent water transport, hill produce and other merchandise used to be transported from and to the village by country boats. Passenger transport by waterways is also popular. Wards 6, 7, and 8 of the Kadapra *panchayat* are surrounded by three rivers – Pamba, Manimala, and Achankovil – and their tributaries, and remain an island. The area is densely populated with 1479 persons per sq km in 1991. The literacy rate in 1991 was 95.6 percent, far higher than Kerala's average.

Though a low-lying region with about half the total area under water during the rainy season, Kadapra has a developed road network including a state highway. The road density is high with 12.5 km of road per sq. km. More than 70 percent of the roads submerge in water during monsoons. Large-scale reclamation or filling of wetland takes place in rice fields lying on both sides of these roads. The reclaimed land is converted to non-agricultural purposes, mostly for construction of buildings for residential or other uses.

Because of land reforms, about 1500 families got ownership right over their hutments; they are now small or marginal farmers. Tenancy has disappeared. However, 25-30 percent of the farmland lies fallow. Job opportunities have dwindled particularly for agricultural work. Participation of women workers is now confined to a few occupations like fishing and building construction, and to a small extent, rice cultivation.

(ii) Kulanada[2]

Kulanada is a midland *panchayat* with geographical features different from those of Kadapra. This predominantly agricultural village has an area of 21.5 sq km and a population (according to 1991 census) of 23083 persons. The density of population of 1069 persons per sq km is lower than that of Kadapra, but is higher than that of the State as a whole. Literacy levels are very high, nearly 94 percent in 1991. The Main-Central Road (State Highway No: 1) passes through this *panchayat*. It has a total road length of 196.65 km, 9.15 km per sq km. At present, there are 5169 houses, with 'Gulf mansions', littering all parts of the *panchayat*.

According to the latest IRDP survey, 1649 HHs were below the poverty line. Among them 577 households belonged to SC/ST communities; 503 households with 2291 persons in them live in 28 recognised colonies (rural slums). Besides the recognised colonies, there were 5 unrecognised colonies in this *panchayat*.

(iii) Ranny-Perunadu[3]

Ranny-Perunadu is a *panchayat* on the Kerala-Tamil Nadu border, in the Ranny *taluk* of Pathanamthitta district. Out of the total area of 82.05 sq km, more than one-fourth is reserve forest. Habitations exist mainly in an area of 12 sq km. According to 1991 census, the population is 22130 with a density of 270 persons per sq km. The general literacy rate in this highland *panchayat*, in which there are places as high as 472 meters above the sea level, was about 93 percent, higher than the state average.

Till the 1950s, population density in this *panchayat* was thin and houses were few and far

between. The major proportion of the land area was under plantations, particularly tea plantations and most of the inhabitants were plantation workers.

Migrant settlers began to come to this place in large numbers from both the low and the mid-land areas like Mavelikkara and Kottayam during the late 1950s and the 1960s. They encroached upon the forestland and cultivated food crops first and switched over to rubber later. They put up small huts to live in. Though the number of housing units increased rapidly during the 1960s, their quality was poor.

The 1970s witnessed large-scale increase in the renovation and construction of residential houses because of increase in household incomes. They got large income windfalls from the sudden upturn in the prices of plantation crops. The settlers replaced their huts with *pucca* houses since the 1970s.

The State High Way to the famous hill shrine, Sabarimala Temple, passes through this *panchayat*; about 37 km of the road passes through the reserve forest. The total road length including the State Highway was 196 km in this *panchayat*. Effective road density in the habitation area works out to 13.25 km per sq km. However, there are islands of deprivation. For instance, electricity, the public distribution system, and other basic facilities are absent in Ward 6 of the *panchayat*. Available data show that nearly 40 percent of the households live below the poverty line; among them, more than one-fourth belongs to the SC/ST communities. Being a hilly region, ST population is relatively high. There were 1547 ST households in the *panchayat* (1991 census).

During the early decades of the present century, tea constituted the major plantation crop. Rice was also cultivated in some parts within the forest area. The 1960s witnessed large-scale replacement of tea by rubber. Large numbers of workers settled in and around these plantations. However, they did not make any changes in the land use patterns. Owners of the plantations lived in places outside the *panchayat*. Workers, mostly local inhabitants, fought through their militant trade unions, for higher wages and better service conditions and succeeded in their struggle. Travel, education, and medical facilities improved. The total area under forest dwindled. The 1990s is another turning point in the history of plantations in the *panchayat*. The big planters parcelled out their plantations into small plots and sold them off to local people. Workers also managed to buy plots. Except changes brought about by granite quarrying and river sand collection, the basic landforms have remained intact. The topography also remains unchanged. Using the rubble and the river sand collected locally, large concrete houses were put up during the 1980s and the 1990s. However, the recent fall in rubber prices appears to have affected the prosperity of the *panchayat*. The volume of business transactions has dwindled as also the pace of construction activities. The process of sub-division of plantations is continuing. Moreover, workers including the plantation workers find it difficult to get regular employment and income.

School education

There are four types of primary and pre-primary schools in the selected *panchayats* – government, private aided, private unaided (but recognised) and private unaided and

(unrecognised). The medium of instruction in private unaided schools is English. Irrespective of economic status, the majority of young mothers whom we met in the course of our second phase of PRA reported that they prefer to send their children to English-medium schools. However, because of the prohibitively high cost involved, the majority now are constrained to send their children to government or private aided schools situated near to their residences. More than one-third of the children in Kulanada panchayat are now studying in English-medium schools.

With a view to improving the quality of education, parents who send children to government and private aided schools have begun to evince keen interest in the affairs of the schools through participation in organisations such as Mothers' Forum and Parent-Teacher Association. Twenty-seven out of the 37 young mothers whom we met in the course of our informal inquiry reported that they participate in the meetings convened by the above organisations; 25 among them have participated in deliberations in general body meetings of these organisations. Participatory local planning and Grama Sabha meetings give them strength and inspiration. There are unmistakable signs of positive changes in the quality of primary education in these schools consequent on their active participation in school affairs.

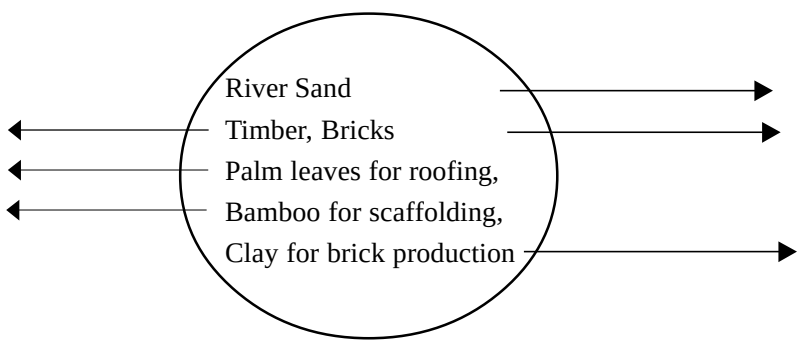
Flows of building materials and construction workers

Conditions of housing and the pattern of use of building materials vary with the socio-economic status of the households. A poor household is housed, in general, in a small thatched or tar-sheet-roofed hut raised on six pillars with cow-dung plastered floor and mud walls. A middle class dwelling is one constructed on rubble foundation with cement-plastered laterite or brick walls and roofed with tiles or reinforced cement concrete (RCC). Modern high-class houses with mosaic / marble / granite flooring and RCC roof have all the facilities of modern houses in urban centres. Building materials and labour are brought from nearby places, but in some cases, from far away places, as well. We have collected detailed information on the flows of building materials and construction workers from and into the *panchayats* using PRA techniques (Flow charts 2.1 to 2.12).

Flow of Building Materials

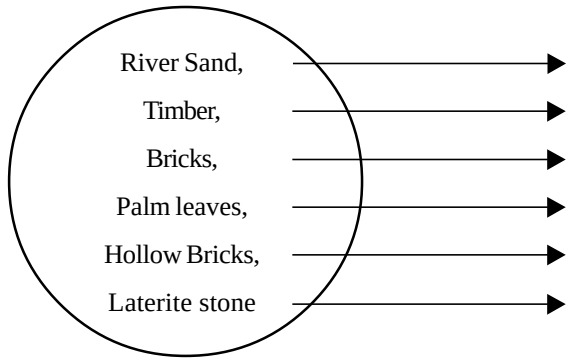
Flow chart 2.1

Outgoing Materials: Kadapra



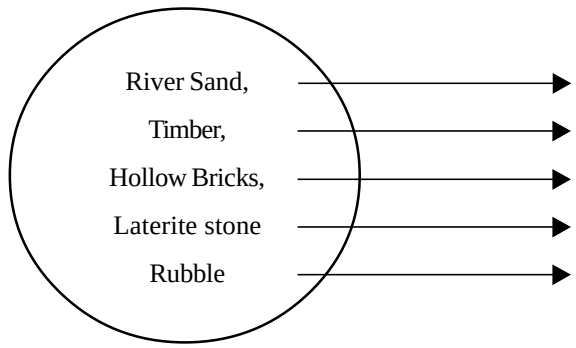
Flow chart 2.2

Outgoing Materials: Kulanada



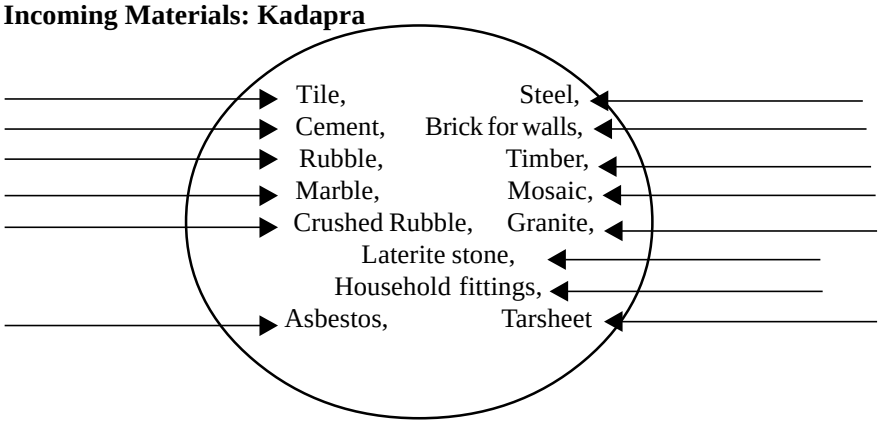
Flow chart 2.3

Outgoing Materials: Ranny-Perunadu



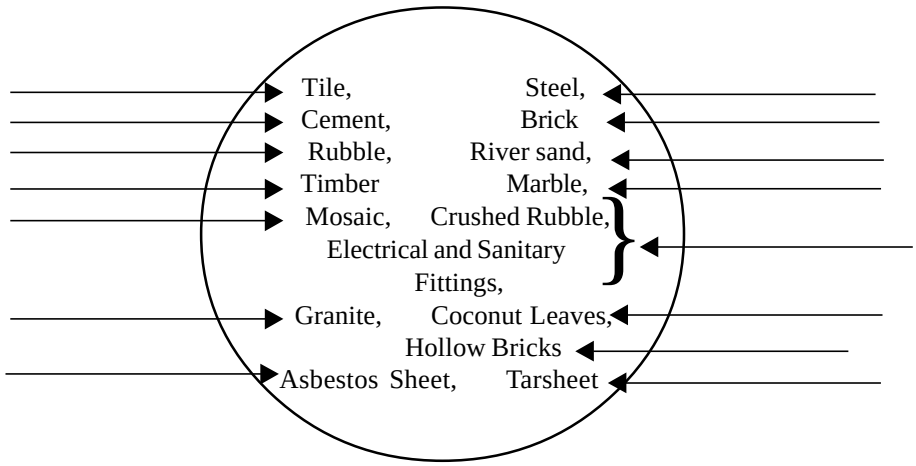
Flow chart 2.4

Incoming Materials: Kadapra



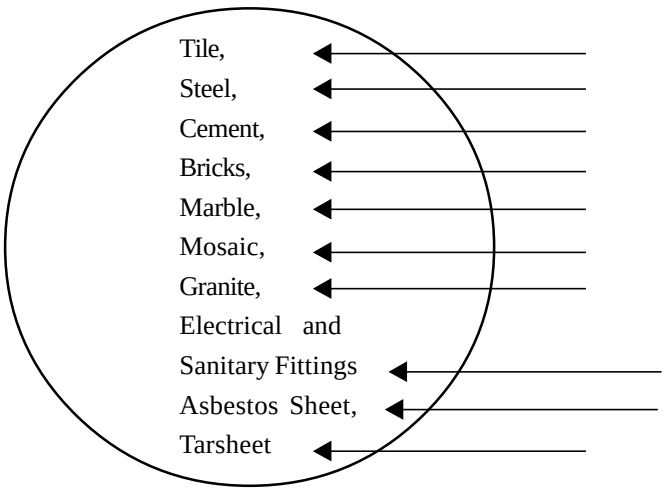
Flow chart 2.5

Incoming Materials: Kulanada



Flow chart 2.6

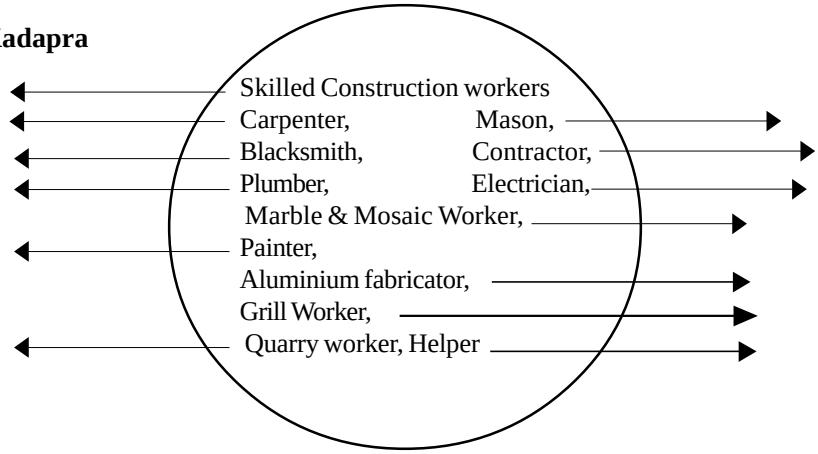
Incoming Materials: Ranny-Perunadu



Flow of Building Services

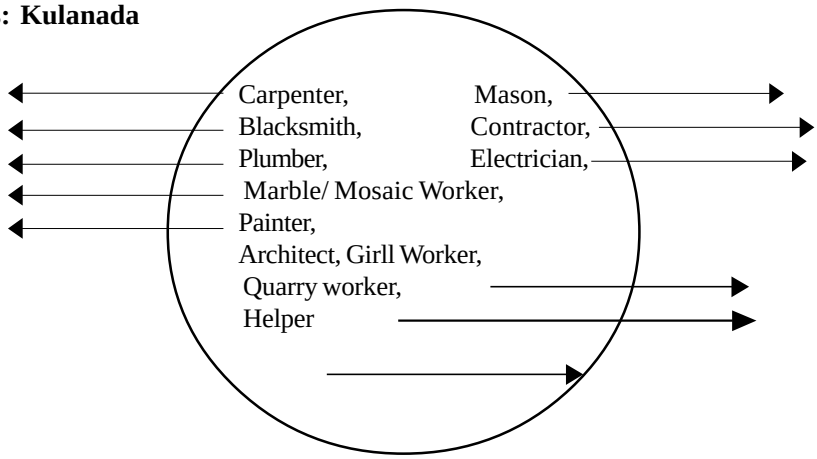
Flow chart 2.7

Outgoing Services: Kadapra



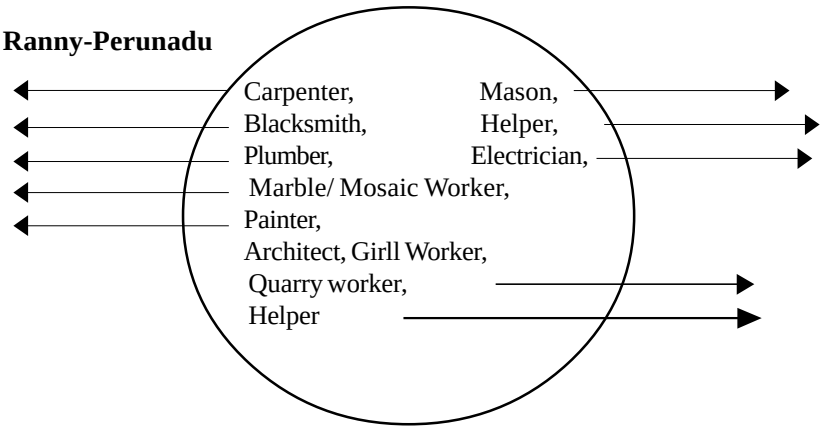
Flow chart 2.8

Outgoing Services: Kulanada



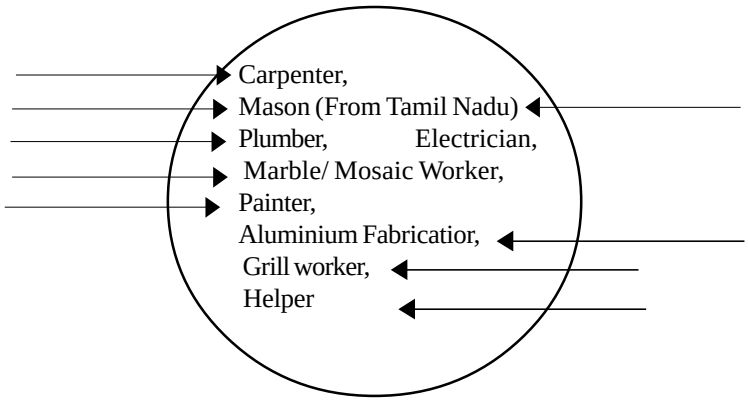
Flow chart 2.9

Outgoing Services: Ranny-Perunadu



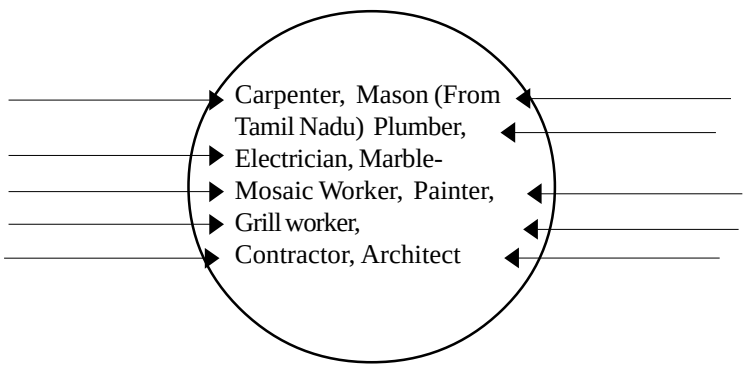
Flow chart 2.10

Incoming Services: Kadapra



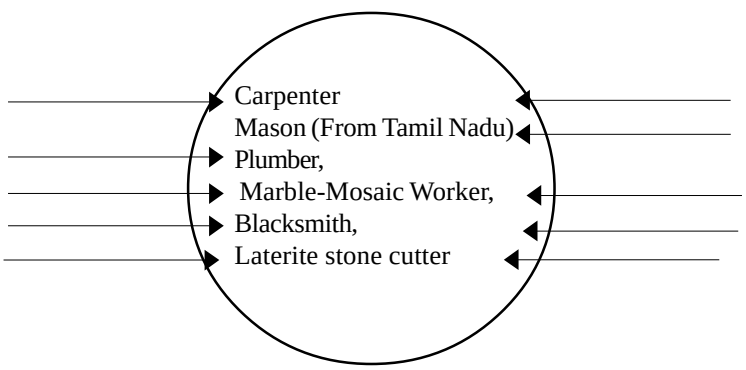
Flow chart 2.11

Incoming Services: Kulanada



Flow chart 2.12

Incoming Services: Ranny-Perunadu



Patterns of materials use and resource inflows are more or less uniform in the entire study region.

Land use pattern

Land use patterns are not, however, uniform across the three *panchayats*. Wetland crops, particularly rice and sugarcane are the major crops cultivated in the low-lying *panchayats*. Coconut was also popular. Cultivation of different combinations of mixed crops is practised in the midland *panchayat*. Plantation crops are predominant in the highland *panchayat* of Ranny-Perunadu in which a few large plantations exist. There are big plantations in Ranny-Perunadu *panchayat*. The basic landforms remain unchanged in this highland *panchayat*, Ranny-Perunadu. In fact, large-scale land conversion has not happened in the region. The major proportion of the *panchayat* is under reserve forest and the wetland area is small. In contrast, more than half the cultivable area of Kadapra *panchayat* is wetland.

Wide variations in land use are observed among the three *panchayats*. While rubber occupies the predominant position in Ranny-Perunadu and Kulanada *panchayats*, rice and coconut are the major crops cultivated in Kadapra *panchayat*. Rice is not at all cultivated in Ranny-Perunadu. Almost all crops in the district are cultivated in the Kadapra and Kulanada *panchayats*.

Table 2.1 Land Use in Sample *Panchayats*

Crops	Area under different crops (in hectares)						
	Kadapra		Kulanada		Ranny-Perunadu		Total
Rubber	8	(0.6)	1100	(57.9)	2687	(77.5)	3795(55.9)
Coconut	460	(32.4)	350	(18.4)	216	(6.2)	1026(15.1)
Rice	449	(31.6)	275	(14.5)	Nil	-	724(10.7)
Sugarcane	141	(9.9)	5	(0.3)	Nil	-	146(2.2)
Tapioca	20	(1.4)	30	(1.6)	25	(0.7)	75(1.1)
Banana Plantain	199	(14.0)	55	(2.9)	24	(0.7)	278(4.1)
Vegetables and Pulses	42	(3.0)	20	(1.0)	50	(1.5)	112(1.6)
Cash crops and tree crops othert han rubber	87.5	(6.2)	60	(3.1)	465	(13.4)	612.5(9.0)
Others	12	(0.9)	5	(0.3)		Nil	17(0.3)
Total	1418.5	(100.0)	1900.0	(100.0)	3467.0	(100.0)	785.5(100.0)

Source: PVR of the respective *panchayats*; Figures in brackets are percentages

Long stretches of rice fields in Kadapra are now kept fallow due to the fact that rice cultivation has become uneconomic. Owners of rice fields find that it is profitable to lease rice land out for clay mining. For every 10 cents of wetland leased out, the owner get Rs 2000 to Rs

2500, an amount much higher than the purchase price of rice land. Once leased out for clay mining, the land can be reclaimed for cultivation only after a long period. Further, rice cultivation in the fields adjacent to the one in which clay mining has been done becomes difficult due to problems of irrigation and drainage.

Uncultivated rice fields have left large numbers of farm workers unemployed. Clay mining has affected the availability of drinking water in the households in the neighbouring areas, during the dry season. Similarly, inadequate drainage facilities result in water-logging for a relatively long period in the year, which in turn, has resulted in the deprivation of workers dependent on the farm sector for livelihood. Though a few of them have managed to get occasional non-farm jobs, the majority remains unemployed during most days in a month except during the busy season.

Barring slight variations, the plight of the poor is not much different across the regions. There has been a drastic change in cropping pattern in all the three regions. A few decades ago, food crops like rice, pulses, and tapioca used to be cultivated on the hilltops in Ranny-Perunadu *panchayat*. Similarly, rice, sugarcane, and coconut were the major crops in Kadapra region. Owing to large-scale conversion of land for purposes other than cultivation, the area under cultivation has declined. Moreover, farmers have shifted to crops that are less labour-intensive. For fear of losing the small bits of land they own, the erstwhile agricultural workers are not willing to move out to other places. Even if natural calamities such as flood occur, they try to stick to their hutments to the extent possible. For instance, during the heavy flood that occurred in the recent past in Kadapra region, Kochuraman, an agricultural worker, and his five-member family did not move out to the relief camps. Though he lost his house and household belongings in the flood, he did not get, as a consequence of his clinging to his hutment, any assistance allotted to flood victims in the region.

There were a large number of sacred groves and ponds both under public and private ownership in Kulanada *panchayat*. Now there is none. Changes in beliefs and attitudes, penetration of plantation crops, and need for extensive cultivation seem to have contributed to the change. May be due to disappearance of sacred groves and ponds, water scarcity is now acute in all parts of the *panchayat* during the dry season. The richer sections can afford to dig deep wells and to get piped water. Indiscriminate mining of river sand has also resulted in a fall in the ground water level. Households residing on the banks of rivers complained that the water levels in their wells have fallen drastically in recent years. They firmly believe that the fall is due primarily to sand mining in the rivers.

Drinking water and sanitary facilities

Low-lying areas are endowed with abundant supply of water. However, only 49 percent of the households in Kadapra had own wells for drinking water in 1996. In the midland areas, though the density of wells is high, a good proportion of them do not have water during the dry season. In Kulanada *panchayat*, for example, 1896 out of the total 4574 wells do not have water for about six months a year. Availability of drinking water during the dry season is an even more serious problem in highland regions. Ninety percent of the households depend either on wells or springs and streams for water. Wells that give water during all

seasons accounted for only 13 percent of the total in 1996. The rest of the wells are dried up during the four months from February. Deepening of the wells is highly expensive and ordinary people cannot afford it. Residents on hilltops travel long distances extending to several kilometres to fetch water during the dry season.

Sanitary facilities are extremely poor in most of the colonies. The low-lying regions are dangerously unhygienic. Though more than 60 percent of the households in Kadapra *panchayat* had latrine facilities in 1996, the majority of the colony residents did not have the facility. In Ranny-Perunadu *panchayat*, 80 percent of the households did not have latrine facilities. Non-availability of facilities for the pilgrims to the Sabarimala shrine during the peak months of pilgrimage (November-January) wreaks havoc to the environment and the hygiene of the people. Because of the dependence of the people on the Pamba River for water, river pollution by human excreta, has led to the spread of a wide variety of water-borne diseases in the area.

Lack of regular physical exercise, artificial and unhygienic food, inadequate supply of safe drinking water, unclean surroundings, overcrowding, and environmental pollution seem to have resulted in increasing incidence of diseases. All the colony residents depend on the allopathic system for medical treatment. They have virtually abandoned their conventional indigenous health care practices. Modern medicines and treatment are costly. Residents borrow from money-lenders to meet medical expenses. Unable to repay loans in time, at least a few households have fallen into a perpetual debt trap.

Housing

Housing boom and its impact is seen in all the three *panchayats*. Transect walk enabled us to see palatial houses popularly known as 'Gulf mansions' on the sides of motorable roads. Housing colonies, the pockets of deprivation, are also seen in all these places. Classification of houses according to roof material is given below.

Table 2.2 Classification of Housing Stock in the Sample *Panchayats* according to Roof material

Roof	Kadapra	Kulanada	Ranny-Perunadu	Total
Thatch	2341 (39.52)	1291 (20.52)	1353 (19.51)	4985(26.0)
Tiles	2241 (37.83)	3248 (51.64)	5126 (73.90)	10615(55.5)
Concrete	1341 (22.65)	1751 (27.84)	457 (6.59)	3549(18.5)
Total	5923 (100.0)	6290 (100.0)	6936 (100.0)	19149(100.0)

Source: *Panchayat* office records and PVR; Figures in brackets are percentages

Kadapra had the highest proportion of thatched (kutcha) houses. About three-fourths of the housing stock in Ranny-Perunadu had tiled roof. The proportion of houses with concrete roof was relatively low in the highland *panchayat*. In the three sample *panchayats* taken together, tiled houses came to be the majority (56 percent).

Trend in the growth of concrete roofed house

On the average less than 10 percent of the houses constructed during the quinquennial period 1973-'78 had concrete roof. The proportion increased to 52 percent during 1993-'98. The change was sharper in the midland region. The trend is picking up in the highland region also (Table 2.3). Details of quinquennial addition to the stock are given in Appendix 2. A

Table 2.3 Percentage share of concrete roofed houses in net addition to total houses, 1973-1998

Year	Kadapra	Kulanada	Ranny-Perunadu
1973-78	9.09	5.88	na
1978-83	23.64	25.93	na
1983-88	50.72	64.20	11.81
1988-93	36.26	53.66	29.14
1993-98	51.61	69.60	30.19

Source: Estimated from secondary sources of data from Panchayat office records; Na: data not available

New houses are relatively large in terms of the number of rooms. The share of big houses with 6 rooms or more has been increasing steadily in all the three regions

Table 2.4 Percentage share of big houses (with 6 rooms or more) in net addition to total number of houses, 1973 -1998

Year	Kadapra	Kulanada	Ranny-Perunadu
1973-78	na	3.92	Na
1978-83	10.34	11.11	Na
1983-88	11.28	14.91	1.76
1988-93	10.44	11.14	6.47
1993-98	19.35	17.52	13.52

Na: data not available; Source: same as Table 2.3

Details of the housing stock and addition to stock in the sample wards of the three *panchayats* are given below. About one-third of the housing stock was *kutcha* with thatched roof. Except in Kulanada, more than 50 percent of the stock had tiled roof.

Table 2.5 Housing stock in the sample wards classified according to roof material

Roof Type	Kadapra	Kulanada	Ranny-Perunadu	Total
Thatch	321 (35.83)	444 (32.53)	310 (28.28)	1075 (32.02)
Tiles	464 (51.79)	514 (37.66)	634 (57.85)	1612 (48.02)
Cement	111 (12.39)	407 (29.82)	152 (13.87)	670 (19.96)
Total	896 (100.00)	1365 (100.00)	1096 (100.00)	3357 (100.00)

Source: Estimated from Panchayat office records; Figures in brackets are percentages.

Table 2.6 Housing Stock in Sample Wards Classified according to the Number of rooms

No. of Rooms	Kadapra	Kulanada	Ranny-Perunadu	Total
>=8	18 (2.01)	60 (4.40)	22 (2.01)	100 (2.98)
6—7	87 (9.71)	235 (17.22)	70 (6.39)	392 (11.68)
4—5	208 (23.21)	474 (34.73)	189 (17.24)	871 (25.95)
3	144 (16.07)	212 (15.53)	143 (13.05)	499 (14.86)
2	122 (13.62)	265 (19.41)	403 (36.77)	790 (23.53)
1	317 (35.38)	119 (8.72)	269 (24.54)	705 (21.00)
Total	896 (100.00)	1365 (100.00)	1096 (100.00)	3357 (100.00)

Source: Estimated from the panchayat office records; Figures in brackets are percentages

Public Housing Schemes in the Selected *Panchayats*

The year–wise number of houses sanctioned (by Revenue and Rural Development departments) and completed in the sample *panchayats* during the period 1985-1997 are given in Table 2.7.

Table 2.7 Houses Sanctioned and Completed in the Selected *Panchayats*: 1985-1997 (schemes under Revenue and Rural Development Departments)

Year	Kadapra		Kulanada		Ranny-Perunadu		Total	
	Sanct-ioned	Comp-leted	Sanc-tioned	Comp-leted	Sanct-ioned	Comp-leted	Sanct-ioned	Comp-leted
1985-86	120		130	5	48	2	298	7
1986-87	33	108	40	129	47	24	120	261
1987-88	55	68	10	16	27	21	92	105
1988-89	43	30	27	32	25	40	95	102
1989-90	95	77	77	25	63	32	235	134
1990-91	36	33	103	45	36	48	175	126
1991-92	23	31	47	59	14	27	84	117
1992-93	22	14	16	26	17	12	55	52
1993-94	16	27	32	10	27	15	75	52
1994-95	45	29	32	12	41	21	118	62
1995-96	46	39	43	48	75	44	164	131
1996-97	27	37	29	45	44	47	100	129
1997-98	9	24	15	40	1	35	25	99
Total	570	517	601	492	465	368	1636	1377

Source: Office records

Utilisation gap

The gap between the number of houses sanctioned and the number completed in the three sample *panchayats* is high. The completion rates are 79 per cent in Ranny-Perunadu, 82 percent in Kulanada, and 91 per cent in Kadapra. The shortfall is due mainly to stringency of rules and regulations of the housing schemes such as stipulations about the minimum plinth size, acceptable collateral, initial down payment, and payment schedules. Secondly, housing schemes are also crucially dependent on related socio-economic variables such as land ownership and legal procedures relating to security of tenure and locational advantages (Roy, 1997). Since the focus of our study is on occupied residential houses, we could not probe deeper into the reasons for the utilisation gap.

Figure 2.1 Exponential trend in the public housing in the sample *panchayat*

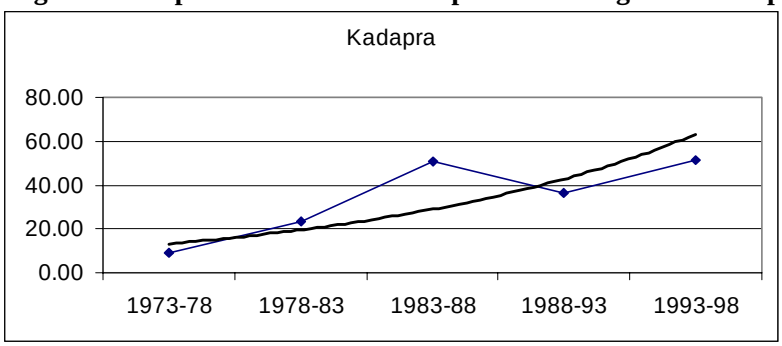


Figure 2.2 Exponential trend of public housing in the sample *panchayat*

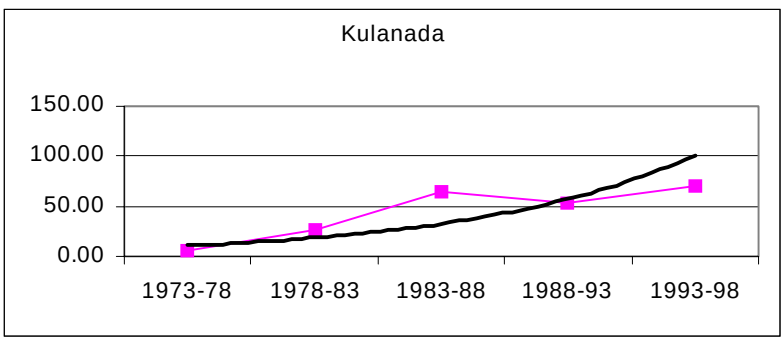
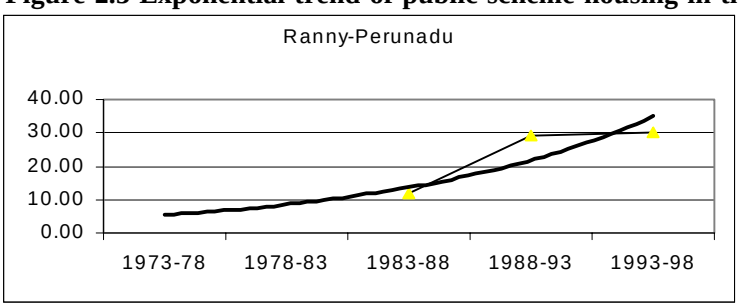


Figure 2.3 Exponential trend of public scheme housing in the sample *panchayat*



The exponential trend shows continuous decline in the number of houses built under the public housing schemes in the three sample panchayats. This trend confirms the general trend at the level of districts and the state as a whole (See Appendix 4 B Tables). The downward trend might be a reflection of the worsening fiscal position of the state to sustain the size of the earlier phase of intervention in social and welfare sectors effectively, during the subsequent phases.

Appendix 2A

Table 2.A.1 Quinquennial addition to housing stock in Kadapra *Panchayat* classified according to type of roof

Roof	1983-88	1988-93	1993-98	Total
Thatch	87 (33.85)	172 (47.25)	98 (28.74)	357 (37.11)
Tiles	65 (25.29)	60 (22.73)	67 (19.65)	192 (19.96)
Concrete	105 (40.86)	132 (36.26)	176 (51.61)	413 (42.93)
Total	257 (100.0)	364 (100.0)	341 (100.0)	962 (100.0)

Figures in brackets are percentages;
Source: Estimated from Panchayat office records

Table 2.A.2 Quinquennial addition to housing stock in Kadapra *Panchayat* classified according to number of rooms

Room	1983-88	1988-93	1993-98	Total
>=6	29 (11.28)	38 (10.44)	66 (19.35)	133 (13.83)
4—5	57 (22.18)	80 (21.98)	89 (26.10)	226 (23.49)
3	46 (17.90)	47 (12.91)	33 (9.68)	126 (13.09)
2	35 (13.62)	32 (8.79)	50 (14.66)	117 (12.16)
1	90 (35. 02)	167 (45.88)	103 (30.20)	360 (37.42)
Total	257 (100.00)	364 (100.00)	341 (100.00)	962 (100.00)

Figures in brackets are percentages;
Source: Estimated from office records

Table 2.A.3 Quinquennial addition to housing stock in Kulanada *Panchayat* classified according to type of roof

Roof	1983-88	1988-93	1993-98	Total
Thatch	115 (36.63)	93 (21.98)	75 (15.72)	283 (22.79)
Tiles	62 (18.13)	103 (24.45)	70 (14.67)	235 (18.92)
Concrete	165 (48.25)	227 (53.66)	332 (69.60)	724 (58.29)
Total	342 (100.0)	423 (100.0)	477 (100.0)	1242 (100.0)

Figures in brackets are percentages
Source: Estimated from office records

Table 2.A.4 Quinquennial addition to housing stock in Kulanada *Panchayat* according to number of rooms

Room	1983-'88	1988-'93	1993-'98	Total
>=6	51	47	82	180
4—5	101	146	196	443
3	49	66	60	175
2	35	59	56	150
1	116	104	74	294
Total	352	422	468	1242

Table 2.A.5 Quinquennial addition to housing stock in Ranny-Perunadu *Panchayat*

Roof	1983-'88	1988-'93	1993-'98	Total
Thatch	257 (54.67)	90 (32.37)	132 (41.51)	479 (48.19)
Tiles	94 (23.63)	97 (34.89)	90 (20.30)	281 (28.27)
Concrete	47 (11.81)	91 (32.73)	96 (30.19)	234 (23.54)
Total	398 (100.0)	278 (100.0)	318 (100.0)	994 (100.0)

Figures in brackets are percentages; Source: *Panchayat* office records

Table 2.A.6 Quinquennial addition to housing stock in Ranny-Perunadu *Panchayat* according to number of rooms

Room	1983-88	1988-93	1993-98	Total
>=6	6 (1.50)	18 (6.47)	43 (13.52)	67 (6.74)
4—5	27 (6.78)	52 (18.71)	32 (10.06)	111 (11.16)
3	36 (9.05)	43 (15.47)	47 (14.78)	126 (12.28)
2	62 (15.58)	74 (26.62)	68 (21.38)	204 (20.52)
1	267 (67.08)	91 (32.73)	128 (40.25)	486 (48.89)
Total	398 (100.0)	278 (100.0)	318 (100.0)	994 (100.0)

Appendix 2 B

Table 2.B.1 Housing units constructed under Revenue Department schemes, 1986 -1994

(Number)

Up to 31-3-1986	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	Total
73080	96243	12619	26305	9218	32909	8709	8657	2622	6242	276604

Source: State Planning Board, Background paper for the formulation of ninth five-year plan

Table 2.B.2 Housing units (Scheme houses) constructed with assistance from Housing Board, 1986 - 1994

(Number)

Up to 31-3-1986	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	Total

Source: State Planning Board, Background paper for the formulation of ninth five-year plan

Table 2.B.3 Housing units constructed for fishermen, 1986 -1994

(Number)

Up to 31-3-1986	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	Total
33332	2290	3870	6143	869	2211	63	2423	1547	1023	53771

Source: State Planning Board, Background paper for the formulation of ninth five-year plan

Table 2.B.4 Housing units constructed with the assistance of SC/ ST Development Department, 1986 - 1994

(Number)

Up to 31-3-1986	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	Grand total
47556	2464	3432	2009	2700	2471	2307	2821	4593	5520	75873

Source: State Planning Board, Background paper for the formulation of ninth five-year plan

Table 2.B.5 Houses constructed under Revenue Department schemes in Pathanamthitta District by *Taluk*, 1986 - 1997

Schemes	Adoor		Kozhenchery		Mallappally		Ranny		Thiruvalla		Total	
	S	C	S	C	S	C	S	C	S	C	S	C
RHS-1	1154	1124	1407	850	898	470	534		1221	1082	5214	3526
RHS-2	625	609	665	614	358	174	268		391	374	2307	1771
RHS-3	664	640	736	692	273	252	459	459	540	496	2672	2531
RHS-4	66	36	358	346	33	23	84	75	4	2	611	482
KAIRALI-1	3	3	271	229	188	167	245	245	272	241	982	885
KAIRALI-2	257	237			18				187	3	462	240
FLOOD	263	239	40	38	185	160	236	228	460	342	1447	1007
TOTAL	3032	2886	3477	2769	1953	1246	1826	1007	3075	2540	13695	10448

S = Sanctioned, C = Completed; Source: District Collector Office and Taluk Office Records

Table 2.B. 6 Details of Revenue Department Schemes, 1985 - 1997

Sl. No.	Scheme	Year	Total Amount			Rate of interest	Instalment & Amount				Repayment EMI	No of House Sanctioned	No of house completed
			Loan	Subsidy	Total		1	2	3	4			
1	**RHS Phase 1**	Jan-86	4500	1500	6000	9.75%	1500	2500	2000		Rs 74 for 60 months, 46 for 47 months, 32 for 1 month, total 108 month	5628	4710
2	**RHS Phase 2**	Dec-86	4500	1500	6000	9.75%	1500	2500	2000		Rs 74 for 60 months, 46 for 47 months, 32 for 1 month, total 108 month	3400	2690
3	**RHS Phase 3**	1989	7500	1500	9000	7%	2000	3000	2500	1500	Rs 70 for 32 months, 82 for 139 months, 83 for 9 months, total 180 months	2790	2301
4	**RHS Phase 4**	1991	7500	1500	9000	7%					Rs 70 for 32 months, 82 for 139 months, 83 for 9 months, Total 180 months 163 declined to accept loans	181* * 151 pending	
5	**Kairali Phase 1**	1990	9552		9552	8.50%	2000	2500	3000	2052	Rs 105 for 153 months	2206	1133
6	**Kairali Phase 2**	1994	9552		9552	8.50%					Rs 105 for 153 months *301 declined to accept loans and took back documents	799*	
7	**Flood scheme**	Oct-92	6000	9000	1500	13.50%	3750	3750	3750	3750	Rs 105 for 120 months	695	

Source: Various Government Orders and District Collector Office Record

Table 2.B.7 Housing units constructed with assistance of Housing Co-operatives, 1986-1994

(Number)

Up to 31-3-1986	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	Total
77576	11012	8658	6716	3502	4577	5313	5563	6231	9386	138534

Source: State Planning Board, Background paper for the formulation of ninth five-year plan

Table 2.B.8 Houses constructed under Revenue Department Schemes in Pathanamthitta District, by Development Block, 1988-1997 (Number)

Name of Blocks	**1988-1989**	**1989-1990**	**1990-1991**	**1991-1992**	**1992-1993**	**1993-1994**	**1994-1995**	**1995-1996**	**1996-1997**	**1997 1998**	**Total**
Elanthur	44	66	187	86	90	120	84	228	205	147	1257
Koippuram	50	67	146	82	66	175	122	191	159	118	1176
Konni	73	94	108	84	102	122	105	202	207	128	1225
Kulanada	74	71	152	134	65	69	103	180	107	65	1020
Mallappally	53	85	124	154	96	148	82	303	144	109	1298
Pandalam	20	50	66	124	106	56	104	208	65	81	880
Parakkode	86	76	105	168	176	376	387	482	177	182	2215
Pulikeezhu	99	113	123	169	124	196	245	225	104	87	1485
Ranni	38	64	90	180	122	221	181	342	400	247	1885
Total	537	686	1101	1190	947	1483	1413	2361	1568	1164	12450

Source: DRDA office records and Block office records

3. Housing Quality and Socio-economic Condition of the Sample Households

The discussion in this section is based on the household survey. A sample was drawn from the housing stock of the selected wards of the three *panchayats* for a detailed household survey. The sample consists of three categories of households: beneficiaries of the public housing schemes, households that constructed new houses since 1996 and others. The housing stock in the selected wards of the sample *panchayats* is classified according to size of houses (measured in terms of the number of rooms) reported in the Building Tax Register of each *panchayat*. The stock and the sample selected from each category are given in Table 3. 1.

Table 3.1 Housing stock and the number of sample housing units in the selected wards according to size of houses

Size of Houses (No. of Rooms)	Sample Housing units		Aggregate Housing stock	
	Number	(%)	Number	(%)
1	705	(21.0)	35	(10.9)
2	790	(25.53)	80	(24.8)
3	499	(14.86)	59	(18.3)
4-5	871	(25.94)	79	(24.5)
6-7	392	(11.68)	47	(14.6)
8 or more	100	(2.98)	22	(6.8)
Total	3357	(100.0)	322	(100.0)

Figures in brackets are percentages; Source: Estimated from *Panchayat* records.

The sample from each size class was selected purposively to get representation of all size class of houses in addition to new houses and public scheme houses. The proportionate share of each size class in the sample was fixed purposively due to their heterogeneity in material use pattern and house quality. More than one-third of the new houses constructed since 1996 were included in the sample. The sample also includes about 27 percent of the houses constructed with the assistance of the Revenue and Rural Development Departments in the selected wards since 1985. The proportion of the sample from others (general category) was limited to about six percent of the aggregate stock. The stock of houses in the sample wards according to type and the number of units selected from each category class are shown in Table 3.2.

The sample consists of 322 households representing about 10 percent of the housing stock in the selected wards. Out of 896 households 103 (11.50 percent) in Kadapra, 117 out of 1365 (8.57 percent) in Kulanada, and 102 out of 1096 (9.31 percent) in Ranny-Perunadu were selected. The quality of houses, amenities, and facilities available and the socio-economic conditions of the sample households are discussed here.

Table 3.2 Housing stock in the selected wards and the number of sample units from according to category and *panchayat*

Panchayat	Category of houses						Total	
	New		Public scheme		Others			
Kadapra	38	(29)	87	(22)	771	(52)	896	(103)
Kulanada	105	(25)	116	(30)	1144	(62)	1365	(117)
Ranny-Perunadu	78	(27)	87	(27)	931	(48)	1096	(102)
Total	221	(81)	290	(79)	2846	(162)	3357	(322)

Figures in brackets denote the number of sample housing units; Source: Various government records

Housing quality

The quality of individual houses is assessed primarily on the basis of materials used for their structure, residential space, facilities and amenities, and present condition. As far as individual households are concerned, house quality reflects economic and social status. The quality of houses in a region, on the other hand, is an indication of the economic status, social attitudes, and economic relations that exist there. Political ideology of the government, its institutions, rules, and priorities often reflect in the housing situation of a country. However, in a modern society, since every member strives to improve social status, the richer sections break out of the rural social milieu by accepting urban lifestyles. Modern and urban styles of living are found among the inhabitants of the study region. Their lifestyles reflected in the housing situation too.

Modern tastes and preferences are visible in the choice of building materials - for roof, walls, and floor materials of the sample housing units. More than one-third of them had concrete (RCC) roof. Nevertheless, the majority had either tiles or thatch as roof material. Classification of the sample units according to roof materials used is given in Table 3.3.

Table 3.3 Distribution of sample houses according to roofing materials by *panchayat*

Panchayat	Roofing materials				
	Thatch	Tiles	RCC	Others	Total
Kadapra	16	58	28	1	103
Kulanada	7	57	52	1	117
Ranny-Perunadu	17	38	41	6	102
Total	40 (12.2)	153 (43.5)	121 (37.6)	8 (2.5)	322 (100.0)

Figures in brackets are percentages; Source: Field survey

The walls of nearly one-half of the sample units were cement-plastered (on laterite stone or bricks). In about 14 percent, it was mud walls, and the rest (40 percent) had unplastered stone or bricks walls. Classification of the sample units according to wall material is given in Table 3.4.

Table 3.4 Distribution of sample houses according to wall materials by *panchayat*

(No.)

Panchayat	Wall material			Total
	Mud (exposed)	Laterite stone/ Brick (exposed)	Laterite stone/ Brick (plastered)	
Kadapra	13	36	54	103
Kulanada	8	47	62	117
Ranny-Perunadu	23	45	34	102
Total	44 (13.7)	128 (39.8)	150 (46.5)	322 (100.0)

Figures in brackets are percentages; Source: Field survey

The predominant (55 percent sample units) floor material used was cement concrete. More than one-quarter of the sample units had mud as the floor material and the rest had mosaic, marble, or granite (Table 3.5).

Table 3.5 Distribution of sample houses according to floor materials by *panchayat*

(No.)

Panchayat	Floor material			Total
	Mud	Cement	Mosaic/Tiles /Marbles	
Kadapra	29	56	18	103
Kulanada	35	58	24	117
Ranny-Perunadu	29	62	11	102
Total	93 (28.9)	176 (54.7)	53 (16.4)	322 (100.0)

Figures in brackets are percentages; Source: Field survey

The quality of individual houses is assessed primarily based on the quality of roof, walls, and floor materials. At the national level, the National Building Organisation (NBO) draws a distinction between two basic house categories: *Pucca* and *kutcha*, and three additional sub-categories: semi-*pucca*, serviceable *kutcha*, and unserviceable *kutcha*. The categories apply to houses throughout India; the definitions have been made on the basis of materials predominantly used for wall, floor, and roofing. *Pucca* houses are built with relatively stable or permanent materials such as stone or bricks for the wall, cement for the floor and tiles or RBC/RCC for the roof. *Kutcha* houses are made of less durable or permanent materials like mud, grass, leaves, reeds, and thatch. Semi-*Pucca* refers to a mixture of *kutcha* and *pucca* materials. The NBO classification is insufficient to capture the luxury constructions seen in the study region that have used modern materials like mosaic and marble for floor, costly paints and tiles for wall coverings and decorative tiles for roof. Even if we use NBO definitions, we need one more category to include the modern luxurious houses.

Measurement of housing quality

We grouped the sample houses into five categories on the basis of the materials of structure

and the condition of roof, wall, and floor. For the sake of comparability, the house quality (HQ) measure is made consistent with the NBO classification with an additional category to include luxurious houses. The five categories are (i) Luxury houses, (ii) *Pucca* houses, (iii) Semi-*pucca* houses, (iv) Serviceable *kutcha* houses, and (v) Unserviceable *kutcha* houses.

The category of large concrete (RCC roof) houses in good condition with polished and painted walls and marble, mosaic or glazed tiles floor, is defined as luxury houses. Medium size houses in good condition with tiles or RCC roof, cement-plastered (on laterite stone or brick) walls, and cement-plastered floor are defined as *pucca* houses. Medium and small houses in moderately satisfactory conditions with tiles or RCC roof, laterite stone or brick exposed walls, cow-dung-plastered floor is categorised as semi-*pucca*. Small houses with thatch or asbestos/tin sheet roof, brick/laterite stone exposed or mud walls and mud or cow-dung-plastered floor, and whose present condition is bad are not however beyond repair, are defined as serviceable *kutcha*. Very small, poor quality houses with thatch or grass or tar sheet roof, mud or thatch walls and mud or cow-dung plastered floor, and whose condition is beyond repairs, come under the category of unserviceable *kutcha*.

Applying the above definitions, about one-quarter of the sample houses were luxury, another 26 percent *pucca*, and 12 percent were unserviceable *kutcha*. Distribution of sample houses according to their quality is shown in Table 3.6.

Table 3.6 Sample houses according to house quality and *panchayats*

House Quality	***Panchayats***			**Total**
	Kadapra	**Kulanada**	**Ranny-Perunadu**	
Unserviceable *Kutcha*	15 (14.6)	6 (5.1)	17 (16.7)	38 (11.8)
Serviceable *Kutcha*	4 (3.9)	7 (6.0)	11 (10.8)	22 (6.8)
Semi-*Pucca*	29 (28.2)	47 (40.2)	27 (26.5)	103 (32.0)
Pucca	31 (30.1)	24 (20.5)	29 (28.4)	84 (26.1)
Luxury House	24 (23.3)	33 (28.2)	18 (17.6)	75 (23.3)
Total	103 (100.0)	117 (100.0)	102 (100.0)	322 (100.0)

Source: field survey; Figures in brackets are percentages.

Size of houses

About one-third of the sample houses were relatively large with plinth area of than100 m^2. At the other extreme, about 14 percent of the houses were too small (less than 25 m^2) to accommodate an average family of five members. Distribution of sample houses units according to size measured in terms of plinth area is shown in Table 3.7.

Source of drinking water

Well-water was the major source of drinking water of the sample households. More than

Table 3.7 Distribution of sample houses according to size class (Plinth area in m²)

Size Class (plinth area in m²)	No. of sample housing units
£ 25m2	44 (13.7)
25-50 m2	95 (29.5)
50-100 m2	83 (25.8)
100-150 m2	45 (14.0)
150-200 m2	37 (11.5)
³ 200 m2	18 (5.6)
Total	322 (100.0)

Source: Field survey; Figures in brackets are percentages

one-third of the households had own wells in their house plots. However, during the summer season the majority of wells in the highland and the mid-land regions are dried up. A few households in Ranny-Perunadu used to travel more than five km to fetch water during the summer season in the past few years. About 40 percent sample of the households depended on pipe well (or pond) or spring water, which they had to share with other households for drinking and cooking. Distribution of sample households according to sources of drinking water is given below.

Table 3.8 Distribution of sample households according to sources of drinking water

Sources of drinking water	No. of sample households
Piped water in house	72 (22.4)
Shared piped water	41 (12.7)
Well at house	118 (36.6)
Shared well	42 (13.0)
Others	49 (15.2)
Total	322 (100.0)

Source: Field survey; Figures in brackets are percentages

Latrine facilities

Nearly two-thirds of the sample households had own latrine facilities. Another one-fourth had no latrine facilities and they used to defecate in open space. About 12 percent of the households had covered pits for use as latrine. Distribution of sample households according to type of latrine facilities is shown in Table 3.9.

Table 3.9 Distribution of sample households according to Latrine type

Type of Latrine	No. of Sample Households
Toilet attached	114 (35.4)
Water seal	90 (28.0)
Covered pit	39 (12.1)
Open air	79 (24.5)
Total	322 (100.0)

Figures in brackets are percentages; Source: Field survey

Furnishing

The quality and extent of house furnishing reflects the economic status of the household. In our sample about one-third of the households had no furniture and crockery other than ordinary cooking vessels and plates and one or two wooden benches. About 17 percent houses were well furnished with modern cooking utensils, cots, cushioned seats, dressing tables, and chests of drawers. Distribution of households according to furnishing is shown in Table 3. 10.

Table 3.10 Distribution of sample households according to house furnishing

Furnishing	Number of Households	
1. Cooking utensils and wooden bench.	108	(33.5)
2. (1) plus cots and one or two plastic chairs	89	(27.6)
3. (2) plus table, chairs and enough cots for all members	70	(21.7)
4. (3) plus spare cots, costly cushioned seats and Dressers	55	(17.1)
Total	322	(100.0)

Figures in brackets are percentages; Source: Field survey

Measurement of quality of amenities

We measured the quality of amenities of the sample houses on the basis of the source of drinking water, type of latrine, furnishing, and electrification. There are five qualities of amenities: good, fair, adequate, inadequate, and deplorable. Households with protected sources of drinking water at house, toilet or water-sealed latrine facilities, electrification and modern, quality furniture are rated as good. Households with protected well, water-sealed latrine; electrification and modest furniture are considered fair. Households with protected well, covered pit as latrine; inadequate and sparse electrification are treated as adequate. Households that do not have own sources of drinking water, are not electrified, have little furniture and use covered pits as latrine, are categorised as inadequate. Lastly, households, which do not have own sources of drinking water facilities, no furniture and no electricity connection and no latrine facilities, are rated as of deplorable quality. Distribution of sample housing units according to their relative quality of amenities is shown in Table 3.11.

Table 3.11 Distribution of sample households according to quality of amenities

Quality of amenities	No. of Sample households	
Deplorable	33	(10.2)
Inadequate	91	(28.3)
Adequate	71	(22.0)
Fair	39	(12.1)
Good	88	(27.3)
Total	322	(100.0)

Figures in brackets are percentages; Source: Field survey

While the quality of amenities of about 27 percent of the sample households was good, that of about 40 percent households was either inadequate or deplorable.

Socio-economic condition of sample households

The socio-economic status of a household depends primarily on the occupation and income of the head. Heads of sample households were employed in diverse occupations ranging from casual labour in the informal sector to highly paid, regular, white-collar jobs in the formal sector. For the sake of simplicity, the whole sets of jobs are classified into four grades: lowest, low, medium, and high. Each grade is defined as follows:

All casual labourers in the farm and the non-farm sectors and petty traders, street vendors and the self-employed with monthly income of less than Rs 1000, are included in the category lowest. Low-level regular jobs in the formal sector such as those of a peon, attender, driver, and sales persons are grouped as low. Marginal farmers and small traders were also included in this category. Regular jobs such as those of a teacher, clerk, and other officials in the formal sector and mid-level farmers, merchants and entrepreneurs are grouped as medium level occupations. High-level regular jobs in the formal sector and professionals, big farmers, plantation owners, and businesspersons with monthly income more than Rs 10000 are grouped under high. Distribution of sample households according to levels of occupation is shown in Table 3.12.

Table 3.12 Distribution of the sample households according to level of occupation of heads by Study Centre

Occupation Level	*Panchayat*						Total	
	Kadapra		Kulanada		Ranny-Perunadu			
Lowest	66	(64.1)	68	(58.1)	71	(69.6)	205	(63.7)
Low	13	(12.6)	25	(21.4)	16	(15.7)	54	(16.8)
Medium	15	(14.6)	15	(12.8)	10	(9.8)	40	(12.4)
High	9	(8.7)	9	(7.7)	5	(4.9)	23	(7.1)
Total	103	(100.0)	117	(100.0)	102	(100.0)	322	(100.0)

Figures in bracket are percentages; Source: Field survey

Family size

The majority of the sample households were relatively small consisting of father, mother, and two children. The average family size was 4.3 persons. About two-thirds of the households had four members or less each. No household in the sample had more than eight members. Significant differences in the average family size were not found among the four occupational groups. However, there were 368 potential households living in the 322 sample houses. If we take the difference between potential households, and the actual number of houses, we find a shortage 46 (14 percent) houses in the three study centres together.

Household income

Income of the households would include income from all sources: work, production, remittance receipts, and pension and other social security benefits. Since several households were reluctant to divulge reliable information on actual income receipts, guesstimates are made for a few households. Inter-, and intra-occupational group differences in income were high in all the three sample regions. The average income of households employed in high-level occupations was more than seven times that of the households employed in the lowest level occupations. Similarly, wide differences in income were found among households belonging to the high level ranging between Rs 10,000 and Rs 30000 per month. The standard deviation of income of the lowest occupational level was Rs 1045, individual household incomes ranging between Rs 100 and Rs 5000 per month. The average household incomes of households employed in the four occupational levels in the three selected wards are shown in Table 3.13.

Table 3.13 Average monthly income (Rs) of sample households by Study Centre

Occupation Level	Kadapra	Kulanada	Ranny-Perunadu	All
EWS (Lowest)	2182	2200	1692	2018
Low	4292	4192	4384	4273
Medium	11133	11200	9200	10675
High	17222	14333	13400	15261
All	5066	4713	3425	4718

Source: Field survey

Land holdings

The average size of land owned by households employed in the high-level occupations was several fold higher than the average land size of those employed in the low and the lowest level occupations. In fact, there was significant positive correlation between occupational level and size holdings. (Karl Pearson's correlation coefficient between occupation grade and size holding was 0.58). Though the differences in average sizes of land holding among the occupational groups were higher in all the three sample *panchayats*, it was phenomenal in Ranny-Perunadu *panchayat* (Table 3.14).

Table 3.14 Average Land Holding Size according to Occupational Level by Study Centre

(in cents)

Occupation Level	*Panchayats*			
	Kadapra	Kulanada	Ranny-Perunadu	All
Lowest	23.39	24.91	39.15	29.36
Low	51.08	43.80	59.94	50.33
Medium	158.13	79.67	135.80	123.13
High	211.33	132.89	664.00	279.04
All	62.93	44.27	82.52	62.36

Source: Field survey

Wide variations in land ownership existed among households in the same occupational levels. For instance, size holdings of households in the high-level occupation group varied between 25 cents and 11 acres (1100 cents). The standard deviation of their size holdings was 269 cents. Similarly, size holdings of the sample households employed in lowest level occupations ranged from 1 cent to 330 cents. The household with 330 cents of land, a small farmer from Kadapra *panchayat*, reported that he was keeping his wetland fallow because cultivation was uneconomical. Deprived of income from land, his family depended on wage labour, with two of its members working as non-farm casual workers, for livelihood. Similar cases were observed in Kulanada and Ranny-Perunadu *panchayats*. One such household with 216 cents of wetland in Kulanada kept its land fallow and the head of the household worked as a non-farm casual worker for Rs 2000 per month, for livelihood. Another head of household with 285 cents of dry land in Ranny-Perunadu reported that his income from land was negligible and hence, he depended on non-farm casual work to earn an average income of Rs 2500 per month.

About 50 percent of the households employed in the lowest level occupations owned less than 10 cents of land while, on the other hand, all the households employed in high level occupations had more than 25 cents of land and 70 percent among them had more than 100 cents each (Table 3.15).

Table 3.15 Distribution of sample households according to land size and occupational level

Land size	Occupation Level				
(Size class in cents)	Lowest	Low	Medium	High	Total
10 Cents	98 (47.8)	4 (7.4)	1 (2.5)	0	103
10-25	24 (22.9)	16 (29.6)	8 (20.0)	0	71
25-50	29 (14.1)	14 (25.9)	6 (15.0)	5 (21.7)	54
50-100	15 (7.3)	13 (24.1)	10 (25.0)	2 (8.7)	40
100-200	11 (5.4)	5 (9.3)	7 (17.5)	5 (21.7)	28
200-500	5 (2.4)	2 (3.7)	6 (15.0)	6 (26.1)	19
500	0	0	2 (15.0)	5 (21.7)	7
Total	205 (100.0)	54 (100.0)	40 (100.0)	23 (100.0)	322

Figures in brackets are percentages; Source: Field survey

We found a positive statistical relationship between size of land owned and monthly income of the sample households (Correlation between monthly income and size of holding was 0.42). However, the main source of income of the majority of rich households was not agriculture. In fact, income was high not because households possess large extent of land; it only happens that most of the rich households also possess large land holdings. In fact, many of the rich households do not consider land as an income-earning asset. They keep their ancestral property intact or acquire landed property because of its social prestige and capital value.

It is observed that the average income of predominantly cash-crop-cultivating households was nearly two times the average income of predominantly food-crop-cultivating households.

The predominantly food-crop-cultivating households earned an average income of Rs 4470 per month from all sources. The cash-crop-cultivating households on the other hand earned an average income of Rs 7610 per month. It is also noted that the proportion of cash-crop-cultivating households was high among the high-level and the medium level categories of households. More than 50 percent of the households belonging to high level and medium level categories of occupation used their land predominantly for cash crop cultivation. Among those who were in lowest and low level occupations, less than 15 percent devoted their land to predominantly cash crop cultivation.

As in the case with many other parts of the State[4], several families in the study region had their members working in the Middle East countries. Among the 322 sample households, 45 (14 percent) had members working abroad in the Gulf countries. There were 59 emigrants from these households. Their average income (Rs.10990), average land size (131 cents), housing quality, and quality of amenities were relatively high compared to those of the sample as a whole.

Occupation and housing quality

Though the housing quality is considered an index of socio-economic status of households, a few households (six percent) employed in the lowest level occupations lived in luxurious houses. We could not find any functional relation between their current employment status and value of their residential house. As was expected, all those employed in mid- and high-level occupations lived in either luxury or *pucca* houses. It is also observed that about one-fourth of the households whose heads were employed in the lowest level occupations lived in *pucca* houses. Twenty-seven (60 percent) out of the 45 remittance-receiving households lived in luxury houses. All these point to the uniqueness of the housing situation in Kerala. Unlike in developed market economies, housing quality in Kerala is not purely a function of current income and employment of the resident households. Distribution of the sample households according to house quality and occupational level is shown in Table 3.16.

Table 3.16 Distribution of sample households according to house quality and occupational level of heads

House quality	Occupation level								
	Lowest		Low		Medium		High		Total
Unserviceable *Kutcha*	37	(18.0)	1	(1.8)	0		0		38 (11.8)
Serviceable *Kutcha*	21	(10.0)	1	(1.8)	0		0		22 (6.8)
Semi *Pucca*	87	(42.5)	11	(20.3)	2	(5.0)	3	(13.0)	103 (32.0)
Pucca	48	(23.5)	16	(29.6)	14	(35.0)	6	(26.0)	84 (26.0)
Luxury house	12	(6.0)	25	(46.3)	24	(60.0)	14	(61.0)	75 (23.2)
Total	205	(100.0)	54	(100.0)	40	(100.0)	23	(100.0)	322 (100.0)

Figures in brackets are percentages; Source: Field survey

Wide differences exist in housing quality of high-level occupation households among the three study centres. For instance, 78 percent high-level occupation households in Kadapra

and 78 percent in Kulanada *panchayats* lived in luxury houses. In Ranny-Perunadu *panchayat*, on the other hand, only 20 percent among the high level employed households were found living in luxury houses[5]. However, geographical differences in the quality of new houses of the richer sections are fast disappearing.

A few (one in Kadapra, six in Kulanada, and five in Ranny-Perunadu) households among the low-level occupation category were seen in luxury houses. It is learned that their heads were emigrants returned from the Middle East. Their major asset was the house they lived in. In the absence of alternative income sources, they depend on casual work for livelihood. Current value of their houses was therefore not an index of their income level. Their current incomes were insufficient even to meet the maintenance cost of the houses they lived in. On the other extreme, several households of the lowest level occupation category (23 percent in Kadapra, 7 percent in Kulanada, and 24 percent in Ranny-Perunadu) were found living in unserviceable *kutcha* houses.

Occupation grade and sizes of houses

Residential houses of all the high-level occupation households in the sample were large with plinth area of more than 100 m^2. The average plinth area of about 83 percent of the houses in this category was more than 150 m^2. Wide differences in house size existed among households of the lowest level occupation category. Seven out of the 205 sample households in the lowest occupation group had big houses with size more than 150 m^2. Distribution of sample households according to size of houses and occupation level is shown in Table 3.17.

Table.3. 17 Distribution of sample houses according to plinth area and occupation level of heads households

Size of Houses	Occupational Level								Total	
	Lowest		Low		Medium		High			
£ 25m2	42	(20.5)	2	(3.7)					44	(13.7)
25-50 m2	89	(43.4)	5	(9.3)	1	(2.5)			95	(29.5)
50-100 m2	54	(26.3)	24	(44.4)	5	(2.5)			83	(25.8)
100-150 m2	13	(6.3)	13	(24.1)	15	(37.5)	4	(17.4)	45	(14.0)
150-200 m2	6	(2.9)	10	(18.5)	11	(27.5)	10	(43.5)	37	(11.5)
³ 200 m2	1	(0.5)	8	(20.0)	9	(39.1)	18	(5.6)		
Total	205	(100)	54	(100)	40	(100)	23	(100.0)	322	(100.0)

Figures in brackets are percentages; Source: Field survey

Per capita space available to the members of high level occupation households (46 m^2) was four times the average space available to members of the lowest level occupation households. The high-level occupation households had an average of 1.79 rooms per head and the lowest grade occupation households had less than one-third of a room per head. Households of medium and low-level occupations had 1.40 rooms and 1.04 rooms per head respectively. Each member had 36 m^2 and 23 m^2 per head in the houses of medium and low-grade occupation households respectively.

Occupation and quality of amenities

All the households of the high and medium level occupational categories enjoyed the facilities of modern types of toilets and latrines. The majority (85 percent) of the households of the low-level occupation category also enjoyed such facilities. However, a significant proportion (36 percent) of the lowest level occupation category had no such facilities and they defecated in open spaces.

The majority of high-level occupation households had both running water and well at their house sites as sources of drinking water. About 60 percent among the lowest level occupation, households had, on the other hand, no own sources of drinking water. While all sample households employed in the top two occupation levels had electrified houses, only 60 percent among the low-level occupation households had such facility. Overall, the quality of amenities of high-level households was good and that of the lowest level households, poor. Distribution of sample households according to quality of amenities and occupation level of heads is shown in Table 3.18.

Table 3.18 Distribution of sample households according to quality of amenities and occupation level of heads

Quality of amenities	Occupation grade								Total	
	Lowest		Low		Medium		High			
Deplorable	32	(15.5)	1	(1.9)	0		0		33	(10.2)
Inadequate	86	(42.0)	5	(9.2)	0		0		91	(28.3)
Adequate	52	(25.3)	16	(29.6)	3	(7.5)	0		71	(22.0)
Fair	21	(10.2)	10	(18.5)	7	(17.5)	1	(4.3)	39	(12.1)
Good	14	(6.8)	22	(40.7)	30	(75.0)	22	(95.7)	88	(27.3)
Total	205	(100.0)	54	(100.0)	40	(100.0)	23	(100.0)	322	(100.0)

Figures in brackets are percentages; Source: Field survey

Furnishing and comforts

Modern household amenities, particularly modern electronic and electrical contrivances, are supposed to be symbols of the comfort and luxury that households enjoy. It is found that the current low status of the employment and income of a few households did not deter them from enjoying these comforts and luxuries. As was expected, more than three–fourths of the sample houses of the high-level employed households had modern amenities. Except one, all the high-level sample households had television sets, radios, and electric fans. A significant proportion (16 percent) of the sample low-level households also had television sets, 38 percent had electric fans; and 62 percent households had radio sets. About 50 percent of the lowest level occupation households had no amenities other than the barest minimum of cooking utensils; they had little furniture worth the name either. The proportion of low-grade households, which owned television sets, electric fans, and radios were 45 percent, 78 percent, and 83 percent respectively. Distribution of sample households according to amenities and the occupational level of heads is shown in Table 3.19

Table 3. 19 Distribution of sample households according to amenities and occupation level of heads

Type of Furnishing.	Occupational Level				Total
	Lowest	Low	Medium	High	
1. Cooking utensils and wooden bench	101(49.3)	7 (13.0)			108 (33.5)
2. (1) + cots and one or two plastic chairs	65(31.7)	15 (27.8)	9 (22.5)		89(27.6)
3. (2) + table, chairs and enough cots for all members	32(15.6)	21 (38.9)	12 (30.0)	5 (21.7)	70 (21.7)
4. (3) + spare cots, costly cushioned seats and dressers	7(3.4)	11 (20.4)	19 (47.3)	18 (78.3)	55(17.1)
Total	205(100.0)	54 (100.0)	40 (100.0)	23 (100.0)	322 (100.0)

Figures in brackets are percentages; Source: Field survey

Education and awareness

All the heads of sample households except 11 (Kadapra 7, Kulanada 1, and Ranny-Perunadu 3) were literate. Literacy rate of heads of sample households was 96.6 percent as against the average literacy rate of 93 percent in the study region in 1991. There was no house with all their members illiterate; at least one among them was educated. About one-fifth of the heads had education beyond the secondary school level. Distribution of households according to years of schooling of the heads is shown in Table 3.20.

Table 3.20 Sample households according to years of schooling of the heads

Years of Schooling of the Heads	No. of Sample Households	
£ 4 Years	66	(20.6)
5-7	65	(20.2)
8-10	131	(40.7)
11-12	33	(10.2)
13-15	18	(5.6)
³ 16	9	(2.8)
Total	322	(100.0)

Figures in brackets are percentages; Source: Field survey

Though the differences in occupation and income of households affected the capacity of a few to subscribe newspapers and journals at home, the majority of the household members read newspapers and journals regularly. In our sample, 87 percent high level, 65 percent medium level, 43 percent low-level, and 16 percent lowest level households subscribed to daily newspaper(s) and journal(s) at home. All of them are aware of the decentralised people's

planning process in the State; and about 90 percent among them hold the view that the socio-economic condition of the weakest sections living in slum-like rural colonies could be improved through local level development planning. The vast majority among the sample households (87 percent high, 90 percent medium, 98 percent low and 90 percent lowest) believe that their living conditions and standards are far better than those of their parents. However, given the fast changes in the society, a few are sceptical about the prospects of their children.

Thus, it is clear that the study region is relatively developed and that the households are enlightened about the importance of housing quality. A comparison between beneficiaries and non-beneficiaries of public housing schemes is taken up in the next chapter.

4. Housing Quality and Socio-economic condition of Beneficiaries of Public Housing Schemes: A comparison with non-beneficiaries

This section presents a comparison of the housing quality and condition, socio-economic status, investment, sources of funds, labour participation, satisfaction, aspirations, and welfare between beneficiary households and non-beneficiary households of similar socio-economic status.

Beneficiary Vs Non-beneficiary houses and households

Public housing schemes as a support strategy is targeted to the marginal sections of society. Being an enlightened society with near-total literacy and vibrant democracy, the likelihood of these programmes reaching the targeted sections would be high. Since the *panchayats* selected for the study are relatively developed in these respects, it is not surprising to observe that all the beneficiary households captured in the survey fell within the economic criteria fixed for the allocation public scheme houses. All the sample beneficiaries, except one, truly deserved the public support. Heads of the sample beneficiary households, except one, were employed in the lowest level occupations.

If housing assistance were sanctioned solely on the basis of income criteria, about 50 percent of the sample households should have received the assistance as their household incomes were less than Rs 2500 per month or per capita annual income was less than Rs 7000. However, only about 37 percent among the eligible households received the housing assistance. Distribution of sample households according to monthly income and beneficiary status is shown in Table 4.1.

Table 4.1 Distribution of sample households according to income and beneficiary status

Monthly income class (Rs.)	No. of sample households		
	Beneficiaries	Non-beneficiaries	Total
Less than 1000	9	22	31 (9.6)
1000-2500	43	68	111 (34.5)
2500-5000	27	70	97 (30.1)
5000-7500	0	18	18 (5.6)
7500-10000	0	26	26 (8.1)
Rs.10000 or more	0	39	39 (12.1)
Total	79	243	322 (100.0)

Figures in brackets are percentages; Source: Field survey

The sample consisted of 60 (19 percent) Scheduled Castes (SC) and 262 (81 percent) non-SC households. Out of the 79 beneficiary households, 48 households belonged to the SC communities. In other words, about 80 percent of the SC households and 12 percent non-SC households got housing assistance.

Housing quality

Houses of all the five qualities were seen both in the beneficiary and the non-beneficiary categories. Wide differences were not observed in the proportion of *kutcha* houses as between government-assisted and not government-assisted sample housing units. However, wide differences existed in the proportion of luxury and *pucca* houses as between beneficiary and non-beneficiary categories. While about 60 percent of the non-assisted units were either *pucca* or luxury, the proportion of such houses among the government-assisted units was only about 14 percent. About two-thirds of the sample beneficiary houses were semi-*pucca* in quality. The proportion of semi-*pucca* houses in the non-beneficiary category was only 21 percent of the sample units. Distribution of sample housing units according to quality and beneficiary status is shown in Table 4.2.

Table 4.2 Distribution of sample houses according to quality and beneficiary status

Housing Quality	No. of Sample Households				Total	
	Beneficiary		Non-beneficiary			
Unserviceable *Kutcha*	8	(10.13)	30	(12.34)	38	(11.8)
Serviceable *Kutcha*	8	(10.13)	14	(5.76)	22	(6.8)
Semi *Pucca*	52	(65.82)	51	(20.99)	103	(32.0)
Pucca	10	(12.65)	74	(30.45)	84	(26.1)
Luxury House	1	(1.27)	74	(30.45)	75	(23.1)
Total	79	(100.0)	243	(100.0)	322	(100.0)

Source: Field survey; Figures in brackets are percentages

The average size of government-assisted houses was far lower than that of non-beneficiary houses. Residential space of about 85 percent of the sample beneficiary houses was less than 50 m^2, while about 60 percent of the non-beneficiary houses had more than 50 m^2 plinth area each. Every third non-beneficiary house was relatively large with residential space of more than 100 m^2 while none of the beneficiary houses had more than 100 m^2 of plinth area. Every fifth beneficiary house was very small with less than 25 m^2 plinth area. However, the proportion of small houses with less than 25 m^2 plinth area among the non-beneficiaries was also low, only about 14 percent.

Own sources of drinking water facilities were absent in the majority (67 percent) of the beneficiary households. A few households in Ranny-Perunadu used to travel more than five km to fetch water during the dry season. Though about 60 percent of beneficiary houses were electrified, latrine facilities were absent in about 40 percent of them. Furniture and crockery, other than a few cooking utensils, was absent in about two-thirds of the beneficiary households. There was however, a single exception; one among these houses was well furnished with modern accessories.

Wide differences in the relative quality of amenities existed as between sample beneficiary and non-beneficiary households. Relative quality of about 72 percent of the beneficiary houses could be rated as inadequate or deplorable, while the proportion of such houses was only

about 27 percent among the non-beneficiary category. Distribution of beneficiary houses according to quality of amenities is shown in Table 4.3.

Table 4.3 Distribution of beneficiary houses according to quality of amenities

Quality of Amenities	No. of beneficiary houses
Deplorable	14 (17.72)
Inadequate	43 (54.43)
Adequate	21 (26.58)
Fair	1 (1.27)
Good	0
Total	79 (100.0)

Figures in brackets are percentages; Source: Field survey

Considering the economic status, especially the household income and occupational level, we saw that all the sample beneficiary households did deserve government support. It is also seen that they constitute only a little more than one-third of the eligible households. Among the 205 sample households employed in the lowest level jobs, only 78 (38 percent) got housing assistance. Since the lowest level occupations consist of a wide variety of informal jobs, we took casual labour households among them for a focussed comparison. Beneficiaries from among the casual labour households are compared with a control group of non-beneficiaries.

Control group

Historically, casual workers, as a group, are supposed to be the lowest in the hierarchical social and economic order of rural societies. Deprived of ownership of means of production, they derive their income and earning from wage labour. Being unorganised, they are supposed to be the lowest paid group. We collected detailed information about their work, wages, earnings, expenditure, savings, debts, investments and aspirations and expectations, besides their housing details.

Our sample consisted of 127 households with their heads employed as casual workers. Among them 65 (Kadapra 18, Kulanada 24, and Ranny-Perunadu 23) got housing assistance. The remaining 62 non-beneficiary households, (Kadapra 25, Kulanada 19, and Ranny-Perunadu 18) was taken as the control group. Though there are exceptions, we assume that the heads are the key decision-makers. In our sample about 30 percent of the heads were not the key decision-makers in their households.

It is learned that 93 percent of the casual workers were employed within the *panchayats* concerned themselves (within a distance of five km from home). They had relatively little assets. Every second among them had less than 10 cents of land. However, one of them had more than one-acre (100 cents) of land. Differences in land holdings as between beneficiary and non-beneficiary households were not large; the latter category of households had an average of 15 cents and the former 12 cents of land. Distribution of sample casual labour households according to land size and beneficiary status is shown in Table 4.4.

Table 4.4 Distribution of sample casual labour households according to land size and beneficiary status

Land Size (in cents)	No. of sample casual labour households			
	Beneficiaries		Non-beneficiaries	
Less than 10 cents	40	(61.5)	33	(53.2)
10-25	15	(23.1)	19	(30.6)
25-50	7	(10.7)	4	(6.4)
50-100	3	(4.6)	5	(8.1)
100-150	0		1	(1.6)
Total	65	(100.0)	62	(100.0)

Figures in brackets are percentages; Source: field survey

The major proportion among the beneficiary and the non-beneficiary households had no land other than house premises, for cultivation. One among the beneficiary and four among the non-beneficiary households used their land predominantly for cash crop cultivation. It is learned that 24 (37 percent) among the beneficiary and 16 (26 percent) non-beneficiary households had at least one head of cattle. However, none of them has taken up cattle-rearing as a major income-earning activity. Mean income, land size, house size, rooms, and family size of beneficiary and non-beneficiary casual labour households according to panchayats are given Table 4. 5.

Table 4.5 Mean income, land size, house size, rooms and family size of beneficiary and non-beneficiary households according to *panchayats*

Mean values	Sample *panchayats*					
	Kadapra		Kulanada		Ranny-Perunadu	
	Beneficiary	Non-beneficiary	Beneficiary	Non-beneficiary	Beneficiary	Non-beneficiary
Monthly Income (Rs)	2383	2162	2188	2139	1365	1544
Land Size (Cents)	12.4	13.5	12.0	16.8	14.2	16.3
House Size (m2)	33.9	40	37.4	43.3	26.7	22.6
No. of Rooms	2.39	2.28	2.33	2.47	1.87	1.61
Family Size	5.17	4.20	4.33	3.89	3.96	4.67

Source: Field survey

Striking similarity in the mean values was observed among the beneficiary and the non-beneficiary households. Mean values, except values of land holdings, were relatively low in Ranny-Perunadu than in the other two *panchayats*. Variations in mean house size (measured in terms of plinth area) and in number of rooms as between Kadapra and Kulanada *panchayats* were not phenomenal. Mean income of sample households in Kadapra was slightly higher than in Kulanada and the differences in mean income as between Kadapra and Ranny-Perunadu were large. Wide variations in income across the regions were mainly due to differences in the nature and availability of farm and non-farm job opportunities.

Income and consumption

Casual labour households draw their income from wage labour. Wage rates vary widely among the workers, depending on the nature and types of work they are employed in. Men and women employed in primary activities in the farm sector got an average of less than Rs 100 a day, while a few employed in non-farm activities got income of not less than Rs 200 a day. Differences in wage rates were observed as between beneficiaries and non-beneficiaries of housing assistance. About 53 percent of the sample workers both among the beneficiary and non-beneficiary categories got wages between Rs 100 and Rs.200 per day. About 40 percent of the sample workers had received less than Rs 100 and about 7 percent earned more than Rs 200 for a day's work during the busy season preceding our household survey. Though job opportunities were lower during the lean season, the wage rates remained unchanged.

Though the sample workers employed in similar jobs got almost the same rates of wages, job availability in terms of the number of days of work was not the same for all the sample workers. Every second worker got employment for more than 15 days a month during the busy season. However, during the lean season not more than 10 percent got employment for more than 15 days a month. Distribution of sample casual workers according to the number of days of work in the busy and the lean seasons is shown in the Table 4.6.

Table 4.6 Distribution of sample casual workers according to number of days of work by season and beneficiary status

No. of days of employment per month	Number of sample workers			
	Beneficiary		Non-beneficiary	
	Busy season	Lean season	Busy season	Lean season
Less than 10 days	16 (24.6)	54 (83.1)	12 (19.4)	47 (75.8)
10-15	15 (23.1)	7 (10.8)	18 (29.0)	7 (11.3)
15 – 20	28 (43.1)	4 (6.1)	20 (32.3)	6 (9.7)
20 –25	6 (9.2)	0	12 (19.4)	2 (3.2)
Total	65 (100.0)	65 (100.0)	62 (100.0)	62 (100.0)

Figures in brackets are percentages; Source: field survey

Significant differences were not found in job availability as between beneficiary and non-beneficiary households. Seasonal differences were also similar for both.

Though the sample workers and their households were not sure about their earnings they had to spend a certain fixed amount for meeting their essential consumption needs, particularly for the purchase of food. It is learned that the sample households spent about 90 percent of their average monthly income for the purchase of food. Differences in the proportion of income spent on consumption as between beneficiary and non-beneficiary households were not significant. In our sample, the beneficiary households spent 89 percent and the non-beneficiary households spent about 92 percent of their earnings for the purchase of food. In this context, it is important to note that in developed economies like the Unites States, citizens

spending over 33 percent of their income on food are considered poor and are eligible for assistance under their Food Stamps programme. By this yardstick, all the sample casual labour households were in abject poverty.

Proliferation of teashops and eating-houses in all parts of villages and the changed food habits of the people have led the workers to prefer food taken from outside home. This tendency is higher among workers in lowland and mid-land panchayats. Eating out accounted for more than 20 percent of the average monthly consumption expenditure of the sample households. Households used to take tea and light refreshment from teashops near their houses on all days. Daily visit to the teashop, a meeting place of workers, was a means to get information about job opportunities, to establish contact with fellow workers and seek work. All the sample male workers in Kulanada *panchayat* used to take meals from eating-houses on days of work. Sample workers in Ranny-Perunadu, in contrast, spent relatively less on food taken from eateries, presumably because of the dearth of teashops in remote parts of this highland region. However, all the sample workers from Ranny-Perunadu also used to take their evening tea from teashops located at the street junctions nearby. Women workers in our sample spent relatively less on food from outside of home. Daily routine of a typical mid-land male casual labourer is given in Chart 4.1.

Chart 4.1 Daily Routine (food practices) of a typical male casual labourer

Time	**Food item**
Early morning	Tea (either from home or from teashop nearby)
Morning	Beakfast: (Preparations made out of Rice, Wheat or Maize from teashop on days of work or *pazhamkanji* from home on days of leisure)
Noon	Meal (Lunch): Rice and curries-vegetables and non-vegetables (from hotel on days of work or from home on days of leisure)
Afternoon	Tea (from teashop on days of work or from home on days of leisure)
Evening	On all days, irrespective of work or leisure, male casual workers used to take evening tea from shops in the nearest street corner.
Night	Meals (Supper): Rice and curries (both vegetables and non-vegetables depending on income) from home

A strong positive correlation between monthly income and expenditure on food was found in the sample households (Karl Pearson correlation coefficient between household income and expenditure was 0.63). Significant difference in the correlation coefficients was not found as between beneficiary and non-beneficiary households. Liquor also figured in the priority list of consumption. Every second sample male worker used to spend not less than Rs 50 a week on liquor. Significant difference as between beneficiary and non-beneficiary households was not found in the proportion of income spent on liquor. It is also found that excessive spending on liquor badly affected the livelihood conditions and housing quality of about one-fourth of the casual labour households. Uncertain employment and income coupled with high and increasing consumption expenditure affected the capacity of the households to save for housing investment. However, a few among the sample households had small amounts of savings.

Savings, housing investment and indebtedness

Normally, we cannot expect a household, which spends more than 90 percent of its income on food, to save for future consumption and investment. However, it is learned that a few (15 percent of the beneficiaries and 11 percent non-beneficiaries) had savings. They saved mainly for three purposes. In the order of priorities they were: (i) marriage of girl children, (ii) education expenses of children, and (iii) housing investment, that is, new house construction or renovation/ repair of the residential house. Since about 90 percent of the sample households who had savings expect government assistance, saving for housing investment ranked high among their priorities.

To understand the magnitude of housing investment we collected the details of cost of construction of new houses (Estimate of housing investment in the sample panchayats is shown in the next section). Twenty-seven (21 percent) out of the 127 sample casual labour households constructed new houses during or after 1996. Among them 13 (48 percent) were government-assisted and the rest (52 percent) not assisted. The mean cost of government-assisted houses (beneficiary houses) was Rs 46140 and that of not assisted (non-beneficiary) houses was Rs 54640. Except in Ranny-Perunadu *panchayat*, the average cost of beneficiary houses was far lower than that of non-beneficiary houses. The mean cost of beneficiary houses in Ranny-Perunadu *panchayat* was, however, more than two times the average cost of non-beneficiary houses. The mean cost of new houses according to beneficiary status and *panchayats* is shown in Table 4.7.

Table 4.7 Mean cost of new houses according to beneficiary status and *panchayats*

Panchayat	**Mean cost of construction of new houses (in Rs)**	
	Beneficiary houses	**Non-beneficiary houses**
Kadapra	34050 (6)	66357 (7)
Kulanada	36375 (4)	47000 (3)
Ranny-Perunadu	83333 (3)	39875 (4)

Figures in brackets are number of new houses of the sample casual labour households; Source: field survey

The mean housing investment of the sample households was more than two times their annual income. However, there were regional differences in the proportion of investment to income. Housing investment as a proportion of gross annual income of the sample households is shown in Table 4.8.

It is believed, in general, that 'if a household has to spent nearly all its income for food in order to keep alive, the proportion it can spend on housing is negligible, or even negative after feeding and clothing (Turner, 1976). The sample households were an exception. The non-beneficiary households in Ranny-Perunadu *panchayat* spent about four times their annual gross income for house construction. The beneficiary households also spent more than three times their gross annual income for their houses. The sample households from other *panchayats* too spent much more than their gross annual incomes for house construction. Investment far higher than gross annual income of poor families, which spent more than 90 percent of their income for the purchase of food, raises the question of sources of funds for investment.

Table 4.8 Housing Investment as a Proportion of Gross Annual Income of Sample Households according to Beneficiary Status *(in percentage)*

Panchayat	Housing investment as a proportion of gross annual income of sample households	
	Beneficiary	**Non-beneficiary**
Kadapra	237.47	101.95
Kulanada	146.88	186.54
Ranny-Perunadu	305.56	396.83

Source: Field survey

Four major sources of funds are available for house construction: (i) non-financial institutions, (ii) financial institutions, (iii) individuals, and (iv) own sources. It is learned that the beneficiary households raised about 40 percent of funds from own sources. Own sources consisted of (a) savings, (b) pensions, PF, and social security benefits, (c) sale of assets, (d) grants and subsidy, (e) gifts, and (f) imputed values of family labour involved in the construction works. The non-beneficiary households raised about 78 percent share from own sources for their housing investment. It is important to observe that despite the grants and subsidies of the government, the share of own sources in the total funds of the beneficiary households was far lower than that of the non-beneficiaries. Proportionate share of each source of housing funds according to beneficiary status of the sample households is shown in Table 4.9.

Table4.9 Percentage share of each source of funds for housing investment by beneficiary status

Sources of funds	**Beneficiary status of sample households**	
	Beneficiaries	**Non-beneficiaries**
Non-financial institutions	42.33	13.24
Financial institutions	6.62	2.94
Individuals	10.72	6.02
Own sources	40.33	77.79
Total	100.0	100.0

Source: Field survey

Wide difference was found in the percentage share of own sources of funds as between the beneficiary and the non-beneficiary households. Grants and subsidies were not available to the non-beneficiary households. The sale of assets and the imputed value of family labour constituted the major share of their own sources of funds. Since they need not produce completion certificate at each stage and were free to design the plan, procure materials, and determine the standard and quality of construction, the participation of family members in their construction process was high. They had sold assets such as gold ornaments and, in a few cases, even ancestral land to raise investment funds. Therefore, their dependence on financial and non-financial institutions for funds, and hence their indebtedness was relatively low.

The beneficiary households had, unlike the non-beneficiaries to adhere to the standards specified by the government agencies, which provided the funds. The degree of freedom of the beneficiary households was constrained by the approved plans and estimates agreed upon at the time of sanctioning of the funds. The sanctioned amount is given in three or four instalments. After each stage – such as laying foundation and basement, construction of walls up to lintel level, completion of walls up to the roof level, and completion of the building in all aspects including plastering and other finishing works – the households must submit certificates obtained from competent authorities to get the subsequent instalments released. It is learned that the participation of family labour was minimal in the execution of construction work. In a bid to adhere to the stipulations of the financing agencies, the majority of the beneficiary households entrusted the construction work with contractors. In that context, the responsibility of the beneficiary household was limited to raise additional funds for timely execution of the work. They borrowed from several sources. The share of borrowed funds accounted for about 60 percent of the total cost of construction.

All other sources except own sources are loans. Debts are to be repaid with interest. The percentage share of debts of the beneficiary households was two to three times of the share of loans of the non-beneficiary households. The share of loans of non-beneficiaries from financial institutions was more than three times the share of the loans of the non-beneficiary households. The majority of the beneficiary households were, therefore, in debt.

Housing quality and condition

Despite the financial support, high borrowing, and heavy debt burden, about 12 percent of the beneficiary households live in unserviceable *kutcha* houses. When compared to the houses of non-beneficiaries, disparity in housing quality was minimal among the beneficiary houses. More than two-thirds among them lived in semi-*pucca* houses. However, there was one luxury house in the beneficiary category. It was a typical case of a Gulf-returned person who turned a wage labourer for livelihood in his post-return phase. The entire income he saved during his employment in the Middle East was invested in the residential house. Deprived of other means of income, though living in a luxurious house, he had to do physical work to maintain his household. Wide disparity in house quality was seen among the non-beneficiary households. About 36 percent of the non-beneficiary households lived in unserviceable *kutcha* houses; but a minority (5 percent) had luxury houses. Distribution of the sample casual labour households according to house quality and beneficiary status is shown in Table 4.10.

The present condition of roof, walls, floor, doors, and windows of the sample houses falls into both good and bad. Significant differences in the proportionate share of good and bad structures were not found as between the beneficiary and non-beneficiary households. The percentage share of good and bad structures by items of buildings according to beneficiary status is shown in Table 4.11.

Contrary to what was expected, we found that though the beneficiary houses were new (constructed since 1985), the present condition of the items of the majority of sample houses

Table 4.10 Distribution of the sample casual labour households according to their house quality and beneficiary status

House Quality	No. of sample casual labour households			
	Beneficiary		Non-beneficiary	
Unserviceable *kutcha*	8	(12.3)	22	(35.5)
Serviceable *kutcha*	7	(10.8)	11	(35.5)
Semi *Pucca*	44	(67.7)	14	(2.6)
Pucca	5	(7.7)	12	(19.5)
Luxury house	1	(1.5)	3	(4.8)
Total	65	(100.0)	62	(100.0)

Source: Field survey

Table 4.11 Percentage share of good and bad structure items according to the beneficiary status of sample households

Structure items	Beneficiary houses			Non-beneficiary houses		
	Good	Bad	Total	Good	Bad	Total
Roof	38.4	61.6	100.0	29.0	71.0	100.0
Wall	29.2	70.8	100.0	29.0	71.0	100.0
Floor	33.8	66.2	100.0	33.9	66.1	100.0
Doors & Windows	41.5	58.5	100.0	27.4	72.6	100.0

Source: Field survey

was indifferent. The relative quality of amenities was also poor. About 75 percent of the beneficiary houses had poor amenities that could be rated as either inadequate or deplorable. The proportion of non-beneficiary households with similar poor amenities was only 66 percent. Besides, significant difference in the quality of furnishing was not found either, as between the beneficiaries and the non-beneficiaries. About 63 percent of the beneficiary and 60 percent of the non-beneficiary households had no amenities other than the essential minimum of cooking utensils in their houses.

Welfare of the households

State intervention in the housing sector was aimed primarily to improve the welfare of the citizens. Having found that the housing assistance reached the deserving citizens, we now examine whether it has enhanced their welfare. Based on four indicators – (i) Income and Assets, (ii) Amenities, (iii) Comforts, and (iv) Education and awareness – consisting of 15 variables we prepared a 1 to 100 welfare scale. Values to the indicators were assigned according to their relative importance. Out of the total 100 scores, a maximum of 30 was assigned to income and wealth of the households, 15 to amenities, 28 to comforts, and 27 to education and awareness of the head of the households. Scores assigned to each indicator and its constituent variables are shown in the following chart.

Chart 4.2 Welfare indicators and scores

1. Income and assets – Maximum 30 scores

Occupation – Max: 10	**Land size – Max: 10**	**Living space - Max: 10**
High level - 10	More than 500 cents -10	One score for one room subject to a maximum of 10 scores
Mid level - 8	100 to 500 cents – 6	
Low level - 6	25 to 100 cents - 3	
Lowest level - 3	Less than 25 cents - 1	

2. Amenities – Maximum 15 scores

Drinking water – Max: 5	**Latrine – Max: 5**	**Electrification – 5**
Running water – 5	Toilet attached – 5	Five scores if house is electrified
Own well – 3	Water seal – 4	
Shared well/pipe water – 1	Covered pit - 2	

3. Comforts – Maximum 28 scores

Furnishing – Max: 10	**Fridge– 10**	**Automobiles – 5**	**Fan - 3**
Cooking utensils alone – 1	Ten scores for fridge	Five scores for automobiles	Three scores for fan
Plus cots and chairs – 3			
Plus table and enough cots for all members -7			
Plus spare cots, cushioned seats and dressers – 10			

4. Education and awareness – Maximum 27 scores

Education – Max: 10	**Newspaper– 5**	**Journal– 5**	**T V– 5**	**Radio– 2**
More than 15 years of schooling– 10	Five scores for newspaper subscription	Five scores for journal subscription	Five scores for TV	Two scores for Radio
12 to 14 years - 8				
10 to 11 years – 5				
4 to 9 years – 3				
Less than 4 years – 1				

We obtained the welfare scores of all the 322 sample households on the basis of the above indicators. Welfare scores of individual households ranged form 9 to 96. The entire sample households are grouped into five categories; those with less than or equal to 20 scores, 20 to 40 scores and so on. Distribution of sample households according to welfare group and beneficiary status is shown in Table 4. 12.

Table 4.12 Distribution of sample households according to welfare group and beneficiary status

Welfare group	No. of sample households		
	Beneficiary	Non-beneficiary	Total
20 scores	16 (20.2)	32 (13.2)	48 (14.9)
20-40 scores	60 (76.0)	53 (21.8)	113 (35.1)
40-60 scores	3 (3.8)	68 (28.0)	71 (22.0)
60-80 scores		53 (22.0)	53 (16.5)
80 scores		37 (15.0)	37 (11.5)
Total	79 (100.0)	243 (100.0)	322 (100.0)

Source: Field survey

Except three, all the beneficiary households fell in the lowest two welfare groups. The proportion of households in the lowest welfare group among the beneficiaries was also higher than the corresponding proportion for the sample as a whole.

Nine out of every 10 sample casual labour households fell in the two lowest groups (Table 4.13). However, the proportion of non-beneficiary households in the lowest welfare group was about two times the proportion of beneficiary households in that group. It is also learned that the relative welfare of non-beneficiary households was high. Distribution of sample casual labour households according to welfare groups and beneficiary status is shown in Table 4.13.

Table 4.13 Distribution of sample casual labour households according to welfare groups and beneficiary status

Welfare group	No. of sample casual labour households		
	Beneficiary	Non-beneficiary	Total
20 scores	15 (23.1)	27 (43.5)	42 (33.1)
20-40 scores	49 (75.4)	26 (42.0)	75 (59.1)
40-60 scores	1 (1.5)	8 (12.9)	9 (7.1)
60-80 scores		1 (1.6)	1 (0.8)
Total	65 (100.0)	62 (100.0)	127 (100.0)

Source: Field survey

Every fourth beneficiary household remained at the lowest welfare ladder, despite the government support to own a house. Does it mean that public assistance did not help improve their welfare? Provision of public houses was aimed primarily to improve the quality of life and living condition of the poorer people. Viewed from that perspective, we found that the scheme has not fully succeeded in achieving the goal. Though housing assistance was given to the deserving citizens, about one-fourth of them continued to live in deplorable conditions. The discussion so far has been based on our evaluation of the housing quality, livelihood conditions and well- being of sample casual labour households. What is the view of the

beneficiaries themselves? It is important to understand the problem from the perspective of the beneficiary households. Not more than one-third among the beneficiary households reported that they are satisfied with their housing quality. Striking similarity was observed in the responses of both the beneficiary and the non-beneficiary households. The proportion of sample casual labour households satisfied with present structure and services of their housing units by beneficiary status are given in Table 4.14.

Table 4.14 Proportion of sample casual labour households satisfied with structure and services by beneficiary status

Structure and services	Proportion of satisfied households	
	Beneficiaries	Non-beneficiaries
Roof	55.4	29.0
Walls	56.9	72.6
Floor	41.5	32.3
Doors	47.7	29.0
Sleeping space	47.7	29.0
Kitchen facilities	29.2	22.6
Toilet facilities	26.2	29.0
Drinking water facilities	38.7	36.9

Source: Field survey

Significant differences were not found in the proportions of satisfied households as between beneficiaries and non-beneficiaries. In this context, it is important to note Turner's three laws of housing:

(i) When dwellers control the major decisions and are free to make their contribution to the design, construction, or management of their housing, both the process and the environment produced stimulate individual and social well-being. When people have no control over, or responsibility for, key decisions in the housing process the dwelling environment may become a barrier to personal fulfilment and burden on the economy.

(ii) Dweller satisfaction is not necessarily related to the imposition of standards, and

(iii) Deficiencies and imperfections in one's housing are infinitely more tolerable if they are his/her responsibility than if somebody else's (Turner, 1976).

Though there were constraints, more than 50 percent of the sample beneficiary households took part in major decisions regarding their house construction. The proportions of beneficiary households, which took part in decision-making according to construction aspects, are shown in Table 4.15.

Contrary to what was expected, we found that every second beneficiary household was dissatisfied with the structure of their present house. About two-thirds among the sample households were not satisfied with the housing services. It is also learned that the actual involvement in construction process in terms of labour participation was meagre. In fact,

Table 4.15 Proportion of Beneficiary Households Participated in Decision-making by Construction Aspects

Decisions	Proportion of beneficiary households
Site selection	50.8
House plan & design	72.0
Material selection	52.3
Employment of skilled labour	52.3
Employment of unskilled labour	49.2
Purchase of sanitary items	38.5

less than one-third of the sample beneficiary households contributed family labour to their house construction. All the works, including earthwork for foundation and basement of more than three-fourths of the sample units, were organised by contractors. The remaining one-fourth employed wage labour, either on daily wages or on piece rates, for the construction work.

Housing assistance in terms of partial finance failed to ensure beneficiary participation at the desired level. However, every second beneficiary household claimed that its social status had improved with the construction of new houses. However, none of them answered in the affirmative for our question on whether their job opportunity has increased after moving to the new house. About 75 percent of the sample casual labour households wanted more help from government to improve their house quality. Every second aspirant expected grants and subsidies from government. They do not want loans even if granted interest-free. Thus, the present pattern of housing assistance failed to strengthen the economic self-dependence and self-reliance of the beneficiary households. Instead, they are caught in a debt trap.

Housing investment undertaken in the sample *panchayats* is examined in the next section.

5. Housing Investment

The focus of the present section is to understand the magnitude of housing investment in the study region. Two estimates using two different sets of primary data are made. Semi-structured interviews (PRA technique) and household survey (direct personal interview with the heads of households) provided the two sets of primary data. The estimation procedure and its limitations, processes, and estimates based on sample results, the percentage share of government-assisted houses in total investment and the sources of funds for housing investment are discussed.

Estimation procedure and limitations

Investment in residential construction is supposed to generate income and employment. Like many rural development activities, housing has a monetary and a subsistence component. This means that house construction and repair involve a flow of money. It may be, on the other hand, a family self-help activity that involves skills, labour force, building materials, and tools as inputs, but not necessarily money. Both the monetary as well as the subsistence components, contribute to economic development since they are part of the economic cycle in two respects: the combination of input factors results in an individual product; the new or repaired house contributes to the national product. Secondly, this process creates employment in the form of self-employment and mutual help (Glaeser, 1995).

The housing market is really two markets, one for single family (largely owner-occupied) and the other for multi-family homes. Our discussion is confined to the former. Expenditure on house construction is on an accrual basis. That is, the outlays are counted as construction progresses. The actual amount of investment in housing during a period depends on conditions of supply as well as demand. Costs in the housing construction industry are largely variable costs. Demand depends mainly on the capabilities of the households to raise investment funds. The capacity to raise funds depends on the income and occupation of the main earning members of households.

The general presumption is that rural houses are constructed either on self-help or on mutual help basis. The housing situation in rural India appears to justify this view. The average housing investment per household (1975-‘76) was Rs 106 per annum (Rs 199 for urban and Rs 80 for rural areas); roughly equivalent to 2.3 percent of the total income of all households: 2.8 percent of urban and 2.1 percent of rural households. The average figure for rural area is composed of a wide range of income-related sub-averages. While in the highest income group, with more than Rs 30,000 per annum, the average housing investment came to Rs 1907, the equivalent average investment dwindles to Rs 7 per annum among the lowest income group which earned less than Rs 3600 per year (NBO and ESCAP, 1984).

Housing conditions in rural Kerala are unique. Given the wide variation in quality of structure, material use pattern, and facilities and amenities, estimation of investment in residential construction is a difficult task. Unlike other investment goods residential house is a customized product. Each unit is unique in resource use, size, type, and design. Even if the size and type

are similar, the actual cost need not be the same. In fact, the actual cost of construction may be influenced by several factors like location, nearness to motorable roads, nearness to the sources of inputs, workmanship, and efficiency of factor use supervision. Therefore, each unit needs to be considered separately for making any reliable estimate of the total investment involved during a given period. We cannot expect to get exact information on amounts due to the fact that the construction process and all the materials involved need not necessarily pass through the market process. Under conditions of subsistence production, it would be difficult to get reliable data on value of materials and labour used particularly in the cases of owner-occupied residential houses.

All owner-occupiers, who organise construction activities on their own, do not necessarily keep accounts of physical quantities, or of market values, of materials drawn from own sources. Accurate data will not be available on the value of materials like timber, laterite stone (wall material), and rock rubble (foundation material) used from own sources in house construction. All the labour involved in the construction need not be wage labour. Family members may involve in the construction process as helpers, skilled workers, or even supervisors. It would be difficult to estimate the actual money value of such labour involved. Several wealthy households in Kerala view their residential house not merely as shelter. House for them is a status symbol. Actual construction costs of such houses tend to be disproportionate to their known sources of incomes. They seldom divulge, therefore, reliable information on their housing costs.

Expenditure on residential construction is the single largest investment decision of an ordinary rural family. The amount involved may be several times the annual income of the household. Unlike in house purchases, construction involves spending on material inputs and labour from start to finish. The period taken to build a house depends on several factors like availability of funds and other inputs. Households which take relatively long periods, often find it difficult to remember the prices of factor inputs at different points of time. They do not keep actual data on total expenditure. Very few people keep accounts of building expenditures. Given the complex realities we have no other way than to depend on estimates based on true representative samples. Since each house is unique in type and size, one has to identify relatively homogeneous groups for some sort of stratification.

We could not find homogeneous groups for stratification. Out of several criteria considered, like number of rooms, roof material, gross rental value, net rental value, and amount of building tax levied by local bodies, we found that data on number of rooms is relatively the most dependable. New houses constructed during the five years from April 1993 to March 1998 and numbers supplied by *panchayats* are considered for purposes of stratification. Based on the number of rooms, these new houses are classified into four categories (Table 5.1).

Sample units for inquiry were selected from different parts of the *panchayats*.

Estimates using PRA data

Samples from each of the four strata were chosen randomly. Because of the resource constraints, a sample size of 100 was fixed, which forms about nine percent of the aggregate.

Table 5.1 New houses (1993-'98) classified according to rooms by *Panchayats*

Size of the House (no. of rooms)	Kadapra	Kulanada	Ranny-Perunadu	Total
1	103	74	128	305
2-3	83	116	115	314
4-5	89	196	32	317
6-11	66	82	43	191
Total	341	4 68	318	1127

Source: Estimated from *Panchayat* office records.

Though the number of houses in the top sub-group was relatively small, we fixed sample size from each stratum. It is well known that variability in the number of rooms and other characteristics are the highest among the highest category houses. It is also noted that variability within the low categories is relatively small. We have selected samples from all the sample *panchayats*. Sample units selected from each stratum are given in Table 5.2.

Table 5.2 Sample Units from Each Stratum according to *Panchayats*

Size of the House (no. of rooms)	Kadapra	Kulanada	Ranny-Perunadu	Total
1	6	6	8	20
2-3	7	9	8	24
4-5	8	10	8	26
6 - 11	10	12	8	30
Total	31	37	32	100

Source: Field survey

The approximate present value of the structure was estimated on the basis of the cost of inputs and labour used in the construction. The total cost of each sample house in each size class (room category) was obtained as the sum of costs of individual units. From the total cost, the average cost per unit was estimated separately for each *panchayat*. The average costs so obtained are shown in Table 5.3.

Table 5.3 Average construction cost of new houses by room category and *Panchayats*, 1993-'98 (in Rs thousand)

Size of the house (no. of rooms)	Kadapra	Kulanada	Ranny-Perunadu
1	7	6.5	6
2-3	90	90	85
4-5	250	220	250
6-11	500	550	500

Source: Field survey

Significant differences in material use are not seen across the regions. However, labour cost varied widely due to differences in location-specific factors. The estimated total investments for the three *panchayats* are given in Table 5.4. Total investment in Kulanada was more than twice the amount in Ranny-Perunadu, which is a relatively backward *panchayat*. About half the total amount in all the three *panchayats* was used for construction of big houses, with 6 rooms or more. The share of the lowest two categories, which together constituted 55 percent of the new houses, came to only one-fifth of the total amount. Variability within the 6-11-room sub-group was high. In that category expenditure on individual units varied from Rs 2 lakh to Rs 15 lakh. In the lowest one-room sub-group, the approximate cost varied from Rs 1500 to Rs 13000.

Table 5.4 Estimated investment in new (1993-'98) houses by room category and *panchayat* (Rs '000)

Size of the House (no. of rooms)	Kadapra	Kulanada	Ranny-Perunadu	Total
1	721	481	768	1970
2-3	7470	10440	9775	27685
4-5	22250	43120	8000	73370
6-11	33000	45100	21500	99600
Total	63441	99141	40043	202625

Source: Field survey

The three *panchayats* together are estimated to have invested about Rs 20.3 crore for new residential construction during the period. Investment in the household construction sector includes not only the cost of new construction but the costs of additions, renovation, and replacement construction as well. A survey on household construction undertaken in 1980-'81 by the State's Department of Economics and Statistics showed that the expenditure on additions and renovation accounted for a little more than 116 percent of the estimated expenditure on new construction during that year. The year 1980-'81 was of course a period when the housing boom was at its peak. If the proportion during the period of the present survey is not less than 100 percent, we may get an amount of Rs 20.3 crore as the cost incurred for replacement, repair, and renovation of the existing stock. The total investment in the three *panchayats* together would therefore come to Rs 40.6 crore during the five-year period from 1993, or an average annual investment of Rs 2.7 crore per *panchayat*.

Estimates using household survey data

To capture more accurate information about total costs of house construction, sources of funds for investment, and other factors affecting costs, we collected data through the household survey. The sample was designed to include new houses constructed during or after 1996. The sample consisted of 81 households, which constituted about 37 percent of the 221 new houses constructed in the selected wards during the five-year period from 1993 to 1998. The total number of houses constructed during that period according to room category and the sample selected form each size class is shown in Table 5.5.

Table 5.5 Aggregate Number of New Houses and Sample Households in Selected Wards of *Panchayats*

Size of the House (no. of rooms)	Aggregate number of new houses	Sample households
1	42	7
2-3	60	31
4-5	74	27
6-11	45	16
Total	221	81

Source: Field survey

Sample size from each category was purposively chosen to include houses constructed with public assistance. Except one, all the scheme houses fell in the 2-3-room sub-group. With a view to comparing the investment and the sources of funds of beneficiary households with those of non-beneficiary households, a relatively large sample size was drawn from that sub-group. The distribution of sample houses according to year of construction and *panchayat* is shown in Table 5.6

Table 5.6 Sample Units Classified according to Year of Construction by *Panchayat*

Panchayat	Year of construction			
	1996	1997	1998	Total
Kadapra	7	10	12	29 (35.8)
Kulanada	6	14	5	25 (30.9)
Perunadu	17	2	8	27 (33.3)
Total	30 (37.0)	26 (32.1)	25 (30.9)	81 (100.0)

Source: Field survey

The sample consisted of houses with one to nine rooms; 47 percent had three rooms or less. One out of every five houses had six or more rooms. Distribution of sample houses according to size and year of construction is shown in Table 5.7.

Data on cost of construction were collected form the heads of sample households. The average cost of construction for each sub-group of houses classified according to *panchayats* is shown in Table 5.8.

The sample statistic is used for estimating total investment in the three *panchayats*. The total amount of investment on new construction is found to be Rs 17.25 crore for the three sample *panchayats*. Assuming an equal amount for replacement and improvement construction, the aggregate investment becomes Rs 34.5 crore. Desegregating at the *panchayat* level, we get an annual average investment of Rs 2.30 crore per panchayat during the accounting period.

Table 5.7 Distribution of the sample houses according to size and year of construction

House Size (No. of rooms)	Year of construction			
	1996	1997	1998	Total
1 Room	2	1	4	7 (8.6)
2-3 Rooms	12	9	10	31 (38.3)
4-5 Rooms	14	6	7	27 (33.3)
6-11 Rooms	2	10	4	16 (19.8)
Total	30 (37.0)	26 (32.1)	25 (30.9)	81(100.0)

Source: Field survey; Figures in brackets are percentages

Table 5.8 Average cost of construction by size class and *panchayat*

House size (No. of Rooms)	Average Cost of Construction (in Rs Thousand)			
	Kadapra	Kulanada	Perunadu	Mean
6-11	284.0	427.8	700.0	416.9
4-5	197.2	183.3	261.3	222.6
2-3	47.3	62.2	84.5	64.8
1	4.9	6.0	9.8	6.4

Source: Field survey

Thus, we find that the average annual investment lay in the range of Rs 2.3 crore to Rs 2.7 crore per sample *panchayat* during 1993-'98. The average of the two figures, Rs 2.5 crore is taken as a realistic estimate of the average annual housing investment in the rural *panchayats* in Kerala during 1993-1998. Half the amount, i.e., Rs 1.25 crore may be considered the expenditure for new construction and the rest for replacement, renovation or repair of the existing housing stock. Thus, all the 925 *grama panchayats* in the State together would have spent Rs 1161 crore in rural residential construction in Kerala at current prices. This amount appears to be consistent with the figures estimated by the National Sample Survey Organisation (NSSO) for the year 1988-'89. The total finance spent on new buildings in rural Kerala during the one-year period from July 1988 to June 1989 was estimated as Rs 647 crore[6] (*Sarvekshana*, 1992). Given the inflation rates and hike in cost of construction, the figures arrived at in the present study seem to reflect reliably the magnitude of the residential construction activities in the State.

Household construction investment in Rural Kerala and its impact

The annual average housing investment per household in the study region during the period 1993-'98 was about Rs 5500. It was roughly equivalent to about 10 percent of the total income of the households as against the all-India proportion of 2.1 percent for rural households in 1975-'76 (NBO & ESCAP, 1984). According to the estimates of the NSSO the share of rural Kerala was for 10.7 percent of household construction investment in rural India as a whole. It is several times the proportion of rural households in Kerala to total rural households in India.

As far as housing is concerned, decisions taken regarding investment are seldom based on expected returns and costs. In most societies, an important component of gross private domestic investment is residential construction expenditure. In developed market economies, housing expenditures are susceptible to public policies, especially monetary and fiscal policies.

Housing investment and the consequent increase in materials production contributed in a big way to generation of employment opportunities in Kerala. Decline in traditional industries such as cashew-processing and coir-manufacturing, shift in the cropping pattern from annual crops to tree crops and conversion of cultivated land to non-agricultural purposes, were throwing large number of rural workers out of employment. Employment opportunities created, because of the increase in housing activities, proved a godsend in the deteriorating unemployment scenario.

Might be because of the penetration of market forces in all walks of human life, rural households in Kerala have incurred expenditure several times their annual income, for house construction[7]. Irrespective of the differences in occupation levels all the sample households spent more than two-and-a-half times their annual income for house construction (Table 5.9).

Table 5.9 Housing investment as a proportion of total income of sample households according to occupation grades

Occupation Level	Housing Investment as Percentage of Annual Income
High Level	242
Mid level	334
Low level	423
Lowest level	288

Source: Field survey

A strong positive correlation is observed between annual income and housing investment of households (Karl Pearson correlation coefficient was 0.71). Governments do not have control over private residential investment. In the socio-economic context in which material use, technology, production process, and production relations are market-determined, those who do not have entitlements may find it difficult to satisfy their needs. Those who have entitlements and capabilities, on the other hand, may not be concerned about the social cost and benefits involved in the use of scarce resources. Secondary sources of data also show that despite the high investment, the quality of amenities and facilities of rural households in Kerala lag far behind the all-India average.[8]

Share of public housing schemes in the study region

Investment behaviour of 18 beneficiary households was captured in the household survey. It is learned that the beneficiary households spent about two times their gross annual income (196 percent), and the non-beneficiary households spent about 3.5 times their annual income for house construction. The average size of a beneficiary house was smaller than that of a

non-beneficiary house. Except one, all the sample beneficiary houses had only less than three rooms each. The distribution of new houses according to size and beneficiary status is shown in Table 5.10.

Table 5.10 Distribution of new houses according to size and beneficiary status

House Size (No. of rooms)	Number of sample new houses		
	Beneficiary	Non-beneficiary	Total
1	0	7	7
2-3	17	14	31
4-5	1	26	27
6-11	0	16	16
Total	18	63	81

Source: Field survey

The average investment per beneficiary house in the 2-3- room size group was Rs 49000 and that of the non-beneficiary house was Rs 84000. The cost of the lone beneficiary house in the 4-5 room size class was Rs 75,000. Wide variations in the range of unit costs were observed as between the beneficiary and the non-beneficiary houses. While the cost of beneficiary houses varied from Rs 9000 to Rs 125,000 that of the non-beneficiary houses varied from Rs 20000 to Rs 200000. In this context, it should be noted that though the housing assistance of the public agencies never exceeded Rs 35,000 per house, the average cost per house constructed under public schemes came to Rs 50,000.

Our field level enquiries showed that out of the 572 houses sanctioned by the Revenue and the Rural Development departments in the sample *panchayats* during 1993-1998, 473 houses (Kadapra 156, Kulanada 155, and Ranny-Perunadu 162) were completed. If an equal number of houses were constructed with the financial assistance from other agencies, the total public houses in the *panchayats* during the accounting period would be around 946. The annual average investment on scheme houses was estimated to be Rs 31 lakh, which comes to about 12 percent of the annual average housing investment per *panchayat*.

Sources of funds for housing investment

For reasons of comparability, following the NSSO classification, sources of fund for construction are classified into four broad categories: Non-financial institutions, financial institutions, Individuals, and Own sources. The non-financial institutions consist of (i) Housing Boards/Development bodies, (ii) Government/Local bodies employer, (iii) Government, (iv) Public sector undertakings, and (v) Private sector. The financial institutions comprise of (i) Co-operative housing finance agencies, (ii) Co-operative bank/Credit banks, (iii) Commercial Banks, (iv) Provident fund, (v) LIC, (vi) other insurance companies and moneylenders. The third category pertains to Friends, Relatives, and Employers. The last category, Own sources refer to (i) Savings, (ii) Pensions, PF, other Annual Benefits, (iii) Sale of Assets, (iv) Subsidies and Grants, and (v) Gifts. The first three categories constitute borrowed funds.

The sources of funds for house construction in rural areas of all-India and Kerala, the sample households and the beneficiaries and non-beneficiaries of public housing schemes in the sample are given in Table 5.11.

Table 5.11 Sources of funds for house construction in rural areas by beneficiary status: All India, Kerala and Sample Households

Sources of funds	Percentage for rural areas				
	All-India	Kerala	Sample houses	Non-beneficiary houses	Beneficiary houses
Non-financial institutions	2.1	4.1	12.7	11.9	26.0
Financial institutions	12.5	15.2	5.8	5.1	15.9
Individuals	10.3	10.2	4.9	4.7	8.9
Own sources	75.1	70.5	76.6	78.3	49.2
Total	100.0	100.0	100.0	100.0	100.0

Source: Figures for all-India and Kerala are estimated from NSSO (1992), and others are estimated from survey results.

Own sources constituted about three-fourths of the total expenditure on house construction in all-India. The proportion was slightly less for rural Kerala. The share of own funds in house construction was also comparable with the all-India average, say 76.6 percent. However, a significant difference is observed as between beneficiary households (49.2 percent) and non-beneficiary households (78.3 percent).

The share of loans from the financial and non-financial institutions and individuals was about 25 percent and 30 percent respectively for the rural households of all-India and Kerala. The share of loans of the sample households taken as a whole comes to 24 percent in broad agreement with the all-India and Kerala averages. However, the share of borrowed funds was far higher (50 percent) for the beneficiary households. In other words, these households are deeply in debt. Many of them find it difficult to repay the borrowed funds from their own income and savings. This would mean that housing for the poorest as it operates now is counterproductive; it helps only to push the poor further down into penury. Ideally, housing assistance should form part of an overall strategy of economic development.

Like in other parts of the country, the penetration of the formal sector elements of urban lifestyle into rural areas has changed the outlook and aspirations of all sections of society. The traditional social systems and ways of life have broken down; the material use patterns of traditional house building and the organisation and technology of house construction have disappeared. All these changes are causing great difficulties for the poor for house construction, as we would show in the next section.

6. Suitability and Acceptability of Public Housing Schemes

The discussion in this section is based on both secondary and primary (PRA and household survey) data. Details of housing assistance and related aspects were collected from the office records of housing finance agencies. Information on materials market, materials use, technology, organisation, labour market, land price, and housing conditions in colonies was gathered through PRA. Data to discuss other aspects such as savings and house maintenance were collected through a household survey.

Penetration of market forces in all rural activities and disappearance of common property resources seem to have put the poor in a dilemma. They are no longer able to collect materials from common property to build a traditional house; nor do they have the capacity to construct a 'standard dwelling' with the partial financial support given by public agencies. The maximum financial support ever given under any public housing scheme was Rs 35000; that too only for houses under Central schemes. The majority of the state schemes consist of two components – loan and subsidy. The maximum subsidy allotted under the latest *Maithri* scheme was Rs 9000. A household, which spends its near-total income for the purchase of food often finds it difficult to command (purchased) inputs with the partial financial support from public agencies for building a 'livable' house. In fact, the quality of the house that anyone would be able to construct depends on his command over critical inputs such as land, materials, and labour.

Housing assistance

Getting public houses sanctioned itself is a laborious and tedious task. First, eligible applicants should get information about the scheme and the documents to be submitted with the time of application. More than 60 percent of the sample households got the information through the local leaders of the mainstream political parties and 35 percent through their friends and relatives. Second, the applicant should get relevant certificates from concerned offices to prove his/her eligibility. Three, title deeds of land and other original documents should be submitted to the concerned agencies. Housing assistance sanctioned after scrutiny and proper verification will be released in three or four instalments. To get each instalment released, the beneficiary should collect and submit stage certificates from the concerned authorities. Beneficiaries will have to pay several visits to the local offices of the housing finance agencies to get all the instalments released. For instance, one sample beneficiary had to visit the office 40 times to get the full amount. Distribution of beneficiary households of casual labour according to the number of times of visits to offices of housing agencies is shown in Table 6.1.

Heads of every second beneficiary household visited offices of housing agencies more than four times and about 12 percent among them visited more than 10 times to get the full amount released. Given the changed profile of casual workers and the uncertainty of employment opportunities, frequent visits to offices involve opportunity cost in terms of loss of work and wages. Opportunity costs of such visits are high during fair and busy seasons.

Table 6.1 Distribution of Beneficiary Casual Labour Households according to Number of Visits to Offices of Housing Agencies

No. of times of visits to office	No. of sample households
1 – 4	34 (52.3)
4 – 6	13 (20.0)
6 – 10	10 (15.4)
More than 10	8 (12.3)
Total	65 (100.0)

Source: Field survey

Institutions and agencies providing housing assistance to economically weaker sections insist on beneficiary contribution in terms of materials and labour. In addition to the beneficiary contribution, the households were expected to mobilise the required materials and labour for the construction work, of course with the financial assistance of the agencies. However, given the changes in the availability and use of materials, and the difficulties involved in foregoing own wage employment, several beneficiary households failed to command construction materials and labour in time.

Materials market

Conditions of housing vary with the socio-economic status of the household. Moreover, the materials use patterns vary widely among the different types of houses. Till the early 1960s, a typical poor household in midland and lowland villages lived in small thatched huts raised on six pillars with cow-dung-plastered floor and mud walls. Mud, bamboo, coconut trees, coconut leaves, palm leaves, and grass had been the popular building materials of the poor households in all the three *panchayats*. Common property resources[9] were available and accessible to the poor. Several materials owned by private individuals also used to be made available to them at low and affordable prices or even free of cost. A middle class dwelling was one constructed on rubble foundation with laterite walls and tiled roofs with separate and open *verandas*. Their sizes varied with the socio-economic status and the size of the household. Large, modern houses were few, and were owned by rich cultivators.

Socio-economic changes since the early 1970s[10] had their impacts on the uses and prices of indigenous building materials. Average prices of indigenous building materials (eg: sand, clay) increased by about 15 to 20 times since the mid-seventies. During that period, the average price of factory-produced materials (eg: cement, iron rods, sanitary ware, and electric goods increased only less than 10-fold). Because of commodification, marketisation, and extensive cultivation of commercial crops like rubber the rural poor lost accessibility to common property resources. At present, they have to compete with the rural elite to command building materials from the market. The partial financial support of government agencies is too inadequate to procure the materials needed for a standard house. Moreover, several materials like mud, clay, palm leaves, and coconut leaves, which had been in use for centuries, began to be looked down upon for their non-durability. Though technologies to improve the durability and strength of such materials are available, the rural poor are not aware of them.

Since the housing agencies insist on the use of durable materials, the beneficiary households are forced to use factory-produced modern inputs.

Though unfriendly to ecology and environment and energy-intensive in their production, modern materials are flexible, durable, and aesthetically appealing. Because of economies of scale, relative costs of such materials are low for large houses. Since transportation cost accounts for a major proportion of its value, use of small quantities of modern materials will be uneconomical. Government-assisted scheme houses are relatively small and therefore, on-the-site cost of materials is higher. Radical changes in material use patterns are a recent phenomenon.

Changes in material use

Elderly people of the sample *panchayats* shared with us their experiences of house construction. Indigenous inputs had been extensively in use for construction of residential houses until the 1960s. Cement, river sand, and iron and steel were only sparingly used till the mid-seventies and that too only for middle and high-class constructions. Popular use of materials such as glazed tiles, mosaic chips and tiles, asbestos, and PVC began only in the 1980s. Tar sheet as roof material was not used until the early 1990s. Cement bricks and cement hollow bricks for walls of all classes of houses and marble and granite for floors of middle class and high class houses began to be used only in the 1990s. The use of tiles for roof declined drastically during the Nineties. None of the houses constructed in the 1990s used lime for mortar preparation or for plastering. Several factory- produced materials became popular in the 1990s. Tar and tin sheets took the place of grass and leaves as roof materials of the houses of the lowest income groups. Information on the use of building materials since 1930, gathered through our informal discussions with the elderly and the knowledgeable persons of the sample *panchayats* is given in Table 6.2.

Technology

Technology for the use of indigenous materials was simple. Semi-skilled workers could handle many operations under the guidance of local head-craftsmen (*Moothasari). Moothasari* could guide all the operations from start to finish of a small construction using local materials. However, with the use of modern materials, each task becomes a specialised job requiring specific skills or training. Moreover, a worker skilled in any specific activity does not necessarily have knowledge and skills in other activities related to construction. For instance, the work of carpenter is now confined to carpentry. He has nothing to do with brickwork or concrete work. Similarly, a mason's skill and training and hence work is confined to the masonry part of the building. Specialisation and de-skilling have resulted in the need for an organiser to co-ordinate the diverse activities involved in house construction.

Head Carpenter or *Moothasari* was the co-ordinator of the diverse house construction activities and therefore the chief technical consultant for the construction of all types of houses till the mid-seventies. Consultancy service was provided relatively free of cost since he did it along with carpentry. No separate fees except some payment by way of obeisance (*Dakshina*) used to be given to him. However, with the use of modern materials such as cement the

Table 6.2 Popular Building Materials in use for house construction of the poor and the middle class of the Sample panchayats since 1930

Year	Building Materials		
	Kadapra	**Kulanada**	**Ranny-Perunadu**
1930	Mud, laterite stone, bamboo, Palmyra leaves, coconut leaves and timber	Mud, sun dried mud bricks, laterite stone, bamboo, Palmyra leaves, grass and timber	Mud, rubble, sun-dried mud bricks, bamboo, grass, Palmyra leaves, coconut leaves and timber
1940	Mud, bamboo, laterite stone, Palmyra leaves, coconut stem and coconut leaves, tile, lime and timber	Mud, sun dried clay bricks, sun-dried mud bricks, laterite stone, Palmyra leaves, bamboo, coconut stem and leaves, grass and timber	Mud, sun-dried mud, bricks, rubble, bamboo, coconut stem and coconut leaves, grass and timber
1950	Mud, bamboo, laterite stone, Palmyra leaves, coconut stem and leaves, tile, lime and timber	Mud, sun-dried clay bricks, sun dried mud bricks, coconut stem and leaves, laterite stone, bamboo, Palmyra leaves, grass, timber, tile and lime	Mud, rubble, sun-dried mud bricks, bamboo palm leaves, grass, coconut stem and leaves, tile and lime
1960	Mud, bamboo, rubble, laterite stone, palm leaves, coconut leaves and stem, lime, river sand, tiles and timber	Mud, sun-dried mud bricks, rubble, sun dried clay bricks, laterite stone, Palmyra leaves, coconut stem and leaves, lime, tile, timber, river sand and cement	Mud, sun-dried mud bricks, rubble, grass, coconut stem and leaves, Palmyra leaves, bamboo, lime, tiles, timber and cement
1970	Laterite stone, mud, burned bricks, coconut stem and leaves, rubble, lime, cement, river sand, tiles, iron and steel and timber	Laterite stone, mud, burned bricks, sun-dried bricks, rubble, lime, river sand, cement, iron and steel and timber	Mud, laterite stone, rubble, sun-dried bricks, burned bricks, grass, coconut stem and leaves, Palmyra leaves, lime, cement, iron and steel, and timber
1980	Mud, burned bricks, rubble, laterite stone, lime, coconut stem and leaves, cement, river sand, tiles, iron and steel, PVC, glazed tiles, mosaic chips and tiles and timber	Laterite stone, mud, burned bricks, rubble, river sand, tiles, lime, cement, iron and steel, asbestos, coconut stem and leaves, PVC, glazed tiles, mosaic chips and tiles and timber	Mud, burned bricks, laterite stone, rubble, lime, river sand, tiles, cement, iron and steel, asbestos, coconut stem and leaves, PVC, glazed tiles, mosaic chips and tiles and timber
1990	Mud, burned bricks, rubble, cement, river sand, coconut stem and leaves, tiles, iron and steel, PVC, asbestos, glazed tiles, mosaic chips and tiles, marble, aluminium and timber	Mud, laterite stone, rubble, burned bricks, river sand, coconut stem and leaves, tiles, asbestos, tar sheet, iron and steel, cement, PVC, glazed tiles, mosaic chips and times, aluminium and timber	Mud, laterite, rubble, burned bricks, river sand, cement, iron and steel, coconut stem and leaves, tiles, asbestos, tar sheet, glazed tiles, mosaic, marble, PVC, aluminium and timber
1998	Mud, burned bricks, rubble, cement bricks, cement hollow bricks, river sand, coconut stem and leaves, asbestos, tar sheet, glazed tiles, mosaic, marble, granite, PVC, aluminium, and timber	Mud, laterite, burned bricks, rubble, cement bricks, cement hollow bricks, river sand, iron and steel, tar sheet, asbestos, glazed tiles, mosaic, granite, marble, PVC, aluminium, and timber	Mud, laterite, burned bricks, rubble, cement bricks, cement hollow bricks, river sand, iron and steel, tar sheet, asbestos, glazed tiles, mosaic, granite, marble, PVC, aluminium, and timber

primacy of the carpenter ended. The role of the carpenter is now confined to woodwork. The mason became the key person in the construction of RCC-roofed houses. He also provided consultancy services relatively free as he did them as part of his responsibility in undertaking masonry work. From the 1980s onwards, when the average size of middle class houses increased, architects and engineers provided consultancy services for construction in all the three sample *panchayats*. Divorced from the physical execution of work, they charged consultation and supervision charges on the basis of the estimated cost of the construction. Their fee was beyond the affordability of the small owner-builders. Therefore, the beneficiary depended on carpenters and masons, but of course, for a fee.

Irrespective of geographical differences, all the *panchayats* had more or less similar patterns of evaluation of the construction and co-ordination of houses. Carpenters continued to be the chief consultant of tiled roof houses throughout. Consultancy services of masons were limited to relatively small RCC-roofed houses. Builders of large RCC-roofed houses consulted engineers or architects for technical advice and supervision (Table 6.3).

Table 6.3 Consultancy and co-ordination of house construction activities

Year	Kadapra	Kulanada	Perunadu
1930	Carpenter	Carpenter	Carpenter
1940	Carpenter	Carpenter	Carpenter
1950	Carpenter	Carpenter	Carpenter
1960	Carpenter	Carpenter	Carpenter
1970	Carpenter, mason	Carpenter, mason	Carpenter, mason
1980	Carpenter, mason engineer	Carpenter, mason and engineer	Carpenter, mason and and engineer
1990	Carpenter, mason, engineer and architect	Carpenter, mason, engineer and architect	Carpenter, mason, engineer and architect
1998	Carpenter, mason, engineer and architect	Carpenter, mason, engineer and architect	Carpenter, mason, engineer and architect

Whoever be the consultant or the co-ordinator, his service came to be priced by the 1990s. The beneficiary households with their limited resources depended on semi-skilled carpenters and masons for consultancy. Even that was costly, for it was difficult to get their services in time.

Organisation

House construction involves teamwork. Teams have to be organised to undertake specific activities such as brick laying, carpentry, and RCC work. Moreover, timely supply of materials also should be ensured for uninterrupted progress of construction work. The owner-builder, in most cases the head of the household, was the key person who organised men and materials for construction till the early 1970s. There were no intermediaries or agents for the supply of men and materials. However, with the housing boom which began in the late seventies intermediaries or agents emerged for the supply of building inputs. By the 1990s, it became difficult for the owners to collect or purchase major building inputs directly from the sources

without the help of agents. The case of labour was not different either as we shall show presently. In consequence, except for tiny *kutcha* constructions the owner-builders are forced to depend on agents or contractors for supply of inputs and prompt execution of the work.

Contracting and sub-contracting systems in building construction became popular in the 1990s. Contractors now do the construction work of all relatively large houses. Even small houses, which use modern construction materials, are built by contractors, seldom by the owners directly.

The major proportion of the beneficiary households in our sample is seen to have depended on contractors and sub-contractors for inputs and execution of their house construction work. Though they were the decision-makers, their involvement in the construction process was meagre. In fact, less than one-third of the beneficiary households of casual labourers contributed family labour for their own house construction. All the items of work, including earthwork for levelling the ground, were done by contractors in more than one-fourth of the sample households.

Non-availability of skilled labour

Nature of rural jobs, types of work available, skill requirements, and work culture have undergone tremendous changes[11] since the early 1970s. Though a large number of non-farm rural jobs have emerged, the mainstream trade unions have adopted a closed shop strategy to reap the maximum benefits possible for the unionised workers. In order to counter the closed-shop strategy of unions, able-bodied young workers nowadays organise themselves into small independent work groups and undertake contractual works. They have succeeded in ensuring for themselves wage rates on par with those of the unionised workers, but without reporting to the labour struggles. These work groups, consisting of skilled and unskilled labour undertook house construction works also. High demand for construction workers coupled with supply inelasticity resulted in wage increases. Through prudent supply management, the work groups earned periodic wage increase since the mid-seventies. The average money wage of skilled construction workers increased more than 15-fold since mid-Seventies in all the three *panchayats*.

Differences in the skills of workers and the heterogeneity of the items of work have rendered the rural labour market highly segmented. The traditional practice of self-help and mutual help among villagers for works such as house construction, and annual maintenance of buildings has almost disappeared. All these types of work are now done by wage labour. This is the present practice even among the lowliest of houses in the colonies of casual unskilled workers.

The traditional practice of members of the household participating in the construction and related items of own households has also dwindled. Earlier, women of the households used to participate in activities like pleating of coconut leaves for thatching, which is a semi-skilled activity. At present women are neither inclined nor do they have the skills to do such activities. Women in most casual labour families do not have the skills to take up construction activities, particularly those using modern building materials. Male members of work groups do not do by themselves even own work partly for fear of losing membership and partly for

lack of the required skills. For instance, the majority of the sample beneficiary households are seen to have entrusted the construction of their houses to local contractors. Even then, inordinate delays have occurred in the completion of work in about 44 percent of the sample housing units.

To understand the delay in the construction of schemes at the *panchayat* level, we collected from the *panchayat* records information on the date of release of the first instalment and the reported date of completion of beneficiary houses. Since all the essential items of information were not available for all the 1377 houses, our analysis is confined to 225 (16 percent) houses for which information was available. Construction of about 18 percent houses was completed in time, i.e., within six months after the release of the first instalment. About 12 percent houses took more than two years for completion. Distribution of beneficiary houses according to the length of time taken for completion after receipt of the first instalment of assistance is shown in Table 6.4.

Table 6.4 Distribution of beneficiary houses according to time taken for completion after the receipt of the first instalment of assistance by *panchayat*

Time taken for completion (in months)	No. of sample government assisted housing units			
	Kadapra	Kulanada	Ranny-Perunadu	Total
<6	18 (22.5)	12 (12.2)	10 (21.3)	40 (17.8)
6—12	31 (38.7)	42 (48.9)	13 (27.7)	86 (38.2)
12—24	17 (21.3)	35 (35.7)	20 (42.5)	72 (32.0)
24-36	8 (10.0)	6 (6.1)	3 (6.4)	17 (7.6)
>=36	6 (7.5)	3 (3.1)	1 (2.1)	10 (4.4)
Total	80 (100.0)	98 (100.0)	47 (100.0)	225 (100.0)

Figures in brackets are percentages; Source: various government office records

A few households took more than three years to complete the work. Delay in construction escalates cost and effects efficiency in the use of materials. One of the major reasons for delay was difficulty in getting labour in time. Skilled workers are interested in the construction of big houses in which they get regular work continuously for long periods. They take up small construction, in general, only during periods they are not in demand for construction of big houses. Since the number of big houses was on the increase, the lowest income households are in a situation of unequal competition with richer households for procuring skilled labour. Therefore, even if funds were available, the beneficiary households find it difficult to complete the work in time.

High aspirations

Despite their low economic status, the majority of the beneficiary households aspire to construct large and quality houses. About 40 percent of the casual labour households wanted to construct spacious houses by expanding the existing houses with addition of rooms. A few among them opted adoption of four rooms constructed using modern commercial inputs and modern technology. 'Loss of self-reliance and traditional capacities, coupled with the

inability to incorporate modern facilities, is a typical development problem that tends to lead to poverty. Modern building materials are often not affordable, yet traditional ones are viewed with contempt. The same is true for building technology and house design. Government intervention though well-intentioned, has probably aggravated the growing dependence and diminishing self-reliance of the rural population - it may, in effect, have helped to create underdevelopment' (Glaeser, 1995). In fact, housing assistance has created some sort of underdevelopment at least in the case of a few beneficiaries in the sample *panchayats*.

All the sample beneficiaries wanted costly durable materials for use in their building construction: rubble (for foundation), cement concrete or mosaic (for floor), burnt bricks (for walls), and tiles or RCC (for roof). Timber is the most preferred material for doors and windows. They opt for strong, durable, spacious, and aesthetically appealing houses. They also prefer factory-made goods for use in their buildings. The majority of them had little faith in the various forms of cost-effective technology, design, and methods of construction. Even if made available, only about 10 percent were willing to use them for own construction.

Poor savings

The rural poor in all the *panchayats* spent nearly all their income for food. Very few households had savings due to uncertainty in employment and income. *Nellu-chitties*, which had been very popular among poor rural women as a convenient form of savings, have virtually disappeared from the rural scene due to decline of rice cultivation. Complete dependence on purchased food materials and food has affected the saving capacity of rural unskilled women workers.

Occasional incomes that non-farm male workers got from contract work are spent conspicuously on food, dress, and travel. They save little. Though the trade union leadership in Ranny-Perunadu *panchayat* attempted to promote savings among the loading and unloading workers, the efforts failed due to resistance from workers. Though the members of a particular trade union opened bank accounts, none of them made any deposits.

Poor maintenance and housing improvement

Lack of adequate savings affected their capacity to effect timely maintenance and repairs of their houses. Only about 26 percent of the sample casual labour households reported that they had some amount of savings to meet a part of the cost of housing improvement. A few households would dispose of their assets to raise funds for housing improvement. However, about 52 percent of the sample households had no source of funds other than any possible government assistance in the form of grant. They expect grants and not loans. Given their experience of irregular employment and income, it is only natural that they do not have the capacity to repay loans.

Even without availing housing loans, a significant proportion of casual labour households are deeply in debt. Medical expenses and recurring expenses for house maintenance were the two major reasons reported for indebtedness. The young generation is not familiar with indigenous methods of curing simple ailments. Even for simple ailments such as the common cold, they depend on modern clinics and medicines. Similarly, annual maintenance and repairs of *kutcha*

houses are done with purchased materials. Since medical expenses and house maintenance expenses cannot be postponed, household without savings are forced to borrow from formal or informal institutional agencies or friends and neighbours. In case they failed to make savings from income for repayment of loans in time, they borrow for foreclosure of default. In this process, a few households were trapped in a vicious circle of debt[12].

Households, which spent more than two to three times their gross annual income on housing, could not raise funds for repair or maintenance, which became essential after a few years of completion of construction. For want of repair and maintenance, housing quality went on deteriorating year after year. Given the fact that the capacity of the beneficiary households has remained unchanged for years, the relative quality of the government-assisted houses remained as low as that of the housing units of the non-beneficiaries in the sample panchayats. Thus, it is seen that provision of partial financial assistance has not solved the housing problem of the poor.

Turner has this to say about this problem: 'It is argued that housing and, by implication, all other personal and locally specific services must be autonomous. Autonomy is far from absolute – for it depends on access to essential resources. In housing local autonomy and direct or indirect dweller control depends on the availability of appropriate tools and materials, of land and finance. In general, the accessibility of these basic resources is a function of law and its administration, and these, in turn, are functions of central authority. Many of those who mistakenly suppose that the problem of housing in rich countries is lack of money or the slow pace of existing production machinery would really like to see uniform housing estates. We have no right whatsoever to tell others to tighten their belts while our own bellies protrude so much that we cannot see the poverty we stand on' (Turner, 1976). In this context, it should be remembered that a major proportion of the housing schemes being implemented for the rural poor are designed on the pattern of developed market economies. The needs, priorities, capabilities, and aspirations of the rural poor in Kerala are definitely different from those in other parts of India and from those in developed market economies.

However, every second sample beneficiary household firmly believed that its social status has improved with the construction of new houses. However, none of them had improved either its job opportunities or health status after having moved into the new home. All the beneficiary households had complaints about the uniform 'standards', 'strict conditions' and the 'rigid' financing patterns of the housing assistance schemes. More than two-thirds of the sample households were of the opinion that the government should not insist on type designs and minimum sizes, as is the practice today. Instead, the government should ensure supply of good quality building materials at affordable prices. Many households expressed their willingness to produce materials from local resources for use in their own house construction if appropriate technology and training were given to them. About 55 percent of the households believed that they could have solved their housing problem without incurring debts if such technology and training were imparted to them.

Despite the massive housing assistance being rendered, several deserving households could not receive it for want of ownership of the minimum extent of land required to become eligible to apply for assistance. Such households end up in slum-like rural settlements.

Land price and growth of slums in rural areas

Inelastic supply of and rapidly rising demand for land, particularly since the mid-seventies have pushed up land prices to very high levels. Income levels of casual labour households are too low to enable them to purchase even a single cent of land in most rural parts of Kerala. At present housing assistance is confined to households, which own at least two cents of land. The majority of *Kudikidappukars* who got 10 cents of land around their hutments under provisions of the land reforms Act of 1970 have received housing loans and grants, pledging the original documents and title deeds of land as collateral. However, owing to uncertain work opportunities and income, many beneficiary households have defaulted monthly instalments of loan repayment and failed to take back the documents from the lending institutions.

Slum-like settlement has grown around the housing structures of early hutment dwellers. New nuclear families have emerged which built attachments to the original structures or put up new huts (most of them poor *kutcha* constructions) around the original ones. The quality of the original houses continued to deteriorate for want of timely repairs and maintenance. Growth of unserviceable *kutcha* structures around the old houses in tiny plots led to congestion and acute shortage of basic facilities and amenities. The situation was not different in the case of other landless households. Despite land reforms, the percentage of landless households in Kadapra *panchayat* increased from about 14 percent in 1960 to about 15 percent in 1996 (Village monograph, 1960; PVR, 1996). Clusters of poor quality houses without basic facilities are seen in several parts of the sample *panchayats*.

In Kadapra *panchayat,* there were 49 recognised slum-like colonies in 1996. The colonies together consisted of 255 houses with a total population of 1231. The average household size in the colonies was 4.83 persons. About 40 per cent of the houses in these colonies were unserviceable *kutcha* constructions. *Pucca* houses were few and far between. About 59 percent of houses in the colonies were semi-*pucca*. Besides recognised colonies there were several unrecognised colonies and housing clusters in which a few of the houses were the ones put up in the 10 cents of land received by way of *Kudikidappu,* consequent on land relations legislation. The estimated shortage of houses, measured in terms of the mismatch between houses and households, in the recognised colonies was about 43 percent (PVR, 1996). It is also reported that more than three households each were residing at least in 30 houses in the colonies. Most houses in the colonies did not have even the bare minimum facilities and amenities.

The housing conditions of the residents of colonies in Kulanada were not much different either. However, landless households were reported to be absent in this midland *panchayat*. There were in 1995, 28 recognised colonies with 503 houses and 2291 persons. The average number of persons per house was 4.55. Besides the 28 recognised colonies there were 5 unrecognised colonies also. Houses in the colonies did not have basic facilities like safe drinking water and toilet. Only less than 10 percent of the households had latrine facilities. Unlike in Kadapra and Kulanada, 95 percent of the colony residents in Ranny-Perunadu belonged to the SC/ST communities. There were 11 recognised colonies consisting of 217 houses and 1533 persons. The average number of persons residing in the houses was 7.06.

Besides the recognised colonies, 294 ST families lived in four Scheduled Tribe habitats in the *panchayat*.

General condition in the colonies

Except a few, the main earning members of the households in the colonies were casual workers either in farm or non-farm sectors. Lack of employment opportunities, irregular work, and low income on the one hand and increased cost of living on the other, made it difficult for them to make both ends meet. Expenses for medical treatment were very high and the majority of them had to borrow heavily for meeting medical expenses. Most of the household had land size of below 10 cents. There were cases of more than four houses living in a ten-cent plot. Open space is not available to grow vegetables, rear chicken, and goat, not even for children to play.

The quality of houses in the colonies is extremely poor. Every 9 out of 10 households are dissatisfied with their housing quality. Unable to find resources to make any improvement, they live in subhuman conditions. None of them wants a loan, even if some agency is willing to lend. What they prefer is government grant or free housing. Loan, they argue, is a trap. Given their uncertain employment and income conditions, they are diffident of their ability to make payment of fixed monthly instalments. They are afraid of losing their land and other assets due to default in loan repayment. To avoid the risks involved, the majority of the households are not willing to avail of any loan facility even if provided interest-free.

The housing conditions of the households living in the colonies were ascertained from 36 heads of households: Kadapra 14, Kulanada 10, and Ranny-Perunadu 12. Their family size was relatively small. Two-thirds had four members or less each. Every three out of four families had plots of less than 10 cents each. However, five families had more than 20 cents each. About 50 percent of the houses were constructed in the 1990s (Table 6.5).

Fifty-six percent of the houses in the colonies were constructed with own sources of funds. They did not get any assistance from either public or voluntary agencies. Since the size and quality of the houses was very poor, the investment requirement was also small. Though they are not satisfied with their house quality they find no means to make any improvement.

The foregoing discussion clearly points to the unsuitability of public housing schemes in the present form of partial financial assistance. Market forces have penetrated into all spheresof building activity. Common property resources are not accessible to the rural poor. Prices of popular building materials and technical consultancy services are beyond the affordability of the lowest income groups. However, their aspirations and expectations are high. They want to construct good quality houses using modern materials. They look down upon traditional building materials and technology while modern materials and technology remain beyond their reach. Financial assistance provided under the public housing schemes is inadequate to satisfy their requirements. With the limited funds they receive from housing schemes, they plan for construction of large houses, which require additional investment; alternatively, they

Table 6.5 Sample colony houses classified according to year of construction by *panchayats*

Year	Kadapra	Kulanada	Ranny-Perunadu	Total
Before 1970	2	0	2	4
1970-80	2	2	3	7
1980-90	5	2	1	8
1990-95	4	3	4	11
After 1995	1	3	2	6
Total	14	10	11	36

Source: PRA

spend the funds for non-housing purposes. In both cases, the desired housing improvement does not happen. The public schemes in the present form are an economic drain and waste of resources. Only if they are modified to suit the socio-economic and cultural specificity of rural Kerala, they would contribute to positive development.

7. An Alternative Approach

Having found that the present pattern of partial financial support has failed to achieve the desired goals, we would like to suggest an alternative approach. The people's participatory planning process seems to provide ample opportunities and the right environment for mitigating the housing problem of the rural poor.

Need for an alternative approach

As has been already shown, under the given socio-economic and cultural specificity of rural Kerala, housing problem of the poor is unlikely to be solved by schemes of partial financial assistance. Nevertheless, the people's campaign for participatory planning launched recently provides the right environment to formulate and implement appropriate schemes to mitigate the housing problem of the poor. The popularity of the ongoing Participatory Local Level Development Planning (PLLDP) in terms of participation in decision-making and programme implementation became evident during our households survey. Heads of all casual labour families, but one, reported their firm belief that that the *Janakeeyasoothranam* (People's Planning) would give better opportunities to the rural poor for their uplift. The level of participation by the poor *grama sabha* meetings was very high. Notwithstanding ideological and political differences[13], about 90 percent of the sample households participated in at least one *grama sabha* meeting during the past one year. About 55 percent among them took part in deliberations and the decision-making process. The enthusiasm evinced in the sample *panchayats* was not exceptional. In fact, 'the campaign has come to include a new component of voluntary resource mobilisation from below, primarily through labour enthusiasm, to solve some of the pressing needs of the people' in the State as a whole (Isaac and Harilal, 1997).

PLLDP envisages local bodies planning for themselves: identifying the felt needs of the people, analysing the development problems, assessing local resources, making feasible development schemes, and prioritising and integrating them into a local five-year plan document. People's Planning campaign has enabled the poor to raise their housing needs in *grama sabha* meetings. Their demand is well reflected in projects and plan proposals prepared by several *panchayats*. All the three sample *panchayats* have resolved to solve the housing problem of the poor in them, before the expiry of the Ninth Plan. The Pathanamthitta district panchayat also resolved to implement the *Housing for all* programme.

Despite all the rhetoric, the three sample *panchayats* do not seem to have made any change in the implementation pattern; the practice before the People's Planning Campaign is continued unchanged. Even during the third year of People's Planning Programme, the structure, content, and financing pattern of public housing schemes remains unchanged. However, procedures for the selection of beneficiaries have become more objective and transparent. The selection criterion followed in Kadapra is a typical case in point[14]. None of the beneficiaries of housing schemes under *Janakeeyasoothranam* have completed house-building work even after two years since the allotment of first instalment of the sanctioned amount[15]. Though we have the right environment, the housing schemes have failed to achieve the desired goal because of the inappropriateness of the schemes and lack of change in the implementation strategy. The

perspective of the housing schemes designed for the rural poor does not seem to be appropriate.

Perspective

The decision-makers should accept the fact that housing problem is a symptom of poverty. It arises when the housing processes, that is the way in which houses are produced and allocated, fails to cater to the needs, hopes, and aspirations of the poor. Such a situation may arise due to several reasons: lack of purchasing power (or affordability), misuse or wasteful use of resources, non-use of or failure to use, available resources, lack of access to places and locations where resources are available, or institutional factors that prevent transferability of ownership of resources. Therefore, housing problem is not simply an economic problem. Even if we suggest economic solution to the problem, it may not help the poor. Their priorities may be different. With the little finance being provided they may not be able to procure the required scarce building materials and labour at the prevailing high prices.

Besides, public housing policies and schemes being followed in Kerala are based on the policy framework developed in the context of the national economy. Though the national policy allows flexibility in the designing of schemes and programmes according to regional requirements, it is not yet reflected in the schemes implemented in the State. For reasons of convenience of administration, the schemes at the State level are designed for implementation uniformly in all the *panchayats*. Differences in geographic, socio-economic, cultural, and ethnic specificities in each region are not considered. Setting a uniform standard for all regions that have diverse features is destructive of the very purpose of state intervention.

In a dynamic society in which needs and aspirations are changing rapidly the task of conceptualising an 'ideal standard' will be difficult. In fact, the expectations about the quality of housing and the level of aspiration for attaining that quality appear to be increasing at a rate more rapid than the increase in the means of the rural poor in Kerala. The development dilemma that the rural poor face at present is that they look down upon the traditional materials, methods, and processes with contempt while they do not have the means to construct 'modern' houses[16] they aspire to possess. Contrary to traditional societies, those living in bad houses in the State are now fully conscious of their shortcomings. Being an educated and modernised society, the status and prestige values attached to housing in rural Kerala are far higher than in the rest of the country.

In the above context, we should look at the housing problem from the perspective of sustained livelihood conditions of the rural poor. Since market forces have penetrated into all activities related to building materials production and on-the-site construction, traditional self-help and mutual help methods have become impracticable. Housing assistance in this situation should be perceived as a means to improve their livelihood conditions and self-dependence. Without that, their house quality will never improve. Housing schemes for the rural poor should therefore become a part of development programmes for the wellbeing of the masses.

Strategy

A two-pronged strategy, (i) discouraging wasteful use of scarce building inputs and (ii) helping the underprivileged to construct reasonable dwelling, may be needed to mitigate the housing problem. Construction of luxury houses squandering scarce building materials should be discouraged through fiscal measures. Building taxes should aim at discouraging wasteful opulent construction and encouraging cost-effective construction. In addition, some institutional mechanism is needed to provide basic materials to the rural poor at affordable prices.

Public schemes, which provide consumption benefits, involving high running costs namely in the form of replacement and repair costs and debt services to the beneficiaries, should be converted to investment schemes which create income and employment. Unlike other investments, fixed capital requirement for house construction is negligible. All that is needed is building inputs and labourers. The strategy at the local level must be to produce as much building inputs as is possible at the local level so as to provide both income and consumption benefits to the builder. To achieve this goal an integrated approach is needed.

Integrated approach

Government at the centre and the states have, at present, several employment and welfare programmes aimed at the uplift of the weaker sections. Proper integration of these programmes with production and marketing of building materials and on-the-site construction, is required for achieving the desired goal. Prospective builders have to be trained to take up these tasks. Facilities in the existing Industrial Training Institutes (ITI), Industrial Training Centres (ITC), *Nirmithi Kendras,* and COSTFORD in the State could be used for the purpose.

We have seen elsewhere that the average annual investment in housing per household was about Rs 5500 during the five-year period from 1993. Not less than one half of this amount went as wages to workers for on-the-site construction. Though the share of cost of beneficiary houses was only about 12 percent of the annual average housing investment, if properly planned, even this much of expenditure would help to ensure larger employment and more income to the rural poor. Therefore, the new strategy should be to empower the people to gain employment and income and accumulate savings to construct own houses without hurting their self-dependence and self-reliance. All these can be done only on the basis of proper appreciation and analysis of the specificity of each locality and its housing situation.

Creation of data base at *panchayat* level

We have national and State-level data on quantitative and qualitative aspects of housing. Qualitative aspects are measured on the basis of arbitrarily fixed standards. The criteria with which standards are judged are often subjective and ethnocentric. However, a uniform standard for the country as a whole is required for assessing the extent and magnitude of the problem and suggesting an overall planned solution[17]. Data at the central and the state levels are based on such a criterion, which is, of course, inevitable for financial planning. However, micro-level or decentralised planning demands an entirely different type of data.

Standardisation is not needed for micro-level assessment of the magnitude of the problem. Given the modern qualitative and quantitative techniques, it is not difficult to take stock of the resource endowments, house quality, housing shortage, and needs of the people and to assess the physical and financial resources required to mitigate the problem. Based on this information it is easy to define strategies and to prepare physical and financial plans and programmes to tackle the problem in that micro-situation within a desired period.

The database at the *panchayat* level must be comprehensive, consisting of the details of housing quality and information about the households deserving public support. The quality of the existing stock should be assessed on the basis of their materials of structure (roof, walls, and floor), space, and facilities and amenities. Information on households such as occupation of the head, income, and assets should also be collected. Using qualitative tools, we can bring them to a 0 to 100 in a welfare scale. If we have such a scale, it is easy to choose households from the lowest rungs of the ladder for giving public support. The welfare criteria fixed at the *panchayat* level must be objective and should be based on dialogue and discussion with the various stakeholders and experts.

All the households eligible to get public support may not require new houses. Semi-*pucca* and serviceable *kutcha* houses could be upgraded and renovated. The houseless households may be grouped into two categories: those who do not have land and those who have at least three cents of land, to construct a house. The comprehensive data should also contain information on the capabilities, potentials, and priorities of each eligible household. Based on such a comprehensive database the *panchayats* may prepare projects, programmes, and plans to mitigate the problem within a reasonable time frame.

Projects, programmes, and plans

Separate projects for new construction, maintenance, and repairs and renovation should be prepared. Details regarding the need, importance, resources requirements (both physical and financial), sources of resources including building materials, labour and finance, work plan, time plan for completing each task, implementation and mechanisms for monitoring the entire works should be specified in each project. Projects of identical features may be brought together to form a scheme. All the schemes relating to residential construction in a *panchayat* may be combined to form its housing plan. Three types of plans depending on the time horizon – short term, medium term, and long term – may be prepared. Short-term plans would constitute annual plans. Schemes prepared for five-years would be the medium-term plan; and perspective plans to mitigate the problem within a specified time frame, say, 10 to 15 years, may be considered long-term. Guidelines published by the State Planning Board[18] would be useful in the preparation of the *panchayat* plans. Projects, programmes, and plans should be in conformity with the broad outline of strategies accepted at the State and the national levels.

The present policy at the national and State levels is to support and help the poor to own an affordable shelter. Given the unique socio-economic and cultural context of rural Kerala, deprived sections living at the margin may not be able to afford a shelter of the 'standard' type. For them the strategy must be either to provide a house or empower them to own

affordable shelter. If housing provision is proposed, the financial support must be high enough to command materials and skilled labour to construct *pucca* houses. That, of course, will be the most acceptable approach. It would be easy to administer and hence will be acceptable to bureaucrats and multilateral financial agencies too. However, it is not sustainable and will definitely affect the self-reliance of people. Therefore, we propose the second option that is to empower people to own their shelter. It is not only sustainable but also would contribute to their self-reliance.

To support the people to own affordable shelter, the *panchayat* housing plans should be integrated with other development plans including those for training and employment creation. It is not an easy task. Co-operation and co-ordination of the stakeholders, decision-makers, bureaucrats, government, and non-governmental agencies at the *panchayat* level are inevitable for its success. Moreover, strong political will is needed to plan and implement the programme at the grassroots level. Given the high investment being made in the housing sector and the success of the people's campaign for local level planning it would not be difficult to achieve this goal. The beneficiary households should be given training and appropriate technology to empower them to own reasonable shelter. The government should provide necessary infrastructure, technical support, and micro-credit facilities for the purpose.

Technology and training

Popular technology at present is the one based on the use of modern factory-produced materials. Technical consultancy is costly. Ordinary people are not familiar with modern technology. Services of technically qualified personnel are required for the purpose. Instead of choosing materials suitable for the popular technologies, development of appropriate technologies suitable for use of indigenous building materials should be thought of. One of the major problems at present is the unacceptability of indigenous materials. They are unacceptable for two reasons: inelegance and non-durability. Costly annual repairs are required. Repair costs for two to three years would amount to the total cost of construction of a new *kutcha* house. Therefore, to make local materials acceptable to people, they should be given an elegant appearance. Technologies to effect these changes are available in research institutions; they have to be taken to the construction sites.

We must have programmes to develop and popularise appropriate techniques. Benefits of inventions made in leading scientific institutions should be made available and accessible to people through training and demonstration. The government must take responsibility to provide technical support in the production and use of environment-friendly, cost-effective, and durable building inputs from indigenous materials. Infrastructure and technical expertise of existing institutions such as the Nirmithi and COSTFORD should be made use of for the purpose. These institutions should extend technical support and training free of cost to beneficiaries of public housing schemes.

Building materials production by masses

Economics of livelihood security to the poor rather than economies of scale should be the main concern in the production and use of building materials. Mass production of goods

may give temporary gains to producers and users. In an economy where housing assistance is given as a security strategy and as a part of the poverty eradication programme[19], production of building materials by the masses, which creates job opportunities and contributes to the income and well-being of the poor, should be encouraged. However, the quality of the materials should not be compromised. Housing quality functionally depends on the quality of inputs used for construction. Cost-effective techniques should be encouraged so that prospective owner-builders could minimise construction costs.

Organisation of construction

Supply of skilled workers is relatively inelastic in the short run. Residential construction, particularly construction of small houses is a seasonal activity. Construction work is possible only during the fair season. In their effort to gain regular work during all seasons, skilled workers either associate themselves with contractors or try to get work in the construction of luxurious houses. Contractors employ skilled workers even for simple activities. Since their skills are not properly used, the practice leads to de-skilling of workers. For reasons of regular work and income, skilled workers are happy to work with contractors. In case they fail to associate with contractors, their next preference is construction of large houses which would offer them work of different types for relatively long periods. Skilled workers rarely take up work in construction of small houses.

In fact, workers are not, in general, available to construct small houses, particularly those using indigenous materials. Occasionally, a worker may agree to work for a day or two, but not continuously till the completion of construction work. The erratic nature of worker availability causes wastage of building materials. Beneficiaries of public schemes of housing may not be able to ensure timely and uninterrupted supply of inputs due to indigence. This is an additional reason for non-employment of workers on a continuous basis. Such a situation may be avoided if there is an agency which co-ordinates the construction works of beneficiary houses in a locality and ensures regular supply of building materials and regular employment to workers.

The co-ordinated work of beneficiary houses will be advantageous to the owner builders in three ways: (i) increases cost efficiency in the procurement and transportation of building materials; (ii) ensures regular and uninterrupted supply of skilled workers, and (iii) avails the services of technical experts at the lowest possible cost. The question then arises as to which agency would co-ordinate the work of the beneficiary households. Technically trained work force is needed for co-ordination and supervision. Trained village-housing assistants may be appointed by the *panchayats* concerned, on temporary basis. Engineering diploma holders and persons trained in Industrial Training Institutes are available in plenty in all the *panchayats* in the state. Qualified persons from among the beneficiaries could also be considered for the purpose.

Resource mobilisation

Finance is needed for implementing the above programmes. At present, finance for housing assistance to the rural poor comes mainly from governments at the Centre and the State.

Central government funds for rural housing are distributed through the Rural Development Department. State government funds are given through more than 30 agencies including State Housing Board, Kerala State Development Corporation for SC/ST, SC/ST Development Department, Fisheries Department, and Development Authorities. Wide differences exist among these agencies in the norms for selection of beneficiaries and in the criteria for allowing loans, grants, and subsidies. There is no co-ordination among them at any level. Co-ordination at the state and the *panchayat* levels would help avoid overlapping of schemes, wastage of resources, and corruption. The activities of various agencies and their schemes targeted to the rural poor at the *panchayat* level need to be co-ordinated and streamlined.

Central and State-level agencies and departments should allocate housing finance to each *panchayat* according to the nature of its need for funds as indicated in the *panchayat* housing plan. The responsibility to give guarantee to the agencies concerned should rest with the local bodies. The funds so obtained could be supplemented with own funds to build up a *Panchayat* Fund for public Housing (PFPH). At present, the combined share of property tax and receipts from the auction of river sand accounted for more than one-third of the average revenue of the sample *panchayats*[20]. Part of the PFPH could be used for financial assistance to deserving households as grants and subsidies and another part for a revolving fund. The revolving fund may be made part of a micro-credit plan. The entire programmes would then become self-supporting and sustainable.

Micro-credit plan

The recipe for poverty alleviation at present is micro-enterprises organised by self-help groups supported by micro-credit. This is also the pathway recommended by Mahatma Gandhi (Swaminathan, 2000). Self-help groups of households eligible to get housing assistance should be formed at the *panchayat* level. These groups may be trained to take up construction work and production of building materials. Financial support for the activities may be given from the PFPH, which acts as a micro-credit fund. All the beneficiary households of the public housing schemes should be made part of the micro-credit plan. It should be required of them to save a part of their income and deposit it with PFPH. This fund could be used to meet their priority needs. It could also be used for repairs and renovation of their house.

Micro-credit also facilitates production of building materials by the masses. That in turn would help fight the adverse effects of penetration of market forces in the rural housing process. Building material production by the masses and the resultant accrual of income would help the poor to enhance their entitlements and capabilities.

The success of this strategy would depend on the co-operation of all the stakeholders in its proper implementation. An institutional mechanism to monitor the implementation of the programmes at the local and at the State levels may be needed for achieving the desired goals.

Programme implementation and monitoring

The responsibility to plan and implement the housing programmes should be entrusted with

the local self-governments. Concerted effort of technical experts, administrators, government officials, non-government organisations (NGOs), political parties and social activists, is needed for mitigating the housing problem of the rural poor. Once, the state government decides to devolve the power of implementing the programmes to the *panchayats*, technical experts and officials manning the intermediate levels such as *taluk* offices and development block offices may have to be transferred to appropriate *Panchayati Raj* levels. They may be given the power to administer the PFPH and *panchayat* house plans. However, the plan and administration structure should be in accordance with the broad framework formulated at the State level.

The responsibility to monitor the implementation of the programmes should be entrusted with a committee consisting of experts, people's representatives, social activists, and representatives of self-help groups. Evaluation and monitoring should form a part of the implementation programme. The structure of the committee should be on the lines of the committees suggested by the State Planning Board for its People's Planning (*Janakeeyasoothranam*) projects.

Besides implementing housing programmes for the weaker sections, strict fiscal measures should be implemented to discourage the craze for uneconomic and wasteful constructions in the name of aesthetic appeal. The common person should be made aware of the need for and the benefits of frugality and prudence.

To sum up, the housing problem of the rural poor in Kerala can be mitigated through the following steps: (i) formulation of local-specific strategies and physical and financial plans; (ii) empowerment of the rural poor to command critical resources for house construction; (iii) decentralised production of building materials by the masses without harming the environment and ecology; (iv) recognition of the potential of the people, helping them to organise self-help groups and micro-enterprises and supporting them with micro credit in order to make them self-reliant; (v) ensuring access to the rural poor to common property resources, which at present are either encroached by rural elite or held by government for improvement of the livelihood conditions of the poor, and (vi) embedding rural housing programmes in *panchayat* development plans, for improving the employment and income opportunities and well being of the rural poor. The success of this approach would crucially depend on the co-operation of all the stakeholders, political parties, bureaucracy, and government and non-government organisations.

8. Summary and Conclusions

The purpose of this study has been to evaluate critically the suitability and acceptability of public housing schemes for the rural poor in Kerala. The study had five major purposes: (i) evaluating the mismatch between supply (reckoned in terms of public provision) and demand (as adjudged by people's affordability and preferences); (ii) understanding the extent of housing inequality among various occupational groups in rural areas; (iii) estimating household investment taking place in the housing sector and its proportionate share in public-assisted scheme houses; (iv) tracing the factors underlying housing inequality and examining the appropriateness and suitability of the present pattern of public provision; and (v) suggesting an appropriate framework for formulating and implementing action programmes and plans for mitigating the housing problem of the rural poor within a stipulated time frame.

Since the problems involved in the study are very complex, a multi-disciplinary approach is followed. Besides secondary and primary sources of data, lessons were drawn from the economic, cultural, and political history of Kerala. Primary information was collected through two methods: PRA and Household survey. PRA techniques facilitated the collection of qualitative information easily, quickly, and reliably form the study regions. Through PRA, we were able to ensure the participation and co-operation of local people and prospective informants of household survey. Interest that our PRA techniques aroused among the people in the study regions was so high that the local decision-makers requested us to present the preliminary results of our study for wider discussion and plan formulation. In response to their request, we have prepared and distributed monographs[21] in Malayalam in the *panchayats* and supplied copies to the *panchayat* functionaries.

State intervention in the housing sector had begun in Kerala during the 1950s. Several novel programmes of intervention were introduced which kindled a ray of hope among the houseless poor, of becoming house owners. A housing boom began in the state in the mid-Seventies. Public housing schemes also had an impressive record during the past two decades in terms of investment and physical achievements. Despite impressive gains, a few negative features have also reared their heads. Inequality in housing conditions widened. The poor have become progressively incapable of self-help and mutual help for solving their housing problems. The degree of their dependence on government support has increased.

The study was conducted in three selected panchayats in Pathanamthitta district. A five-stage stratified random sample technique was adopted to identify units for the household survey.

Like in other parts of the State, an upturn occurred in residential construction activities in the study region also. Changes in material use pattern and improvement in the average size and the housing quality were visible in the new constructions of the relatively rich. The proportion of RCC roof houses that had been less then 10 percent of the new constructions during the quinquennium 1973-'78, increased to 52 percent during 1993-'98. The proportion of relatively large houses also increased.

Wide inequality in housing quality existed in the study areas. The majority of the sample households whose heads were employed in high level occupations owned luxurious houses and a few engaged in the low level occupations lived in large and relatively well-built houses. Housing quality of the sample households was not purely a function of their current income and employment status. It is also found that the current poor income and low employment status does not deter a few households from enjoying well-furnished and comfortable housing conditions.

Though a few heads of households were illiterate, there were no households with all adult members illiterate. About 35 percent of the households used to subscribe to newspapers and journals. All the households are aware of the people's campaign and cherish high hopes of socio-economic development, particularly development of the weaker sections through decentralised planning.

All beneficiary households of public housing schemes were found to belong income and occupation categories well within the economic criteria fixed for receipt of housing assistance. They constituted only 37 percent of the deserving households. Despite housing assistance, about 20 percent of the beneficiary households lived in *kutcha* houses, half of which were in unserviceable conditions.

On a comparison of non-beneficiary households and beneficiary households belonging to casual labourers, we found striking similarity between them in mean income, family size, land size, and in the size of the house building. About 90 percent of their income went to the purchase of food materials. Very few households had any savings. The mean investment on new houses was more than two times the average annual household income. However, the mean cost of new houses of the beneficiary households was found to be a little lower than that of non-beneficiary houses.

It is learned that the majority of the beneficiary households were deeply in debt. Their average debt was about 60 percent of the total funds invested, as against only 25 percent for non-beneficiary households. Wide differences in the proportion of own funds as between beneficiary and non-beneficiary households were observed. However, higher investment and greater indebtness were not reflected in the quality and the condition of beneficiary houses.

It is found that the relative welfare of a few non-beneficiary households in the control group was higher than that of beneficiaries. Every fourth beneficiary household remained at the lowest rungs of the welfare ladder despite the public support.

Every second beneficiary household was found to be dissatisfied with the quality and structure of their houses. About two-thirds among them had complaints against housing services rendered. Their involvement in the construction process in terms of labour participation was meagre. Thus, the housing assistance in terms of partial financial support is found to have failed to ensure adequate beneficiary participation.

The annual average housing investment per *panchayat* during the five-year period 1993-1998 was found to have been around Rs 2.5 crore. One-half of this amount was spent on new construction and the rest on repairs and renovation.

The annual average housing investment per household in the study region during the period 1993-'98 was about Rs 5500. It was roughly equivalent to about 10 percent of the total income of households as against the all-India proportion of 2.1 percent (for rural households in 1975-'76).

The impact of high investment in the housing sector was not reflected in the productive sectors of the State's economy. Productive investment per capita remained consistently lower in Kerala than in the neighbouring states of Karnataka and Tamil Nadu, as well as in India as a whole. However, housing investment and the consequent materials production did contribute substantially to generation of employment opportunities in the State.

High investment and the resultant increased demand for building inputs and labour have shattered the hopes of the poor to construct reasonable dwellings with public support. Because of the penetration of market forces in all spheres of the building process, the poorer sections had to spend more than three times their annual household income for the construction of simple structures. Public assistance that provided partial financial support was found too insufficient. They had to borrow heavily from various sources to finance construction.

It is found that privatisation and monopolisation of common property resources and the penetration of market forces in all spheres of rural life had encroached upon the capacity of the rural poor to construct reasonable dwelling places with the partial financial support from housing schemes. Moreover, getting public assistance was not an easy task. The amount of assistance was released, after fulfilling all the formalities, in instalments. To get each instalment released, the beneficiary had to submit certificates obtained from concerned authorities. Several beneficiary households had to visit the offices of the housing schemes several times at the cost of losing their jobs or work opportunities.

Average prices of indigenous building materials were increasing at rates far higher than those of factory- produced materials during the period since the 1970s. People began to look down upon several indigenous materials because of their non-durability and inelegant appearance. Though technologies to improve the durability and strength of such materials are available, they had not reached the builders in the countryside. Because of cost efficiency, durability, and flexibility, modern materials are more acceptable to the people and hence popular. Drastic changes in material use patterns are seen in the study region.

Technology for the use of indigenous materials was simple. The *Moothasari* (the Master carpenter) used to be able to guide all the construction processes involved in the construction of small houses from the start to the finish. However, with the popularity of modern materials, each task necessitated specific skills and training. Specialisation and de-skilling followed. The need for an organiser to co-ordinate the diverse processes involved in house construction became increasingly evident. Technical consultancy became a priced service.

Owner-builder used to be the controlling organiser of building construction till the early 1970s. He used to organise the services of labour, both skilled and unskilled, and to buy materials or collect them from own sources. Agency services were absent. Nevertheless, at present, it has become difficult for owner-builders to gather materials directly from own or

other conventional sources through the services of agents. From a situation of no intermediaries or agents between the sources of supply and demand, house building has moved to a system of contract and sub-contract by the 1990s. The majority of the beneficiary households in our sample also depended on contractors for execution of their house construction work.

High demand for and relative inelasticity of supply of construction workers, has pushed up their wage rates. Even at high wages, skilled workers do not take up work in construction of small houses. In a bid to get regular work for lengthy periods and all seasons of the year, they prefer to work under contractors; alternatively, they would take up work on their own, of construction of large buildings. Builders of small houses may not get workers for completion of construction work according to schedule. Delays in construction escalate costs.

With changes in material use pattern, technology, construction processes and organisation of construction, the traditional practice of self-help and mutual help in house construction among villagers, became impracticable. Moreover, very few households do have the capability and the willingness to contribute own labour or labour of the members of their households for house construction. Casual workers find it a losing proposition either to work in own house construction or to help others with voluntary labour.

As a result of the overall changes that have occurred since the mid-'seventies, the capacity of the rural poor to construct 'a reasonable dwelling' with partial financial support of public agencies, as is the case today, has eroded. The quality of the house that a person would be able to construct depends on his command over critical inputs. The maximum financial support under any public housing scheme till date is Rs 35000, that too only under Central schemes. With this amount, it is well neigh impossible to command the minimum amount of critical inputs required to construct a minimum 'standard' house. Even if one manages to complete construction one would not be able to effect timely repairs and renovation and the house would fall into disrepair in a few years' time.

Thus, we find that in the unique socio-economic and cultural conditions prevailing in Kerala, the practice of partial financial assistance is insufficient to solve the housing problem of the rural poor. Their aspirations and expectations already run high and they want to construct good quality houses using modern construction materials. While traditional building materials and construction technology are looked down upon, modern materials and technology remain beyond their reach. Financial assistance provided under the public housing schemes is inadequate. While financial resources remain limited, they plan for structures which require much larger investment in house construction; alternatively, some may misuse the funds received for housing, to satisfy other family needs. In either case, the objective of improving the housing conditions of the rural poor is defeated. In their present form, public housing schemes for the rural poor constitute an unfruitful venture and wastage of resources. If modified to suit to the socio-economic and cultural specificities of rural Kerala, the schemes are sure to contribute to positive improvement in their housing conditions.

In order to bridge the gap between research and its implementation, we have suggested an alternative approach and made a few recommendations. The recommendations are addressed to local bodies, public agencies, NGOs, and other stakeholders. The ongoing campaign for

people's participatory planning provides the right environment to formulate and implement appropriate schemes suitable to the socio-economic specificities of the state for solving the housing problem of the rural poor. We should accept the fact that the housing problem is a symptom of poverty and that schemes for the rural poor should, therefore, be a part of the development programmes, which provide employment and income and envisage improvement in the well-being of the poor.

The action programme suggested involves six steps: (i) preparation of local-specific, physical and financial plans based on objective evaluation of the housing needs; (ii) provision of employment for empowerment of the rural poor to command critical resources for house construction; (iii) organisation of decentralised production of building materials by the masses without harming the environment and the ecology; (iv) recognition of the potential of the people, helping them to organise themselves into self-help groups and micro enterprises and supporting them with micro-credit without making them mere dependants of the largesse of government; (v) giving the rural poor access to common property resources, which at present are either encroached upon by the mighty and influential sections or by the government for profit-making; and (vi) integrating the rural housing programmes with the local level development plans for enhancing employment and income opportunities, and the well-being of the rural poor. Proper institutional mechanisms to implement these programmes have to be put in position. Co-operation and participation of all stakeholders should be ensured at all stages for the success of the programme.

End Notes

1 Details of Kadapra village were taken from the village monograph 1961 and the *Panchayat Vikasana* Report 1996.

2 Information is based on the *Panchayat Vikasana* Report (PVR) and informal discussion with knowledgeable persons.

3 Basic information was collected form the PVR and informal discussions with knowledgeable persons in the locality.

4 Kerala has a long history of labour out-migration and remittance inflows from outside the state. However, emigration of workers in large numbers to countries of the Middle East that began from the 1970s, following the 1973 increase in petroleum prices, has been a landmark in the social and economic life in Kerala. PRG Nair (1994) estimated the number of emigrants in the early 1990s to this region to be in the range 700,000 and 800,000 persons. (Ref: PRG Nair (1994, 'Broad Trends in Migration to the Middle East. A Note' in AKG Centre for Research and Studies). However, emigration was practically absent till the 1960s in Kadapra. It is clear, and there is general scholarly consensus, that the remittance-receiving households spent a major proportion of the receipts to residential construction activities. Emigrants to the Middle East were temporary workers who were not allowed to own any real estate or to undertake any business enterprise of their own in the host countries. 'The migrant worker sees employment in the Gulf countries, as perhaps his only chance to accumulate enough to purchase some land, construct a house, educate his children, marry away his sisters and daughters and save funds with which to start some independent career on repatriation from Gulf countries'. Village studies in the dominant migrant centres show that significant proportions of the remittances are utilised for investment in residential construction. One such study has pointed out that 46.9 per cent of (remittances receiving) household expenditure goes to the construction of new buildings and another 2.1 percent for renovation and repairs of buildings. All the micro-level studies point to the predominance of investment made by the migrant household in the purchase of land, in house construction and in renovation or replacement of residential houses.

Table 3. N. 1. Distribution of Emigrant households according to House Quality

House quality	No. of sample households
Serviceable *Kutcha*	2 (4.4)
Semi-*Pucca*	5 (11.1)
Pucca	11 (24.4)
Palatial or luxury	27 (60.0)
Total	45 (100.0)

Figures in brackets are percentages; Source: Field survey

Table 3. N.2. Distribution of Emigrant Households according to quality of Amenities

Quality of Amenities	No. of sample households
Inadequate	2
Adequate	6
Better	4
Best	33
Total	45

Source: Field survey

The general socio-economic and housing condition of emigrant households is far better than the rest of the households in the sample *panchayats*.

5 **Table 3. N (a). Sample households in Kadapra classified according to house quality and occupation level of main earning member**

House Quality	Occupation grade of main earning member				Total
	EWS (Lowest)	Low	Medium	High	
Unserviceable *Kutcha*	15 (22.7)				15 (14.6)
Serviceable *Kutcha*	3 (4.5)	1 (7.7)			4 (3.9)
Semi *Pucca*	27 (40.9)	1 (7.7)	1 (6.7)		21 (28.2)
Pucca	20 (30.3)	2 (15.4)	7 (46.7)	2 (22.2)	31 (30.1)
Palatial or Luxury House	1 (1.6)	9 (69.2)	7 (46.7)	7 (77.8)	24 (23.3)
Total	66 (100.0)	13 (100.0)	15(100.0)	9 (100.0)	103 (100)

Figures in brackets are percentages; Source: Field survey

Table 3. N (b). Sample households in Kulanada classified according to house quality and occupational level of the main earning member

House Quality	Occupational Level of Main Earning Member				Total
	EWS (Lowest)	Low	Medium	High	
Unserviceable *Kutcha*	5 (7.4)	1 (4.0)			6 (5.1)
Serviceable *Kutcha*	7 (10.3)				7 (6.0)
Semi *Pucca*	39 (57.4)	7 (28.0)		1 (11.1)	47 (40.2)
Pucca	11 (16.2)	6 (24.0)	5 (33.3)	2 (22.2)	24 (20.5)
Palatial or Luxury House	6 (8.8)	11 (44.0)	10 (66.7)	6 (66.7)	33 (28.2)
Total	68 (100.0)	25 (100.0)	15(100.0)	9 (100)	117 (100)

Figures in brackets are percentages; Source: Field survey

Table 3. N (c). Sample households in Ranny-Perunadu classified according to house quality and occupational level of the main earning member

House Quality	Occupational Level of main earning member				Total
	EWS (Lowest)	Low	Medium	High	
Unserviceable *Kutcha*	17 (23.9)				17 (16.7)
Serviceable *Kutcha*	11 (15.5)				11 (10.8)
Semi *Pucca*	21 (29.6)	3 (18.8)	1 (10.0)	2 (40.0)	27 (26.5)
Pucca	17 (23.9)	8 (50.0)	2 (20.0)	2 (40.0)	29 (28.4)
Palatial or Luxury House	5 (7.0)	5 (31.3)	7 (70.0)	1 (20.0)	18 (17.6)
Total	71 (100.0)	16 (100.0)	10(100.0)	5 (100)	102 (100)

Figures in brackets are percentages; Source: Field survey

6 **Estimated total finance invested in new residential construction from July 1988 to June 1989 (Rural) (in Rs lakh)**

Type of New building	India (percentage)	Kerala (percentage)
Pucca	509149 (79.2)	57416 (88.8)
Semi-Pucca	92726 (14.4)	5562 (8.6)
Kutcha	40699 (6.4)	1712 (2.6)
Total	642575 (100.0)	64690 (100.0)

Source: Sarvekshna 50th issue 1992

7 **Average cost of construction per square metre for completed new buildings (Rural)**
(Rupees)

Type of structure	India	Kerala
Pucca	594	643
Semi-*Pucca*	205	307
Kutcha	89	97
Total	324	495
Estimated no. of constructions	3094045	172337

Source: NSSO

8 The rate of growth of residential houses during 1981-'91 was 27.64 percent as against the population growth of 13.98 percent. The average size of a household in Kerala according to 1991 census was 5.3 persons as against 5.6 for all-India. It has been estimated that about 20 percent of 54.59 lakh houses in Kerala were thatched huts of semi-permanent nature. Out of this, about 5.5 lakh units were sub-standard huts unfit for safe living. Moreover, five per cent of the houses needed to be demolished and reconstructed.

Facilities and amenities

Percentage of households

Having safe drinking water	**India**	**Kerala**
SC	63.60	23.50
ST	43.21	15.65
Others	64.10	18.49
Total	62.30	18.89
Having electricity		
SC	28.10	23.74
ST	22.80	13.64
Others	48.06	51.28
Total	42.37	48.48
Having Toilet		
SC	11.16	29.33
ST	7.22	13.85
Others	28.63	53.90
Total	23.70	51.28
All the three facilities		
SC	6.62	5.23
ST	3.23	2.47
Others	19.83	9.43
Total	16.07	8.98
None of the facilities		
SC	28.06	49.82
ST	45.30	69.95
Others	21.37	32.21
Total	24.54	34.19

9 Common property resources are defined as resources accessible to the whole community of a village and to which no individual has exclusive property rights.

10 The 1970s was a turning point in the socio-economic history of Kerala. This decade witnessed unprecedently large commercialisation of agriculture, the emergence of the Gulf boom, and rapid increase in the number of educated job seekers. The process of commercialisation intensified since the mid-seventies with accelerated shift towards major cash crops such as rubber due to sharp changes in relative profitability of crops. An unprecedented outflow of workers in large numbers began from rural areas also, primarily to West Asia (Gulf boom) resulting in large inflow of remittances. The high rates of growth of population of the 1940s and the 1950s reflected in the growth of persons entering the labour force, during the Seventies. This happened at a time when employment opportunities in agriculture were shrinking due to the lower levels of labour use in commercial crops. Demographic pressure on the employment market

was severe; but the opening up of work opportunities on the West Asian countries offered some relief. There was, of course, the demand-inducing effect of the improved levels of living manifested from the late 1970s in the diversification of economic activities particularly, growth of the construction sector in the rural areas of Kerala (Mridul, 1994).

11 Several paradoxical situations are seen in the rural labour market. On the one side, the number of the educated unemployed is on the increase and on the other, acute labour shortage is experienced in both farm and non-farm sectors. Several studies, both at the micro as well as at the macro level, on the conditions of markets for agricultural products and agricultural labour conducted in recent years have reported acute labour shortage in the paddy sector (Jose, 1991; Shaji, 1992; Vijayam, 1994; Mariamma, 1993; George Joseph, 1995; Mridul, 1994). They indicate that though difficulty in getting agricultural workers was being experienced by farmers from the late 1970s onwards, acute shortage was felt only since the mid-eighties. With increase in new job opportunities in the non-farm sector and improvement in the general economic conditions, farmer-labour relations increasingly became formal, impersonal, and contractual (Kannan, 1995; Olle Tornquist and Tharakan, 1996). Refusal on the part of labour to adhere to patron-client relations, the sense of dignity manifested in personal hygiene and the changed lifestyles seem to have prevented young workers from taking up work in slurry for rice cultivation. Besides, rise in literacy which raises income/ job/status aspirations of the younger job seekers and sharp increases in wage rates of non-agricultural work, were also considered to be the major reasons for the steep fall in the supply of farm labour (Mridul, 1994).

It is difficult to classify rural workers into farm and non-farm workers. For reasons of freedom of time disposition and desire to make high earnings, young workers organise themselves into small work-groups and take up work at piece rates fixed through negotiation between the employer and work-groups. They prefer non-farm work, that too on contract basis. The young workers complained that they are not demanded for farm work, particularly work in paddy fields. During our informal discussions, many young workers said that they are willing to undertake farm work. The cultivators on the other hand said that the youngsters do not have the skill and training required to take up work in paddy field. The elders who have the skills and the experience are not healthy enough to do hard labour. Though their marginal productivity is low, they would not accept a wage rate below parity. The parity wage at present is Rs 125 for an unskilled male worker. Still the farmers prefer trained elder workmen for farm work.

Workers whom we met, particularly at Kadapra, said that they subsist on income from occasional work. Though job opportunities are rare, no worker was willing to work at a rate below the parity wage, which they consider as their hard-earned right. Farm workers firmly believe that agriculture is a profitable activity. Since a major proportion of landowners in rural areas draw their main income from sources other than agriculture, the farm workers believe that the landowners are not interested in cultivation. Cultivators, whom we met in the course of our study, complained, on the

other hand, that farm workers are not available to do farming activities in time. They also complained that workers are insincere and unwilling to do hard manual work and that therefore cultivation of any type of annual crops was uneconomical. They prefer to keep the land fallow rather than cultivating it at a loss.

12 The case of Joy Abraham is a typical case in point. Joy Abraham (45) of Kadapra is a hard-working farm labourer. He was a teetotaller. His family consists of five members. All the three children crossed secondary level schooling and the youngest was studying for her plus-two course in a school 10 km away from the place of residence. His wife was also a farm worker. The family owned 10 cents of land. Besides, they had a few hens and three goats. On the days of work, he got Rs. 125 as wages. During the previous busy season, he got employment for 15 days. His semi-*pucca* house was constructed with a loan of Rs 13000 from government. The monthly instalment of repayment was Rs 125. Owing to lack of the wherewithal to repay, 16 instalments fell into arrears. He paid Rs 2000 in lumpsum, procured by selling two goats; even then the arrears had accumulated. In the mean time the quality of their house deteriorated. If they spend on house repair and improvement, the amount of arrears would aggravate further. In the circumstances, Joy has postponed all ideas of repairs and renovation of his house indefinitely.

13 We inquired about the political party affiliation of the sample casual labourers. About 40 percent among them were either members or sympathisers of political parties, which are constituents of the ruling Left Democratic Front (LDF); another 25 percent were members or sympathisers of parties which formed constituents of United Democratic Front (UDF) and a minority (4 percent) were members of Bharatiya Janata Party (BJP). About 31 percent sample households were not willing to divulge their political party affiliation.

14 Beneficiary selection in Kadapra *panchayat* during 1998-'99 was done on the basis of nine criteria. Scores given to each criterion are given below.

Criteria	**Scores**
Houseless households living below poverty line	20
Households of Widows	15
Women-headed HHs	15
Households with female children alone	10
Households with handicapped persons	10
Households with persons suffering from chronic diseases	10
Households residing in colonies	10
Households which lost houses in natural calamities	5
Households which did not get any other assistance	5
Total	100 marks

Households with a minimum of three cents of land and capable of contributing the beneficiary share for construction are eligible to apply for housing assistance.

Beneficiaries of housing schemes under the special component plan, particularly for SC/ST households, have been selected on the basis of another set of criteria and marks, as shown below.

Criteria	**Scores**
Households which do not have livable houses	10
Households of widows	20
Women-headed households	10
Households with female children alone	10
Households with Handicapped persons	10
Households having persons suffering from chronic diseases	10
Households of Destitutes	10
Households who have minimum three cents land	10
Total	100

15 We collected information from 19 randomly selected households who had got housing assistance under *Janakeeyasoothranam,* from the three *panchayats*. Construction work of all houses, except one, remained incomplete at the time of our visit in April 1999, i.e., after two years since the allotment of the first instalment. The work of the one, which was completed, had actually started three years before the sanctioning of the public assistance. Construction work of one-third of the sample houses (six houses) was only at their beginning stage at the time of our visit. Another one-third had constructed walls up to the roof level. None of the beneficiary households had made use of either indigenously available materials or cost-effective techniques. They complained about the difficulty in getting the services of skilled workers in time. Therefore, they depended on contractors for several activities. The mean amount invested was Rs 45000. Expenditure on individual houses varied from Rs 500 to Rs 1.75 lakh. Besides public assistance and own sources, all of them had raised loans from a variety of sources. The average amount of debt reportedly incurred for house construction by the sample households at the time of our visit was Rs 18000. Notwithstanding public assistance, own funds, and high debt, none of the beneficiary households could complete the construction.

16 Housing is expected to satisfy both micro and macro level needs. At the micro level enough space for cooking, dining, living, and sleep is needed. In the provision for housing services like potable water, arrangements for sanitary/provision collection and disposal of human excreta and solid waste are also needed. At the macro level, travel and communication facilities, open space, schools, health centres, markets and the like are considered necessary for social development.

17 In April 1999, it was estimated that the housing sector in India requires Rs 4 lakh crore of investment. The Housing Minister's conference held in New Delhi in June 1998 set the target of construction of 20 lakh additional dwelling units every year for the poor, 13 lakh for rural and 7 lakh for urban areas. It is estimated that an annual investment of Rs 8000 crore is required for the purpose.

18 Kerala State Planning Board has published manuals detailing the procedures to be followed in the preparation of projects at different levels of local self-governments. 'These manuals are not mere hypothetical exercises. Care is being taken to ensure that these are based on actual field experience so that these guidebooks give confidence to the *panchayats*, regarding their practicability. It is also cautioned that what is needed is not replication of successful models from other areas, but their imaginative adaptation to the local specificities' (Isaac and Harilal, 1997).

19 Both the national and the State governments have recognised the need for continued direct state intervention for poverty alleviation. The Ninth Plan has identified seven basic services for priority attention: safe drinking water, primary health service facilities, universal primary education, public housing assistance to all shelter-less poor families, nutritional support to children, connectivity of all villages and habitations by roads, and public distribution system targeted to the poor. Policies and programmes relating to these areas are given special attention in the Ninth Plan (CMIE, Approach Paper to Ninth Five-Year Plan, February, 1997). Government of Kerala gave top most priority to the housing sector. In a recent order the government declared that special priority should be assigned to housing and drinking water. Up to 10 percent of the allocation in the general sector is allowed to be diverted by local bodies from the productive sector subject to the condition that an equivalent amount is earmarked by the local bodies for these purposes from their plan grant-in-aid from the service sector [G.O (MS) No. 20/99/Plg dated 05-04-1999].

20 The major sources of revenue of the sample *panchayats* are classified into five major heads viz., property tax, profession tax, surcharge on stamp duty, revenue from auction of river sand, and others. However, a separate account for revenue from river sand was not available for Kadapra panchayat. The combined share of property tax and revenue from river sand accounted for about one-third of the average revenue of the *panchayats*. Year-wise revenue receipts of sample *panchayats* since 1990 (1990-'91 to 1997-'98) are given in the following three tables.

(i) **Year-wise revenue receipts of Kadapra *panchayat* by sources**

(Rs. in thousand)

Source	**Year**							
	1990-1991	**1991-1992**	**1992-1993**	**1993-1994**	**1994-1995**	**1995-1996**	**1996-1997**	**1997-1998**
Property Tax	270	215	168	217	218	227	234	236
Profession Tax	137	302	227	218	219	316	175	188
Surcharge on stamp duty	162	289	235	331	179	255	612	122
Others*	246	541	436	809	740	1260	2326	1570
Total	815	1347	1066	1575	1356	2058	3347	2116

* others is inclusive of revenue from river sand

Source: Estimated from *Panchayat* Office Records

(ii) **Year-wise revenue receipts of Kulanada *panchayat* by sources**

(Rs. in thousand)

Source	Year							
	1990-1991	1991-1992	1992-1993	1993-1994	1994-1995	1995-1996	1996-1997	1997-1998
Property Tax	239	264	266	326	432	376	442	453
Profession Tax	79	93	104	97	130	150	132	208
Surcharge on stamp duty	265	109	351	384	299	339	748	344
River sand	52	50	91	45	87	180	610	750
Others	421	319	290	323	300	481	353	554
Total	1056	835	1102	1175	1248	1526	2285	2309

Source: Estimated from *Panchayat* Office Records

(iii) Year-wise revenue receipts of Ranny-Perunadu *panchayat* by sources

(Rs. in thousands)

Source	Year							
	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98
Property Tax	160	154	151	106	276	273	273	244
Profession Tax	85	140	134	95	152	190	190	125
Surcharge on stamp duty	115	141	375	290	255	565	867	395
River sand	47	48	62	24	94	95	267	318
Others	119	131	135	138	71	179	363	627
Total	526	614	857	653	848	1302	1960	1709

Source: Estimated from *Panchayat* Office Records

21 Separate monographs in Malayalam for the three *panchayats* were printed and distributed. Title *'Parppida prasnam: oru puthiya sameepanathinte aavasyakathayum prasakthiyum'* (Housing problem: need for and importance of a new approach), May 1999.

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