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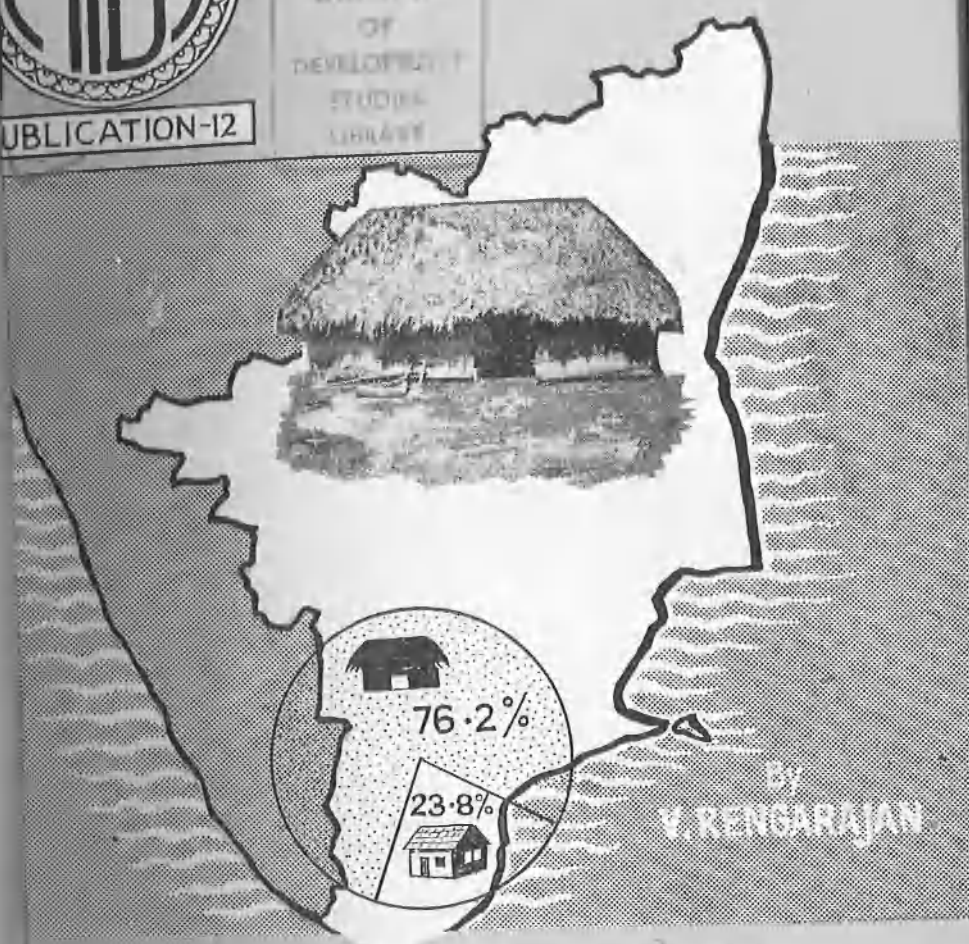
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RURAL HOUSING IN (67) TAMIL NADU



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By
V. RENGARAJAN



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(67)

RURAL HOUSING IN TAMIL NADU

V. RENGARAJAN

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PREFACE

Rural housing is a neglected area—neglected both in studies and in state and national plans and action. It is part of the wider neglect of the rural countryside—stemming perhaps from the Western additions summed up in the antithesis, *urbanus - rusticus*, drawing in turn its aspiration opposing the primacy of the town as the home of civilization to the barbarism of the countryside which led Karl Marx to declare that the opposition between town and country begins when barbarism turns to civilization.

It was left to Gandhi to remind us that India lives in her villages, and to Mao Tse Tung to demonstrate to the world that rural people when organised can and do fight and obtain their rights to equality and freedom, and consequent food, clothing and housing and what are termed public goods. Rural Housing in Tamil Nadu when subject to economic analysis involves (a) determination of the physical features of the housing programme, (b) transformation of the physical quantities into price or value terms and (c) application of a norm, in this case highest net present value, as a basis for deciding on how many houses, when and where.

This monograph covers rather expansively the ground under the issues listed as (a) and (c) above. On (b), that is, the valuation of the actual and proposed housing programme, the market prices are used rather than the first best standard prices which would measure the marginal utilities and marginal costs of housing in an optimal situation on the second best standard prices which measure over time utilities and costs in states of disequilibrium. As the purpose of the study is not to evaluate the rural housing investment in the State, but rather to arrive at certain tentative conclusions with regard to rural housing policy in relation to factors (a) and (c) referred to above, that is, the physical quantities of housing needed in the rural areas and their costing in rather broad order of magnitude, the valuation problem of all the inputs and outputs of the programme which would have to be as a system of standard prices has been left aside. What is aimed at is a set of policy

recommendations with regard to rural housing and not its social valuation.

The current status of rural housing in Tamil Nadu is rather poor and depressing. Out of total 58.0 lakhs rural houses, 63 per cent are houses with *Katcha* walls and roofs, and 23 per cent with *pucca* walls and roofs—the others being somewhere in between. 90.4 per cent own their houses and 9.6 per cent are tenants. 61 per cent live in one room houses which average 4.6 persons per room compared to the 1.5 to 2.6 persons average of houses with 2 rooms and above. The congestion ratio, that is the population-house ratio for the State works out to a 1 room house to every 5 persons, with congestion ratio being high in Chingleput, North Arcot, Madurai and Kanyakumari districts. In the absence of detailed information on rural housing in the State, the results of housing conditions in 5 villages in the district of Thanjavur and Ramanathapuram, 7 villages in North Arcot conducted during 1958-61 and 1973 have been used as a pilot sample to outline the nature of the houses, the area covered, the income levels of occupants, the numbers living in each house, the reflection of the class structure on housing, etc. The picture which emerges that any where between 60-70 per cent of the villagers who are of the scheduled castes or other backward communities are agricultural labourers or tenants living in one room *kutchas* with nuclear type of families living in them. The houses are all old and are constantly being repaired.

The record of government intervention in rural housing in the first Four Plans is not impressive. The provision of Rs. 1.3 lakhs per block in the First Plan for rural housing was in the main diverted to financing government staff housing. In the Second Plan a Rural Housing Cell was set up and 25 pilot rural housing projects were executed in the state. The Third and Fourth Plan continued this small trickle down process in rural housing. Around 14,000 acres have been distributed as 4.2 lakhs *pattas* during this period along with 2.5 lakhs *kudiyiruppus*. It is only in the plantations that housing for plantation workers has been adequately provided in the State. In fact this State is outstanding in this regard. During the Fifth Plan, the State has undertaken a rather remarkable programme of rural housing for harijans under the Harijan Housing

and Development Corporation which aims at building 1 lakh houses by the end of the Plan period, of which over 7000 houses were completed by the end of 1975. Under the direction of the Rural Housing Cell established in 1958 and referred to earlier, over a period of 14 years ending March 1973, 5700 rural houses have been completed with the financial outlay of Rs. 250 lakhs. In addition under the Rural Housing Scheme 1900 houses have been built. This total of 7600 houses built should be seen against the need for 36 lakhs rural houses as estimated by the State Planning Commission.

The future needs of rural housing in the State are computed using a variety of techniques and sources. The starting point is that 287 lakhs rural persons are in 1970 living in 58 lakh houses, 75 per cent of which are *kutcha* houses of a one room type in which 5 persons live. On the assumption that rural-urban population ratio will decline from 67 : 33 to 56 : 44 by the end of the century, providing 2 room houses for family size which will decline from 5 to 4.25 in that period and replacing the *kutcha* houses by more permanent structures on house sites of 3 cents average, there is need for 62 lakh additional units by the end of the Sixth Plan at a cost of Rs. 1136 crores.

This is a rather daunting perspective. To deal with the urgencies of rural development, the monograph recommends : (a) A rural housing survey with a fairly simple format which is outlined in order both to assess the precise position of various types of rural houses needed and to keep the data continually upto date. The data used in this study are based on census and NSS sources which are partial and indirect and hence the first need for launching the programme is the proposed survey. (b) Second and simultaneously a State Rural Housing Finance Corporation should be set up with district Rural Housing Units and Block Rural Housing Agencies under the Corporation which should mobilise local rural resources up to the extent of 60-70 per cent of the finance indicated earlier and with a State subsidy of around Rs. 400 crores for the balance of the Fifth and Sixth Plan periods. (c) Third a programme of land assignment to the landless - who are the rural majority - the small farmer, the marginal and dry farmer, the small tenant and the agricultural labourer, involving distribution of surplus land to some and

pattas to those now with houses which may have either to be demolished and rebuilt or renovated and remodelled. This land distribution programme should be under the technical supervision of the Corporation. (d) Fourth to promote cost effectiveness, use of local materials and ensure a certain minimum of uniformity in construction, the Corporation should use the research and development units for rural housing construction now developing in the State's engineering and technological institutions. (e) Finally, in order to ensure people's participation and active involvement in the programme, Village Housing Committees should be formed in large villages or groups of hamlets to draft a realistic village programme of redevelopment including the laying of streets, drains, the acquisition of land, participation in building and in distributing of loans and grants available for housing and to transform the programme into a work schedule which the committees will be responsible for executing.

This monograph on Rural Housing in Tamil Nadu thus indicates the broad lines of future planning rather than preparing a precise programme for Rural Housing in the State. The Institute is grateful to the various departments of government engaged in housing programmes, the Department of Statistics, the State Planning Commission, the University of Madras, the Institute for Techno-Economic Studies and Rural Housing Wing (Bangalore) for the help provided in the collection of data—both published and unpublished. The analysis of the data, the judgements and views expressed on them as well as the recommendations in the study are the responsibility of the author Mr. V. Rengarajan, a research officer of the Madras Institute of Development studies.

I commend the study to the government departments responsible for policy and execution of rural housing in the State in the hope that it may indicate the way forward in this area of vital importance for the well being of people of the State.

Malcolm S Adeshiah

CHAPTER 1

FRAMEWORK OF THE STUDY

Introduction

Housing is one of the primary needs of man ranking in importance next only to food and clothing. A residence under hygienic conditions in good surroundings has a salutary effect on life. Much emphasis is being given to food production and greater efforts are directed to stepping up the production of textiles; but very little has been done in providing housing facilities to the country's growing population.

Existing Facilities

The fifteenth round of the National Sample Survey shows that 14 per cent of our rural people occupy an average of 12.5 square feet of floor space and another 29 per cent, 37.1 square feet, while 50 square feet per person is the minimum accepted national and international standard. According to the report of the working group on housing for the Fourth Five Year Plan, around four-fifths of our rural population live in *kutchha* structures, flooring and walls of mud and thatched roofs of grass and reed. Only about 2 per cent of our people live in *pucca* houses with plastered flooring, brick walls and concrete or tile roofs.

Table 1—Distribution of dwellings according to building materials⁽¹⁾.
(Unit of 1000 houses)

Predominant building materials used	1961			1970*		
	Rural	Urban	Total	Rural	Urban	Total
Grass, reeds, leaves, bamboo, mud, etc.	751	397	662	723	367	626
Burnt bricks, stones, cement, G.I. sheets, etc.	249	603	338	277	633	374

* Provisional; Based on a 20 per cent sample of listed houses.

It is observed that out of every 1,000 dwellings in the urban areas, there are still 367 huts, thatched sheds, etc., whereas in the rural areas, out of every 1,000 dwellings as many as 723 are of mud, bamboos, leaves, etc. (1970).

The total housing stock in Tamil Nadu increased from 63.7 lakhs dwellings in 1961 to 81.8 lakhs in 1970 (provisional) according to the house listing by the Census Department. This gives a growth rate of 2.8 per cent per annum during the nine years between 1961 and 1970 as against a population growth rate of 2.0 per cent. During the decade preceding 1961, the housing growth rate was 2.0 per cent as against the population growth rate of 1.1 per cent. The average number of persons per house is 5.0.

Table 2—Classification of houses according to number of rooms and number of persons⁽²⁾.

	(in thousands)				
	One Room	Two Rooms	Three Rooms	Four Rooms	Five Rooms
Number of households	3,872.9	1,395.0	392.8	144.9	94.9
Number of persons	16,650.5	7,426.4	2,420.2	970.7	742.7
Average number of persons per room	4.6	2.6	2.1	2.3	1.5

1) *Tamil Nadu Economic Appraisal: 1973.*

2) *The Perspective Plan for Tamil Nadu: 1971-1984.*

Table 3—Classification of census houses by walls and roofs⁽¹⁾.
(in thousands)

Total number of census houses	Houses with <i>kutch</i> a walls and <i>kutch</i> a roofs	Houses with <i>kutch</i> a walls and <i>pucca</i> roofs	Houses with <i>pucca</i> walls and <i>kutch</i> a roofs	Houses with <i>pucca</i> walls and <i>pucca</i> roofs
5,823.8	3,532.5	838.2	108.3	1,341.6

People living in temporary structures of walls and roofs constitute nearly 61 per cent. The households living in houses on rental basis constitute 10 per cent. The number of persons living in one room houses constitute nearly 61 per cent.

Table 4—Rural-urban composition of population.⁽²⁾

	1971		1961		Percentage Growth rate
	Popula- tion in millions	Percen- tage	Popula- tion in millions	Percen- tage	
Rural	28.65	69.72	24.70	73.31	16.03
Urban	12.45	30.28	8.99	26.69	38.44
Total	41.10	100.00	33.69	100.00	22.01

About 69.72 per cent or 28.65 millions (1971) live in the rural areas. The decennial growth rate of the rural population during 1961-71 works out to 16.03 per cent. Hence there is a heavy demand for housing in the rural areas. A residence under hygienic and good surroundings must be assured to the rural people who contribute nearly 42.90 per cent of the State income. But these people now live in poor conditions. The National Sample Survey (Rounds 16, 17, 18 and 19) records that 73.80 per cent of the population lived

(1) *Ibid.*

(2) *Tamil Nadu Economic Appraisal: 1973.*

below the poverty line in rural areas during 1969-70 in Tamil Nadu. They were forced to obtain loans from money-lenders at exorbitant rates of interest against the mortgage of their houses whenever they were in need of money for domestic and other expenses. Further, there are also other problems which are closely associated with housing, namely sanitation, drinking water, health facilities, schooling, recreation and communication particularly in the rural areas. As such, housing becomes as important a consumption good as any other. Hence the Rural Housing Programme receives high priority in rural development.

Rural Housing in the Perspective Plan for Tamil Nadu

The Perspective Plan for Tamil Nadu (1972-'84) says "...further, housing in rural areas creates a chain of rural industries which produce materials like doors, windows and other related components for houses, which will employ a large number of craftsmen and other workers. It will pave the way to discovery of local materials and improve the available materials used in house construction. Another impact of rural housing will be that it will create industrial activities in terms of brick kilns, blacksmithy, workshops, foundries, carpentry, etc., and provide employment for a considerable number of people in rural areas. Despite its importance, housing did not receive adequate attention in our national plans and was assigned a low priority until recently. The result is there is acute shortage of housing all over the country."

Objectives

The major objectives of the study are:

- (1) to study the conditions of housing and the stock of houses in the rural areas;
- (2) to study the dimension of poverty in relation to housing in Tamil Nadu;
- (3) to project rural housing needs for V and VI Five Year Plans; and
- (4) to give some suggestions for consideration during plan implementation.

Data

This study uses primary data collected at the University of Madras for the Project on Agrarian Change (1973-74) and at the Agro-Economic Research Centre (village surveys) (1958-61) for micro level analysis.

Secondary data from the Census 1971, N.S.S. and the records of the Rural Housing Cell (Tamil Nadu Government) are used for analysis at the macro level.

The Tools Applied

(1) To find out the rate of progress for population and houses, a logistic model is used.

$$y_t = y_0 (1 + r)^t$$

$$\frac{y_t}{y_0} = (1 + r)^t$$

$$\sum \left[\log y_t - \log y_0 - t \log (1 + r) \right]^2 = 0$$

Differentiating with respect to r , we get

$$\sum \left[\log y_t - \log y_0 - t \log (1 + r) \right] \frac{t}{1 + r} = 0$$

Since $1 + r > 0$

$$\sum t \log y_t - \sum t \log y_0 - \sum t^2 \log (1 + r) = 0$$

$$\sum t^2 \log (1 + r) = \sum t \log y_t - \log y_0 \cdot \sum t$$

$$\log (1 + r) = \frac{\sum t \log y_t - \log y_0 \cdot \sum t}{\sum t^2}$$

y_t = population in the t^{th} year

y_0 = the number in 1901

r = rate of progress (10 years being one unit)

(2) To find out the missing data, interpolation method is followed; Piediagram and Lorenze curve have also been used.

The main limitation of the study is that time-series data on rural housing are not available.

General Framework

Proceeding in accordance with the design suggested, the monograph has been cast in the following general framework.

Chapter 2 studies the condition and the stock of rural housing.

Chapter 3 studies poverty and housing.

Chapter 4 attempts to evaluate the present efforts.

Chapter 5 projects the housing needs for V and VI Five Year Plans.

Chapter 6 makes policy recommendations.

Model rural house design plan is also shown at the end.

Concepts and Definitions**Building:**

A building is a readily distinguishable structure or group of structures, such as a house, school, workshop, temple, etc.

House and Census House

House is a building with one or more rooms with a common entrance. A census house is a building or part of a building having a separate main entrance from the road or common courtyard or staircase, etc., used or recognised as a separate unit. It may be used for a residential or non-residential purpose or both. A house may consist of one or more census houses.

A room should have four walls with a doorway and with a roof over head and should be wide and long enough for a person to sleep in it. It should have a length of not less than 2 metres and breadth of at least 1.5 metres and 2 metres in height. An enclosed space which is used in common for sleeping, sitting, dining, storing and cooking, etc. is regarded as a room.

Household

A household is a group of persons who commonly live together and would take their meals in a common kitchen unless the exigencies of work prevent any of them. A household may consist of one or more families.

Family

A family is one which consists of a husband and wife with or without children.

Household Structure

There are five types of household structures as defined by the Project on Agrarian Change* conducted jointly by Madras University and Cambridge University whose data are used for analysis here.

The definition of five types of household structures.

- (1) **Nuclear** : Husband and/or wife and/or unmarried children including single member household also.
- (2) **Joint Vertical** : Two or more married generation including unmarried children / grand-children — all vertically related—a couple + their children and their children.
- (3) **Joint Horizontal** : Two generations only—parents and children with brothers/sisters, married or unmarried, of parent generation and their children all married couple of same generations—horizontally related.
- (4) **Joint mixed** : Vertical and horizontal relation.
- (5) **Others** : Not related members.

* Author has worked as Research Supervisor in the project.

CHAPTER 2

PRESENT HOUSING CONDITION AND STOCK OF RURAL HOUSING IN TAMIL NADU

When land was abundant and human wants were limited, there were no acute problems of health and hygiene. But due to pressure on land for agricultural, irrigational, industrial, commercial, educational and other purposes, availability of land for human habitation had largely shrunk. In the country side, whatever land was available, was encroached upon. The rural people also usually constructed their dwellings in the place available in a haphazard manner. Many of the houses in rural areas are woefully deficient in essential physical and social requirements of residential houses. Overcrowded, structurally unsound, insanitary and infested with vermin these houses lack the simplest arrangement for cooking and storage of food and safe water supply for drinking and washing. The houses are constructed in rows either back to back or side by side with common walls in between without provision for cross ventilation. The plan of a rural house is designed by a local man on the traditional pattern of house design. More modern and scientific method of house planning is followed in urban areas. Sometimes cattle are housed along with human beings without any proper drainage facilities. There are no proper chimneys for smoke. Most of the houses are built with mud walls and thatched roofs. Both these materials are impermanent and cannot withstand heavy rain, fire and storms.

The number of householders residing in excellent houses in urban areas was about three times that in rural areas. Distribution of households under rented and owned houses in rural and urban areas by condition of structure was roughly of the same order except that the proportion of owned houses whose condition of structure was bad, dilapidated and improvised was far greater in rural than in urban areas.

N. S. S. also supplies information about 'period built' which were collected in order to get an idea of the age of the house.

Table 6—Percentage distribution of households by the age of the house in rural and urban areas.

No.	Age of the house (in years)	Rural	Urban
1.	0-2	4.62	23.66
2.	2-3	3.63	2.44
3.	3-5	7.63	5.17
4.	5-7	6.65	4.28
5.	7-10	7.95	5.81
6.	10-15	13.86	9.54
7.	15-20	9.40	7.24
8.	20-40	21.15	21.87
9.	40-60	9.92	11.59
10.	60 and above	15.19	8.40
Total		100.00	100.00
(i) Sample villages/blocks		7913	4072
(ii) Sample households		21710	4282

Source: *N. S. S. 18th Round: February 1963 to January 1964; All India.*

In rural areas most of the houses (92%) were built more than 3 years ago from the date of survey and only 8 per cent of the households occupied houses which were built within 3 years of the data of survey. On the other hand, in urban areas about 26 per cent of the households occupied houses which were built within 3 years.

Table 7—Percentage distribution of households residing in rented houses and average monthly rent per household (in rupees) in rural and urban areas.

No.	Monthly expenditure level (in Rs.)	Rural		Urban	
		Average rent (in Rs.)	Percentage	Average rent (in Rs.)	Percentage
1.	0-25	1.40	4.56	4.55	1.34
2.	26-50	3.14	20.11	4.12	7.74
3.	51-100	4.09	39.58	7.31	30.79
4.	101-200	7.10	28.24	12.94	37.88
5.	201-300	10.19	5.28	22.97	12.53
6.	301-400	15.51	1.05	31.50	4.30
7.	401-500	27.94	0.55	51.68	1.90
8.	501 and above	14.89	0.63	60.06	3.52
		5.28	100.00	14.89	100.00
	(i) Sample villages/ blocks	7913		4072	
	(ii) Sample households	21710		4282	

Source: N. S. S. 18th Round: February 1963 to January 1964; All India.

Table 7 gives the estimated average of monthly rent per household. Only the occupied rented houses were considered. It is found that the average rent (Rs. 14.89) in urban areas was about three times greater (Rs. 5.28) than in rural areas. For the households belonging to higher expenditure levels, the amount of rent paid was high in urban areas compared to rural areas. This table also shows that two-thirds of the households both in rural and urban areas fall in the expenditure group 51-200.

In rural areas, many households are living in rented houses and the rent is less than that of urban areas.

Table 8—Percentage of distribution of households residing in rented house by monthly rent classes in rural and urban areas.

No.	Monthly rent class (in Rs.)	Rural	Urban
1.	0-10	86.67	51.54
2.	10-20	10.78	28.65
3.	20-30	1.30	10.10
4.	30-40	0.08	4.86
5.	40-60	0.27	2.96
6.	60-80	...	1.51
7.	80-100	0.30	0.32
8.	100-125	...	0.57
9.	125-150	...	0.21
10.	150 and above	...	0.28
	Total	100.00	100.00
	Sample households	737	1920

Source: *N. S. S. 18th Round: February 1963 to January 1964; All India.*

Table 8 gives the percentage distribution of households residing in rented houses by monthly rent classes. The results show that about 87 per cent of the households in rural areas and 52 per cent of the households in urban areas lived in houses where the monthly rent was less than Rs. 10. The table also reveals that in rural areas about 97 per cent of the households did not pay more than Rs. 20 per month as rent.

Table 9 presents the estimated average monthly rent per household by States in rural and urban areas. In general, it is found that the average rent in urban areas was about 2 to 5 times that of the rural areas at the State level, except for West Bengal where the proportion was still higher (that of about 11 times the rural areas). The average rent in rural areas was lowest in West Bengal (Rs. 1.47) and highest in Manipur. While in urban areas it was lowest in Himachal Pradesh (Rs. 3.50) and highest in Delhi (Rs. 25.62). In Tamil Nadu it was Rs. 4.68 in rural and Rs. 15.04 in urban areas.

Table 9—Estimated monthly rent in rupees for household in rural and urban areas.

No.	State	Sample households average rent in rupees			
		Rural	Urban	Rural	Urban
1.	Andhra Pradesh	77	141	5.41	10.96
2.	Assam	17	58	9.05	18.54
3.	Bihar	38	112	6.07	12.42
4.	Gujarat	63	101	5.32	14.13
5.	Jammu and Kashmir	9	33	8.33	13.62
6.	Kerala	44	37	6.58	13.73
7.	Madhya Pradesh	43	137	5.51	9.34
8.	Madras	141	162	4.68	15.04
9.	Maharashtra	72	302	4.43	17.09
10.	Mysore	48	94	3.75	17.69
11.	Orissa	8	39	3.34	14.26
12.	Punjab	23	45	5.35	17.56
13.	Rajasthan	88	85	4.03	16.37
14.	Uttar Pradesh	23	245	5.17	11.25
15.	West Bengal	29	251	1.47	15.91
16.	Union territories				
	Delhi	1	58	10.00	25.62
	Himachal Pradesh	—	4	—	3.50
	Manipur	2	1	10.50	16.00
	Tripura	11	23	6.73	14.16
	Union territories pooled	737	1928	5.28	14.89

Source: N. S. S. 18th Round: July 1963 to January 1964.

Table 10—Estimated cost of repairs and maintenance per household (in Rs.) by condition of structure in rural and urban areas.

No.	Condition of structure	Rural	Urban
1.	Excellent	47.50	27.60
2.	Fairly good	17.39	17.01
3.	Bad dilapidated and improvised	12.91	6.91
4.	All structures	18.14	17.08
	(i) Sample villages/blocks	7913	4072
	(ii) Sample households	21710	4282

Source: *N. S. S. 18th Round: February 1963 to January 1964.*

Table 10 shows that during the reference period of the National Sample Survey (February 1962 to January 1963) about Rs. 17 to 18 for household was spent on cost of repair and maintenance of houses in India. The maximum amount was spent on excellent houses (about Rs. 48 and Rs. 28 for rural and urban areas respectively). About Rs. 17 was spent on fairly good houses which needed no major repairs. The amount spent on bad houses was the least in both rural and urban areas. The amount spent in rural areas was roughly twice that in urban areas.

Drinking Water

Table 11—Percentage distribution of households by source of drinking water in rural and urban areas.

No.	Source of drinking water	Rural	Urban
1.	tap	2.56	57.25
2.	well	68.08	11.64
3.	tube well	11.15	24.89
4.	tank and pond	6.45	1.53
5.	river, lake spring	9.35	1.88
6.	others	2.41	2.81
	Total	100.00	100.00
	(i) sample villages/blocks	2913	4072
	(ii) sample households	21710	4282

Source: N. S. S. 18th Round: February 1963 to January 1964.

Table 11 gives the percentage distribution of households by source of drinking water. About 68 per cent of households in rural areas had their drinking water from wells. About 11 and 9 per cent of households utilised tube wells and river, lake and spring water for drinking water purposes respectively. Percentage of households getting water from taps was the least (3%).

Uses of Houses**Table 12**—Census of houses and uses to which they are put; Tamil Nadu—Rural.

Sl. No.	Particulars	No.	Sub-total
1.	Census houses vacant	4,96,565	4,96,565 (7.2%)
2.	Occupied houses used as		
	(a) purely residential	56,50,560	
	(b) shop cum residence	52,380	
	(c) workshop cum residence	83,890	
	Total occupied residential		57,86,830 (84.5%)
3.	Hotels, tourist houses	3,375	
4.	Shops	74,240	
5.	Business house and offices	18,620	
6.	Factories	39,360	
7.	Restaurants	25,400	
8.	Places of entertainment	4,815	
9.	Places of workshop	83,430	
10.	Others	3,17,035	
	Total occupied non-residential		5,66,275 (8.3%)
	Total		68,49,670

Source: *ITES: A diagnostic study to assess the size of the problem.*

Vacant Houses

Out of the total number of rural houses in Tamil Nadu, 92.8 per cent of houses are occupied and there are as many as 4,96,565 houses forming 7.2 per cent which are vacant. Among occupied houses, 91 per cent of houses are utilised for residential purposes and 9 per cent of houses are used for non-residential purposes like hotels, shops, factories, workshops, etc., 2.4 per cent of houses are utilised as shop cum residence and workshop cum residence. 82.5 per cent of total houses are used exclusively for residential purposes.

State as a Whole

Out of 95,63,530 census houses, 6,71,610 houses are vacant. Rural areas account for 4,96,565 vacant houses and urban for 1,75,045 vacant houses. Vacant houses form 7 per cent of all houses. In rural areas 7.25 per cent of all houses are vacant while 6.45 per cent of all houses are categorised as vacant in urban areas.

While the State average of vacant houses is 70 per 1000 houses in the districts, the range basis for the State as a whole varies from 153 in Nilgiris to 37 in Madras. 73.9 per cent of vacant houses are to be found in rural areas and 21 per cent in urban.

Table 13—Number of rural houses and their Use.

Sl. No.	District	Total number of census houses	Census houses vacant at the time of house listing	Houses used for residential purposes	Houses used as shops cum residences	Houses used as workshops cum residence including household industry
1.	Chingitput	415.5	20.3	357.3	3.9	5.4
2.	North Arcot	673.2	35.1	537.4	6.2	8.7
3.	South Arcot	698.2	36.0	596.8	6.8	4.5

(Contd. on p. 18)

Table 13—Contd.

Sl. No. District	Total number of census houses	Census houses vacant at the time of house listing	Houses used for residential purposes	Houses used as shops cum residences	Houses used as workshops cum residence including house-hold industry
4. Dharmapuri	308.7	19.2	266.5	1.9	1.1
5. Salem	556.9	48.3	462.7	3.3	11.2
6. Coimbatore	681.0	57.9	562.5	8.0	20.6
7. The Nilgiris	68.3	11.6	48.1	0.3	0.1
8. Madurai	626.5	46.6	520.0	5.1	4.2
9. Tiruchirapalli	751.5	64.3	605.8	4.0	8.8
10. Thanjavur	707.9	33.4	603.9	4.4	4.6
11. Ramanathapuram	555.4	50.5	442.6	3.1	3.5
12. Trunelveli	594.0	58.4	471.8	3.9	3.5
13. Kanyakumari	211.8	14.3	174.6	0.9	2.3
Total	6848.9	495.9	5650.0	51.8	88.5

Source: *The Perspective Plan for Tamil Nadu.*

Among the districts, the highest number of vacant houses are found in Tiruchirapalli district since it has nearly 13 per cent of total vacant rural houses. The lowest is found in Nilgiris. The maximum number of rural houses are used for residential purposes in the district of Dharmapuri where 86.3 per cent of rural houses are used mainly for residential purposes. It is followed by Chingleput where 86.0 per cent of houses are used for residential purposes while the State average is 82.5 per cent.

Houses which are used as shops or as shops cum residences, are largely found in Coimbatore followed by South Arcot. Again in Coimbatore district, houses are used as workshop cum residences including household industry. Next to Coimbatore district, Salem district has more workshop cum residential houses. It seems more persons in rural areas engage themselves in industrial activities in their houses. While 1.2 per cent of total rural houses in Tamil Nadu are utilised as workshop cum residence, Coimbatore district has nearly 3 per cent of its rural houses in this category.

Housing Condition in Tamil Nadu

Since there are no comparable statistics for Tamil Nadu in the categories used for All-India census, different categories to define the types of housing are used and they are as follows:

- (1) Kutcha walls with kutcha roof—
Thatched roof with mud walls.
- (2) Kutcha walls with pucca roof—
Tiles/Acc roof with mud walls.
- (3) Pucca walls with kutcha roof—
Brick building with thatched roof
- (4) Pucca walls with pucca roof—
Brick building with tiled/Acc roof.

These are the major types of houses that are found in rural areas.

Table 14A—Distribution of census houses by material of wall cross classified by material of roof (as per 1970 census house listing).

(in thousands)

District	Total number of census houses	Kutcha walls with kutcha roof	Kutcha walls with pucca roof	Pucca walls with kutcha roof	Pucca walls with pucca roof
Chingleput	368.3	282.8	7.8	6.2	71.3
North Arcot	556.8	403.0	19.5	5.2	128.9
South Arcot	613.3	503.1	6.8	12.0	91.1
Dharmapuri	271.4	156.3	71.6	1.2	42.1
Salem	480.2	304.2	42.1	25.7	108.1
Coimbatore	595.5	157.6	185.1	13.9	238.6
The Nilgiris	48.9	7.0	2.1	0.7	39.1
Tiruchirapalli	623.4	437.5	63.5	7.6	114.6
Madurai	532.0	292.6	113.2	8.1	117.8
Thanjavur	618.5	466.2	27.5	13.1	111.5
Ramanathapuram	450.9	240.3	109.1	3.8	97.5
Tirunelveli	485.9	198.2	131.8	5.9	149.8
Kanyakumari	178.7	83.7	58.1	4.9	31.2
Total	5823.8	3532.5	838.2	108.3	1341.6

Source: *The Perspective Plan for Tamil Nadu.*

PIE DIAGRAMS SHOWING THE DISTRICT WISE DISTRIBUTION OF RURAL HOUSES BY STRUCTURE IN TAMIL NADU

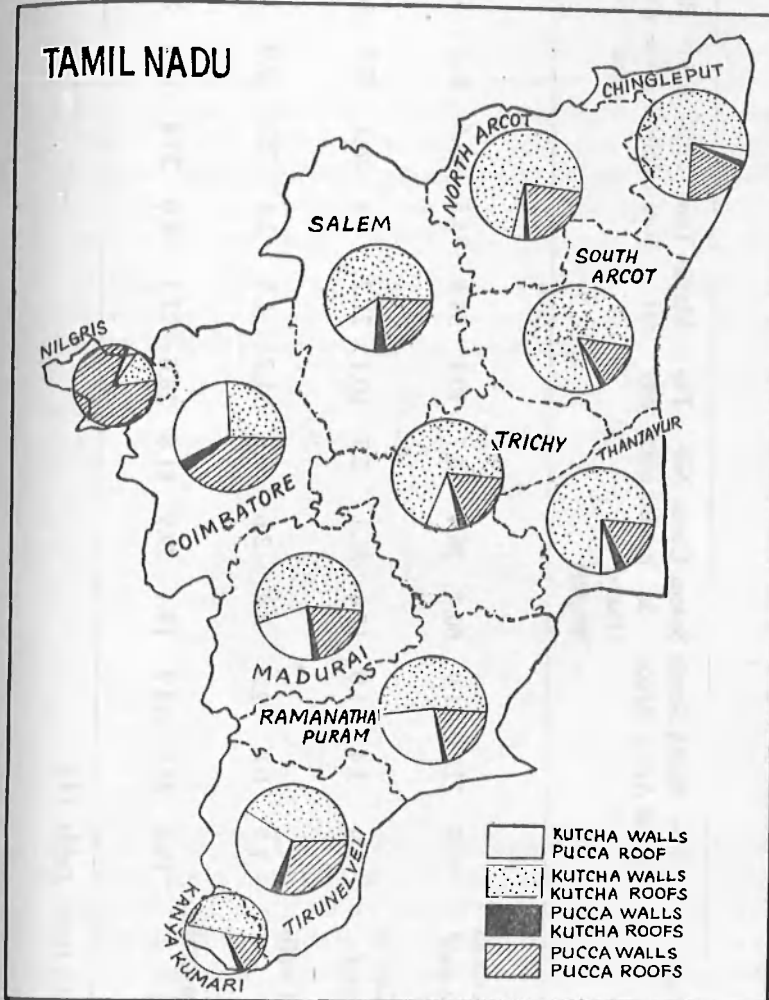


Fig. 1

Refers to Table 14B

Table 14B—Percentage of distribution of houses by structure—Districtwise in Tamil Nadu.

Structure of House	Chin- g'epu t Arcot	North South Salem	Coim- & batore gis	Nil- c'iy	Tri- rai	Madu- jore	Tan- nelveli	Tiru- yaku	Kan- mari	Rama- natha- puram		
Percentage of Kutcha walls and Kutcha roof	76.6	72.2	81.9	60.4	26.4	14.7	70.1	54.8	75.5	40.6	46.6	53.3
Percentage of Kutcha walls and Pucca roof	1.9	3.4	1.0	17.4	31.1	2.7	10.1	21.2	4.4	26.8	32.7	24.2
Percentage of Pucca walls and Kutcha roof	1.9	0.8	2.2	2.8	2.6	0.8	1.2	1.5	2.1	2.2	2.9	0.7
Percentage of Pucca walls and Pucca roof	19.6	23.6	14.9	19.4	39.9	81.8	18.6	22.5	18.0	30.4	17.8	21.8

Source: Computed from Table 14A.

Table 15—Classification of census houses by wall and roof:
Tamil Nadu.

(in thousands)

Total number of census houses	Houses with kutcha walls and kutcha roofs	Houses with kutcha walls and pucca roofs	Houses with pucca walls and kutcha roofs	Houses with pucca walls and pucca roofs
5823.8	3532.5	838.3	108.3	1341.6
(100%)	(63%)	(13.2%)	(0.8%)	(23%)

Source: *The Perspective Plan for Tamil Nadu.*

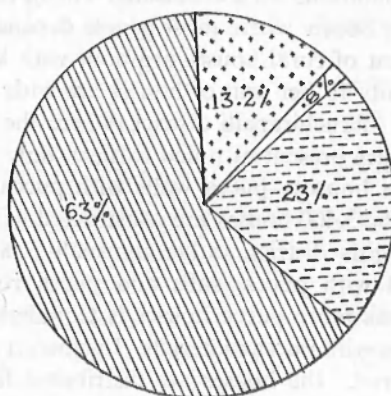


Fig. 2

Of the total 5823.8 thousand houses, only 23 per cent of houses are with pucca walls and pucca roofs. The majority of houses, that is nearly 63 per cent of houses, have kutcha walls and kutcha roofs. Houses with kutcha walls and pucca roofs form 13.2 per cent. Less than one per cent of houses are with pucca walls and kutcha roofs. From Table 15, it is evident that there is a large gap between the structures of houses. Most people build houses with kutcha walls and kutcha roofs. Next highest are houses with pucca walls and pucca roofs. The structure of houses largely depends on the economic status of the households. The poor normally construct houses with kutcha walls and kutcha roofs which are available and cheap in the rural areas. Among

the combined type of structure of houses (pucca roof and kutcha walls, pucca walls and kutcha roof), more build houses with pucca roofs and kutcha walls, indicating more care about the roof than the walls. If the roof is strong, it is assumed that it could safeguard the house to a certain extent.

In Table 14A which shows the districtwise distribution of the houses by structure, it is seen that more rural houses are found in Tiruchirapalli district. Next comes Thanjavur district followed by South Arcot and Coimbatore. More houses with kutcha walls and kutcha roof are present in South Arcot. That is to say it has 14.2 per cent of such houses of Tamil Nadu. Further, 83 per cent of total rural houses of the South Arcot district are made of kutcha roofs and kutcha walls. In Tamil Nadu, South Arcot has the most poor conditions in rural housing. Thanjavur is supposed to be the granary of South where most people depend on agriculture. Here 75.4 per cent of rural houses are built with kutcha roof and kutcha walls. Only 18 per cent of houses are with pucca walls and pucca roofs. In Tiruchirapalli district (where the highest number of rural houses are present as noted earlier), only 18.2 per cent of houses are pucca houses—pucca walls with pucca roofs. Nearly 70 per cent. i.e., 6,23,400 houses are constructed with kutcha materials. In the Nilgiris district, rather unusually, 81.2 per cent of houses are built with pucca walls and pucca roofs. The next district which has more pucca houses is Coimbatore having 40% of its rural houses with pucca materials. Further, it is evident that in Coimbatore district, the houses are distributed fairly equally in all types of structure of houses except in Item No. 3. While 40 per cent are pucca houses, 26.3% are kutcha type and 31 per cent of houses are with kutcha walls with pucca roofs. The remaining, nearly 3 per cent are with pucca walls with kutcha roofs.

Tenurial Condition

Table 16—Classification of households according to tenure.

Tenure	in thousands	%
Owned	5,349.2	90.4
Rented	562.4	9.6
Total	5,911.6	100

Source: *The Perspective Plan for Tamil Nadu.*

Out of 59,11,600 rural households in Tamil Nadu, 90.4 per cent of them own their houses. Only 9.6 per cent, that is 5,62,400 households are living in rented accommodation.

Table 17—Districtwise households classified on tenure basis (As per 1971 census house listing).

(in thousands)

Sl. No.	Name of District	Households			Percentage
		Owned	Rented	Total	
1.	Chingleput	348.9	25.0	373.0	6.7
2.	North Arcot	540.0	34.2	574.2	5.9
3.	South Arcot	583.3	42.4	625.7	6.7
4.	Dharmapuri	254.9	17.5	272.4	6.2
5.	Salem	441.1	40.6	481.7	8.3
6.	Coimbatore	517.8	82.7	600.5	13.6
7.	The Nilgiris	22.5	26.6	49.1	54.0
8.	Madurai	476.4	62.3	538.7	11.5
9.	Tiruchirapalli	584.9	51.4	636.3	8.0
10.	Thanjavur	557.1	72.2	629.3	11.4
11.	Ramanathapuram	418.2	38.5	456.7	8.3
12.	Tirunelveli	436.9	50.9	487.8	10.2
13.	Kanyakumari	167.2	18.1	185.3	9.9
Total		5,349.2	562.4	5,911.6	9.5

Source: *The Perspective Plan for Tamil Nadu.*

In almost all the districts, there are households who live in houses on rental basis. The rented houses are fairly evenly distributed in all the districts. The highest number of rented houses i.e., 1.4 per cent of the total rented houses of Tamil Nadu are

found in Coimbatore district. Though Coimbatore district has 1.4 per cent of total rented houses of Tamil Nadu, nearly 86 per cent of the district's rural people own their houses. In the Nilgiris district, nearly 54 per cent of the households are living in rented houses. The highest number of households who own houses are found in Trichy district. Only 8.0 per cent of households live in rented houses there. Generally, except the district of Nilgiris, the range of percentage of rented households in all the districts of Tamil Nadu is 5 to 14, showing a majority of the households owning their houses.

Table 18—Classification of houses according to number of rooms and number of persons.

(in thousands)

	One room	Two rooms	Three rooms	Four rooms	Five rooms and above
Number of households	3,872.9	1,395.0	392.8	144.9	94.9
Number of persons	16,650.5	7,426.4	2,420.2	970.7	742.7
Average number of persons per room	4.6	2.6	2.1	2.3	1.5

Source: *The Perspective Plan for Tamil Nadu.*

The above table shows that the number of persons living in one room houses constitute nearly 61 per cent. Only 2.6 per cent of people are living in five rooms and above. The remaining 37 per cent of persons occupy two to four rooms. The average number of persons per room is 4.6 in one room, 2.6 in two rooms, 2.1 in three rooms, 2.3 in four rooms and 1.5 in five rooms and above. This trend shows that while the number of rooms increases, the average number of persons per room decreases. While 61 per cent are concentrated in one room houses, where the average number of

persons per room is 4.6, very few live in five-room houses where the average number of persons per room is 1.5, indicating a general state of congestion in the occupation of the houses. Further, 65.6 per cent representing 38,72,900 households live in single rooms. The average size of household living in one room is 4.6, whereas for those who live in five rooms and above it is 7.5. Thus though the average size of household is higher in many roomed houses, the occupants can be accommodated comfortably. But the average size of 4.6 per household in single room house poses the problem of congestion. The majority live in this condition in rural areas.

Table 19—Districtwise population/house ratio.

No.	Districts	Total number of Rural Population	Total number of Rural Houses	Population/ House Ratio
1.	Chingleput	18,96,909	36,83,00	5:1
2.	North Arcot	29,72,702	5,56,700	5:1
3.	South Arcot	31,04,726	6,13,300	5:1
4.	Dharmapuri	15,33,834	2,71,400	5:1
5.	Salem	21,97,234	4,80,200	5:1
6.	Coimbatore	28,16,936	5,66,384	4:1
7.	Nilgiris	2,50,780	48,900	5:1
8.	Tiruchirapalli	29,91,808	6,23,400	5:1
9.	Madurai	26,14,003	5,32,000	5:1
10.	Thanjavur	30,52,694	6,18,791	5:1
11.	Ramanatha- puram	21,13,545	4,50,900	4:1
12.	Tirunelveli	21,71,019	4,85,900	4:1
13.	Kanyakumari	10,181,44	1,78,700	5:1
	Total	2,87,34,334	58,23,800	5:1

Source: *Census of India 1971, Provisional population totals.*

The population-house ratio shows that there is one house to every five persons in Tamil Nadu. A similar trend is seen in almost all the districts of Tamil Nadu. In the districts of Ramanathapuram, Tirunelveli and Coimbatore, one house is available to every four persons. Among the districts, South Arcot has the maximum rural population while Tiruchirapalli district has the maximum number of rural houses as noted earlier. But the gap between the availability of houses to persons is still wide.

Table 20—Number of persons per house (1901–1961).

State/District	1901	1911	1921	1931	1941	1951	1961
Madras State	5.5	5.4	5.2	5.2	5.2	5.6	5.3
Madras	9.2	8.7	8.2	8.8	8.8	12.9	11.7
Chingleput	6.4	6.2	5.9	5.7	5.7	5.9	5.4
North Arcot	6.4	6.7	6.3	6.3	6.3	6.4	5.9
South Arcot	6.9	6.2	5.8	5.5	5.4	5.6	5.2
Salem	5.0	5.1	4.7	4.7	4.9	5.2	5.1
Coimbatore	4.9	4.9	4.7	5.0	5.1	5.5	5.3
Nilgiris	4.6	4.4	4.2	4.3	4.4	5.4	5.0
Madurai	5.0	5.6	5.4	5.5	5.4	6.2	5.6
Tiruchirapalli	5.5	5.1	5.1	4.9	4.9	5.2	4.8
Thanjavur	5.3	5.2	5.1	4.9	4.8	5.2	4.9
Ramanathapuram	5.0	5.6	4.9	4.9	4.9	5.0	4.8
Tirunelveli	5.0	4.5	4.4	4.3	4.4	4.7	4.6
Kanyakumari	4.6	4.8	5.1	5.3	5.4	5.7	5.6

Source: *MIDS Bulletin*, December 1971, Vol. I, No. 11
Micro Study on Condition of Rural Housing.

The Agro-economic Research Centre, University of Madras, conducted village surveys on the following villages during 1958 to 1961. Detailed analysis of the condition of housing in those village reveals the actual conditions.

No.	Villages	Taluk	District	Year of survey
1.	Sengipatti	Tanjavur	Tanjavur	1958-59
2.	Aralikottai	Tirupathur	Ramanathapuram	1958-59
3.	Uppathur	Sathur	Ramanathapuram	1958-59
4.	Rajagambiram	Sivaganga	Ramanathapuram	1957-58
5.	Vadamalai-puram	Sathur	Ramanathapuram	1960-61

VILLAGE—SENGIPATTI

Housing Pattern

The buildings have been classified according to the purpose for which they are utilised and in all, there are 494 buildings in the village. Among these buildings, 415 (84 per cent) are used as residential houses (Tamil Nadu 82 per cent) by villagers showing that at least 100 households do not have independent houses to live in and are satisfied with a portion in a house. Of the remaining 79 buildings, 72 are used as cattle sheds, 5 as shops and one each as workshop and rural dispensary. 15% of the houses are utilised for non-residential purposes while the percentage for Tamil Nadu is 9 per cent.

A large majority (93.31 per cent) of the buildings are built with mud and thatched with palmyrah or coconut leaves. Only 21 are built with brick and mortar and out of these 14 are tiled and terraced. The details are given below.

Table 21—Housing pattern.

Type	Mud	Brick and mud	Brick and mor- tar	Stone and mor- tar	Wood	Sticks	Total
Thatched	461	—	1	—	1	1	464
Tiled	6	14	1	2	—	—	23
Terraced	—	7	—	—	—	—	7
	467	21	2	2	1	1	494

The situation is unsatisfactory when the area of the building where the villagers live with their families of three to four members is considered. 234 buildings or little less than half the number are less than 200 square feet in area, which means that most of these households have only one room, with a dimension of 16' x 12'. Ordinarily they are partitioned by a small mud wall making provision for a small improvised kitchen at one corner of the room. Another 121 are of area between 200 and 300 square feet. Rich landlords and businessmen own about 19 spacious buildings and all of them are with an area of over 1000 square feet each.

Table 22—Distribution of buildings by area.

Area in square feet	Number of Buildings
Less than 100	38
100—200	196
200—300	121
300—400	58
400—500	29
500—1000	33
1000—2000	14
2000—4000	5
Total	494

The table given below shows the area occupied by the households in the village for different income groups.

Table 23—Households by residential area occupied and levels of income.

Income (in Rs.)	Less than 100	Area occupied in square feet								Total
		100- 200	200- 300	300- 400	400- 500	500- 1000	1000- 2000	2000- 4000		
Less than 200	9	12	7	1	2	4	—	—	35	
200—400	20	65	24	15	2	9	—	—	135	
400—600	11	72	29	13	7	7	—	—	139	
600—800	—	22	19	9	2	9	1	—	62	
800—1000	—	9	12	7	1	10	2	—	41	
1000—1500	—	7	4	8	3	7	1	1	31	
1500—2000	—	1	1	1	2	7	2	—	14	
2000 and above	—	—	—	1	2	1	—	1	5	
	40	188	96	55	21	54	6	2	462	

Of the total 462 households, 228 families (nearly 50 per cent) live in houses with an area of less than 200 square feet, and a majority (189) have an annual income of less than Rs. 600. Another 54 families (11.6 per cent) have a residential area of 500-1000 square feet and they are from almost all the income groups. All the 8 families having a residential area over 1000 square feet are with an annual income of over Rs. 600. It is also seen that a few households utilise two houses each for residential purposes.

27 households or 6 per cent of the total number live in rented buildings (9 per cent for Tamil Nadu) and the total area occupied by them come to 8662 square feet which works out to an average of 321 square feet per family. For 14 of them, the buildings are given rent free and the rest pay a total annual rent of Rs. 426. At an average they pay Rs. 32.7 in rent (for all India it is Rs. 4.68). One of the biggest buildings in the village with an area of 2800 square feet has been rented out for an yearly rent of Rs. 60 and in it is situated the rural dispensary.

Table 24—Distribution of income according to different levels and households.

Income class (Rs.)	No. of Households	Percentage	Income (Rs.)	Percentage
200	35	7.6	5,358.60	2.0
200—400	135	29.2	44,387.14	16.3
400—600	139	30.1	68,075.45	25.1
600—800	62	13.4	42,631.73	15.7
800—1000	41	8.9	36,170.60	13.3
1000—1500	31	6.7	36,915.40	13.6
1500—2000	14	3.0	23,734.30	8.7
2000—3000	2	0.4	4,081.00	1.5
3000	3	0.7	10,271.00	3.8
Total	462	100.0	2,71,625.22	100.0

The average income per household is Rs. 587.9 and about 66 per cent of the households have less than the general average income. The largest number of households belong to the level Rs. 400-600.

Table 25—Distribution of total earners with different levels of earnings in different occupations.

Levels of earnings (Rs.)	Cultivator	Agricultural Labourer	Arts & crafts	Business	Teaching	Medical profession	Religious profession	Essential services	Ministerial services	Others	Total
100	98	56	1	—	—	—	1	—	—	5	161
100—200	73	341	—	—	—	—	—	1	—	4	419
200—300	51	176	2	2	—	—	1	1	5	5	243
300—400	21	—	1	1	—	—	—	2	1	1	27
400—600	27	—	3	4	—	—	—	2	2	10	48
600—800	18	—	—	4	5	—	—	—	—	1	28
800—1000	7	—	—	4	1	—	—	—	4	—	16
1000—2000	6	—	—	4	—	1	—	—	2	—	13
2000—3000	—	—	—	—	—	—	—	—	—	—	—
3000—4000	1	—	—	1	—	—	—	—	—	—	2
Total	302	573	7	20	6	1	2	6	14	26	957

R. H. J.

Out of the 302 earners engaged in cultivation, 98 or 32 per cent earn below Rs. 100, while 73 are in the scale of Rs. 100—200. No agricultural labourer is able to earn more than Rs. 300 per year, while as many as 341 or 59.5 per cent of the total labourers receive income between Rs. 100—200.

Table 26—Number of persons and per capita income.

(Village: Sengipatti)

Class	No. of persons	Total net income Rs.	Per capita income Rs.
Land owners:			
Big	36	9,199.50	255.5
Medium	232	28,574.83	123.2
Small	1,033	1,33,871.55	129.6
Total	1,301	1,71,645.88	131.9
Tenants	78	11,940.30	153.9
Agricultural labourer	281	31,907.35	113.6
Arts and Crafts	27	2,667.60	98.8
Business	88	20,263.50	230.3
Teaching	13	4,360.00	335.4
Medical Profession	8	1,334.00	166.8
Religious Profession	10	1,295.00	129.5
Essential services	21	2,436.50	116.0
Ministerial services	50	10,832.00	216.6
Others	78	12,943.00	165.9
Total	1,955	2,71,625.22	138.9

The above table shows different types of occupational class of people and their per capita income. It is evident that the per capita income for the farming community is low. Teaching is the highest and the lowest is found in arts and crafts community.

Table 27—Total expenditure on different categories by different classes.

(in rupees)

Livelihood classes	Food	Fuel lighting	Clothing	Conventional necessities	House furnishing	Misc. items	Total	Per capita expenditure
Big landowners	7,259	304	—	1,206	80	3,501	12,350	343.1
Medium landowners	35,609	1,727	828	999	276	6,804	49,234	212.2
Small landowners	1,21,656	8,459	465	12,911	772	20,604	1,64,867	163.7
Tenants	8,838	583	1,100	856	35	1,527	12,939	165.9
Agricultural Labourers	27,528	2,207	1,267	2,908	104	2,873	36,887	131.3
Artisans	2,129	121	—	891	34	304	2,979	114.6
Craftsmen	64	14	—	6	—	2	86	86.0
Petty Businessmen	9,565	794	836	2,134	421	3,010	16,760	190.5
Teachers	1,790	150	702	327	139	1,547	4,655	358.1
Medical Practitioners	1,038	63	—	180	65	485	1,831	228.9
Religious profession	364	51	—	93	3	637	1,148	114.8
Essential services	1,590	208	—	418	15	264	2,495	118.8
Ministerial services	7,358	463	440	1,121	165	3,996	13,543	276.9
No gainful employment	8,051	663	1,500	1,662	67	2,433	14,376	186.7
Others	137	19	—	18	1	23	198	198.0
Total	2,32,976	15,826	11,358	28,221	2,177	48,010	3,38,568	173.2
% to total	68.8	4.7	3.3	8.3	0.7	14.2	100	—

Table 27 shows the annual expenditure of households on different categories of the family budget. Irrespective of the livelihood class, the major expenditure is on food items. Next comes expenditure on miscellaneous items, followed by conventional necessities and fuel lighting and clothing. But the smallest portion of the income is spent on housing and furnishing. Among these petty businessmen, teachers and medical practitioners spend more on housing compared to other categories.

VILLAGE—ARALIKOTTAI

Table 28—Types and structure of buildings.

Type	Brick and Mud cement	Mud Stone	Brick and mud	Mud and cement	Others	Total
Tiled	22	24	3	24	—	73
Thatched	—	184	—	7	2	194
Tiles and Thatched	—	—	—	1	—	1
Total	22	208	3	32	2	268

Table 28 shows that as many as 194 or 72.39 per cent of the total number of houses are of the thatched type. As for the structures 208 or 77.61 per cent of the buildings are of mud structures and 32 are of brick and mud, while 3 houses are built with stone and another 2 with mud and cement. The remaining one refers to the thatched cooking shed.

Table 29—Area and type of buildings.

Area in sq. feet	Tiled	Thatched	Tiled and Thatched	Total
0—200	—	—	—	—
200—400	—	15	—	15
400—600	8	52	—	60
600—800	1	16	—	17
800—1000	13	70	—	83
1000—1500	15	24	—	39
1500—2000	9	6	—	15
2000—3000	18	5	—	23
3000 and above	9	6	1	16
Total	73	194	1	268

Out of the total 268 houses, 72.3 per cent or 194 houses are thatched. 78.9 per cent of houses occupy less than 1000 square feet. Only 28 per cent of thatched houses are built in more than 1000 sq. feet. But among the tiled houses, about 70 per cent of houses occupy more than 1000 sq. feet. Only nine tiled houses and six thatched houses occupy more than 3000 sq. feet.

Table 30—Distribution of area by structure.

Area in sq. ft.	Structure						Total
	Brick & Mud Cement	Mud Stone	Brick & Mud & Others	Mud & Cement	Others	Total	
0—200	—	—	—	—	—	—	—
200—400	—	15	—	—	—	—	15
400—600	1	57	—	2	—	—	60
600—800	1	16	—	—	—	—	17
800—1000	1	77	—	5	—	—	83
1000—1500	4	29	—	4	2	—	39
1500—2000	1	5	—	9	—	—	15
2000—3000	10	5	1	7	—	—	23
3000 and above	4	4	2	5	—	1	16
Total	22	208	3	32	2	1	268

A glance at Table 30 reveals that most of the houses covering an area of less than 1500 sq. feet are of mud structures with thatched roofing. A majority of big houses occupying more than 1500 sq. feet have tiled roofing. The mud structure also gives way to brick and cement and stone as the area increases. *This shows a direct relationship between the type and structure of the building on the one hand and the area on the other.*

The relationship between the levels of incomes of families and the areas occupied by families are brought out in the following table.

Table 31—Households according to the area occupied and income levels.

Area in sq. feet.	Income Levels (Rs.)							Total	Owned	Rented	Rent free	Total
	Nil	250	250 to 500	500 to 750	750 to 1000	1000 to 1500	1500					
200	—	—	—	—	—	—	—	—	—	—	—	—
200—400	—	4	4	—	—	—	—	8	7	—	1	8
400—600	—	19	24	3	1	—	—	47	43	1	3	47
600—800	—	8	6	2	—	—	—	16	15	1	—	16
800—1000	—	13	26	10	—	—	—	49	44	5	—	49
1000—1500	1	6	13	7	2	3	1	33	31	1	1	33
1500—2000	—	2	6	2	—	1	—	11	11	—	—	11
2000—3000	—	4	11	6	—	1	—	22	21	1	—	22
3000 and above	—	1	7	2	3	1	1	15	15	—	—	15
Total	1	57	97	32	6	6	2	201	187	9	5	201
Owned	1	55	88	29	6	6	2	187				
Rented	—	2	5	2	—	—	—	9				
Rent free	—	—	4	1	—	—	—	5				
	1	57	97	32	6	6	2	201				

According to Table 31 *big houses covering large areas do not necessarily denote high incomes* to the families. Households having an income of less than Rs. 250 do possess big houses and big earners are owning small and medium houses. Of the 14 families having an income of Rs. 750 and more only 5 own big houses of over 3000 sq. ft. and one is living in a small house covering about 400-600 sq. ft. Similarly, 15 out of 57 households in the income group of less than Rs. 250 and 18 out of 97 households in the Rs. 250-500 group are residing in big houses of more than 2000 sq. feet.

It must be remembered that area occupied here refers to the area on which the building actually stands plus the area of surrounding yards or open space, if any, belonging to that household. Taking into account the actual area occupied by the building, there are not many families with income less than Rs. 750 owning big houses of 2000 sq. feet and above. This shows that some of the houses included in the bigger area groups in the above table are actually small, with adjoining open space owned by the residents.

Table 32—Income group and area occupied by buildings.

Area in sq. ft.	Income Level (Rs.)						Total	Owned	Rented	Rent free	Total
	Nil	250	250 to 500	500 to 750	750 to 1000	1000 to 1500					
0—200	—	—	—	—	—	—	—	—	—	—	—
200—400	—	4	5	1	—	—	10	9	—	1	10
400—600	—	23	30	3	1	1	58	54	1	3	58
600—800	—	10	8	2	—	—	20	19	1	—	20
800—1000	—	13	28	17	—	1	59	54	5	—	59
1000—1500	1	6	10	5	2	3	28	26	1	1	28
1500—2000	—	—	6	—	1	—	7	7	—	—	7
2000—3000	—	—	8	4	1	—	13	12	1	—	13
3000 and above	—	1	2	—	1	1	6	6	—	—	6
Total	1	57	97	32	6	6	201	187	9	5	201
Owned	1	55	88	29	6	6	201				
Rented	—	2	5	2	—	—	9				
Rent free	—	—	4	1	—	—	5				
	1	57	97	32	6	6	201				

It can be seen that 6 families have big houses of not less than 3000 sq. feet plinth area and the majority of the households are in buildings of sizes varying from 400 sq. feet to 1000 sq. ft. It is also evident that 57 families have an annual income of less than Rs. 250 and 97 families are getting Rs. 250—Rs. 500 while another 32 families come under the group Rs. 500 to Rs. 750.

Only 2 families have an income of more than Rs. 1,500 i.e., Rs. 125 per month. This is really a high level of income in such rural areas. It must be noted that there is one household in the village which has no income at all. On enquiry it is learnt that families had been to Sri Lanka and have returned to their home village only recently. They live on their assets and previous earnings.

Table 33—Distribution of buildings classified according to primary occupation of heads of households.

Type	Culti- vation	Agricul- ture	Non- agricul- tural Labour	Crafts	Traders	Teach- ing	Essen- tial service	Minis- terial service	Other profes- sion	Not gain- fully emplo- yed	Total
Tiled	63	2	—	2	—	—	2	—	1	3	73
Thatched	135	43	—	1	8	—	1	2	3	1	194
Tiled Thatched	1	—	—	—	—	—	—	—	—	—	1
	199	45	—	3	8	—	3	2	4	4	268

Of the 268 buildings in the village, as many as 244 (91 per cent) are possessed by the agriculturists, including agricultural labourers. The rest are distributed among the craftsmen (3), tradesman (8), ministerial services (2), essential services (3) and other professionals (4) and persons with no gainful employment (4). Among agriculturists, cultivators possess 199 buildings comprising of 135 thatched and 64 tiled buildings, while 45 buildings, 43 of which are thatched, belong to the labourers. This table reveals also the predominance of thatched houses mostly owned by cultivators.

Table 34—Current expenditure according to different income levels. (in Rs.)

Level of Income	Number of households	Food	Clothing	Housing	Conventional necessities	Fuel lighting	Education	Miscellaneous	Total	Expenditure per household
250	58	20373	1814	465	2253	297	605	2099	27906	481.1
250—500	97	53288	5330	1467	5765	1068	2015	7455	76388	787.5
500—750	32	21271	1921	433	2160	297	320	2802	29204	912.6
750—1000	7	5396	725	133	453	72	25	1464	8268	1181.1
1000—1500	6	5856	750	125	298	84	74	849	8036	1339.3
1500 and above	2	3150	700	185	756	30	550	1239	6610	3305.0
	202	109334	11240	2808	11685	1848	3589	15908	156412	774.3
Percentage to Total		69.90	7.19	1.80	7.47	1.18	2.29	10.17	100	

Table 34 shows that food expenditure occupies the first position in the list followed by miscellaneous expenditure and clothing. But annual expenditure on housing forms only 1.80 per cent. Only the largest income group spends more on housing. But their expenditure on housing forms only 2.8 per cent in their annual expenditure. Housing in general receives low priority among all classes.

VILLAGE—UPPATHUR

The village has in total 605 buildings, of which 539 or 89.09 per cent are residential quarters, while the rest is made up of cattle sheds (65) and a shop (1). One healthy feature noticeable is that 493 families are housed in 539 buildings of different types and this shows that a few rich people are utilising more than one building for living purposes. It is encouraging to find that 65 out of 128 agriculturists who own livestock have separate cattle sheds. Out of the total number of 605 buildings, 216 or 35.70 per cent are built with mud walls crowned with tiled roofs. There are 163 thatched houses with mud walls, which are small huts with a limited living space. The number of terraced buildings has been reported to be 162 or 26.78 per cent of the total. A few tin roofed houses are also present. It is evident that around 35.70 per cent of the ryots live in tiled houses with mud walls. In the whole village, only one building has stone walls with thatched roof, which happens to be a cattle shed.

Table 35—Distribution of houses by type and structure.

Type	Tiled	Thatched	Terraced	Tin	Total
Mud	216	163	—	13	392
Brick and Mortar	48	—	162	2	212
Stone	—	1	—	—	1
Total	264	164	162	15	605

The area covered by the buildings may be taken as a criterion in judging the standard of housing facilities available to the masses. Table 36 below reveals that 326 or 53.88 per cent of the total buildings are below 500 sq. feet in area. This brings to light that roughly more than half of the total number of houses are very small in size with insufficient dwelling space. Roughly 35.21 per cent of the buildings are medium sized ones, occupying an area varying from 500—1500 sq. feet. In the village, there are a number of buildings (66) covering a space of more than 1500 sq. feet and among them 3 between 10,000—20,000 sq. feet. In Uppathur, there is a large building which covers more than 20,000 sq. feet. One major finding is that a number of families live in spacious buildings.

Table 36—Distribution of buildings by area and roof structure.

Area in sq. feet.	Tiled	That-ched	Ter-raced	Tin & Thatched	Tin	Total
0—250	60	82	7	—	4	153
250—500	90	55	21	—	7	173
500—750	51	15	27	—	2	95
750—1000	34	8	26	—	—	68
1000—1500	16	3	30	—	1	50
1500—2000	3	1	15	1	—	20
2000—3000	7	—	24	—	—	31
3000—5000	2	—	4	—	—	6
5000—10000	1	—	4	—	—	5
10000—20000	—	—	3	—	—	3
20000 and above	—	—	1	—	—	1
Total	264	164	162	1	14	605

Table 36 also shows that around 56 per cent of the total buildings covers less than 500 sq. feet in area, while in the case of thatched houses, exactly 50 per cent of them (82 out of 164) has an area below 250 sq. feet each. In the village roughly one third of the terraced buildings are seen to cover an area ranging from 750-1500 sq. feet. About 50 per cent of the tiled houses lie between 250-500 sq. feet.

Table 37—Distribution of building by area and structure.

Area in sq. feet.	Mud	Brick & mortar	Stone	Total
0—250	139	13	1	153
250—500	140	33	—	173
500—750	54	41	—	95
750—1000	33	35	—	68
1000—1500	17	33	—	50
1500—2000	4	16	—	20
2000—3000	4	27	—	31
3000—5000	1	5	—	6
5000—10000	—	5	—	5
10000—20000	—	3	—	3
20000 and above	—	1	—	1
Total	392	212	1	605

Table 37 gives information about the distribution of buildings by area and structure. It will be seen that of the total number of mud houses of 392, 279 or 71.77 per cent are small ones, each built in an area of less than 500 sq. feet. Around 51 per cent of the buildings with brick and mortar walls cover an area varying from 500—1500 sq. feet.

Table 38—Income levels and area occupied by buildings.

Income (in Rs.)	AREA in Sq. ft.									Total	Own- ed	Rent- ed	Rent free	Total
	250	500	750	1000	1500	2000	3000	5000	6000					
250	33	43	38	11	4	1	1	—	—	131	84	25	22	131
500	8	32	67	20	13	2	1	—	—	143	114	22	7	143
750	1	11	18	13	13	4	5	1	1	67	52	12	3	67
1000	—	4	8	8	7	5	4	3	—	39	35	2	2	39
1500	—	4	5	4	11	7	1	2	1	35	31	3	1	35
2000	—	—	—	2	4	2	9	4	2	23	23	—	—	23
3000	—	—	2	2	7	4	4	7	4	30	29	1	—	30
5000	—	—	—	—	—	1	2	7	5	15	15	—	—	15
10000	—	—	—	—	—	—	—	3	2	5	5	—	—	5
20000	—	—	—	—	—	1	—	1	2	4	4	—	—	4
20000 and above	—	—	—	—	—	—	—	—	1	1	1	—	—	1
Total	42	94	138	60	59	27	27	28	18	493	393	65	35	493
Owned	31	68	99	43	52	27	27	28	18	393				
Rented	3	13	30	12	7	—	—	—	—	65				
Rent free	8	13	9	5	—	—	—	—	—	35				
	42	94	138	60	59	27	27	28	18	493				

Table 38 brings out the relationship between residential areas and levels of income. As many as 274 (55.5 per cent) families occupy an area of less than 500 sq. feet and among them 222 earn an annual income within Rs. 750. In the next size group, all different levels of income are represented. There are 127 households occupying an area between 1000—3000 sq. feet. and all of them except 39 with an annual income of more than Rs. 1000. Among the 25 families who reside in big buildings standing on an area of more than 5000 sq. feet, 10 earn more than Rs. 5000 per year, including the one who is occupying more than 20000 sq. feet. It is found that of the 42 families who belong to the smallest income group (below Rs. 250), 33 are living in small houses which are below 250 sq. feet. One important finding that emerges from the study of this table is that, as usual, the size of the building increases along with the increase in income. In this village, 100 families live in rented buildings, of which 65 are paying rent while the rest i.e., 35 are not. All these households are getting less than Rs. 1,000 per year.

In general, different kinds of homesteads denote differing social status. As usual, in Uppathur village, rich and well-to-do people live in substantially built houses. The average families have moderate buildings, while the poor section of the people lives in small houses.

Table 39—Type of buildings classified according to occupation of the heads of households.

(Area in sq. ft.)

Occupation	Tiled		Thatched		Terraced		Tin and Thatched		Tin	
	Area	No.	Area	No.	Area	No.	Area	No.	Area	No.
Big landlords	42281	45	8419	21	177924	87	1575	1	1050	3
Medium land owners	24365	30	5252	12	40110	33	—	—	2564	4
Small and owners	17125	30	5634	15	3650	5	—	—	1218	4
Non-cultivating owners	—	—	—	—	1200	1	—	—	—	—
Agricultural labour	31895	91	26249	94	6390	12	—	—	675	3
Non-agricultural labour	300	1	—	—	—	—	—	—	—	—
Arts and Crafts	5194	13	1839	8	3330	3	—	—	—	—
Big businessman	—	—	—	—	5359	6	—	—	—	—
Trade (Petty)	12375	20	1500	6	4447	6	—	—	—	—
Teaching	3430	4	144	1	8812	5	—	—	—	—
Essential services	2441	5	630	2	2328	4	—	—	—	—
Ministerial services	1616	4	438	2	2775	3	—	—	—	—
Medical Profession	1695	3	—	—	—	—	—	—	—	—
Small Industries	2350	5	—	—	750	1	—	—	—	—
Others	8587	25	1661	8	4890	6	—	—	—	—
Total	153654	276	51766	169	261965	172	1575	1	5507	74

From Table 39 it is found that nearly 69.77 per cent of the terraced buildings are owned by the big and medium land owners taken together, while around 55 per cent of the thatched houses are utilised by the agricultural labourers. In the case of tiled houses 38.04 and 33.33 per cent are owned by the land owners (big, medium, small taken together) and labourers (agriculture and non-agriculture together) respectively. Both the thatched (33) and the tin-roofed houses (8) owned by a few big and medium land owners are used mostly as cattle sheds. Even if we take into consideration, the area occupied by different livelihood classes, then also, it is found that income has a close relationship with the extent of area occupied. In the village 45 out of 493 households are electrified. The discrepancy that prevails in the total number of buildings is due to the fact that a few households have been counted twice.

Table 40—Distribution of income by primary occupation of the heads of households.

Primary occupation of the head	Total number of households	Total no. of members in the household	Total income of the household Rs.	Income per capita Rs.	Average income per households Rs.
Cultivation	166	867	386139	445.37	232.14
Agricultural Labour	195	654	100944	154.35	517.66
Non-agricultural Labour	1	7	505	72.14	505.00
Arts & Crafts	30	144	21353	148.28	711.77
Big businessmen	3	22	31991	1454.14	10663.67
Trade (Petty Business)	28	108	24084	223.00	860.14
Teaching Profession	7	36	12455	345.97	1779.29
Medical Profession	3	14	2689	192.07	896.33
Essential services	11	49	7123	145.37	647.54
Ministerial services	9	33	6987	211.73	776.33
Others	38	131	22450	171.37	590.79
Non-cultivating owners	1	2	350	175.00	350.00
No gainful employment	1	1	—	—	—
Total	493	2068	617070	298.38	1251.66

Table 40 gives the income picture of different occupational households of this village. The big business people receive the highest per capita income followed by teaching households. It is seen that the lowest average income per household is found in the cultivating family. The agricultural labourers seem to be better off than their cultivating families. Similarly, Table 40 is compared with Table 39, then again, it is seen that more agriculture labour households occupy tiled houses than cultivating families. This is something quite unusual in this village. The criteria for good living or pucca houses is a function of income. Further, this village has sizable samples in all the occupational categories and majority of the houses are tiled houses. Generally, it shows the economic development of the village.

Table 41—Current expenditure according to levels of income. (in Rs.)

Levels of income	Food	Conventional necessities	Clothing	Religious ceremonies	Fuel or Lighting	Travel
0— 250	4,804	456	637	291	1,951	152
250— 500	23,370	2,926	3,299	1,270	6,039	682
500— 750	52,752	7,581	8,293	2,716	10,768	1,771
750—1000	28,732	4,214	5,120	1,505	2,444	967
1000—1500	37,716	4,286	6,250	1,637	6,536	1,178
1500—2000	19,955	2,131	3,640	990	3,485	775
2000—3000	24,829	2,567	4,060	1,165	4,338	817
3000—5000	31,214	4,069	5,952	1,665	6,048	1,604
5000	32,206	5,465	7,795	1,485	6,015	3,500
Total	2,55,578	33,695	45,046	12,724	47,624	11,453
Percentage to total	75.54	7.59	10.14	2.86	10.72	2.58

(Contd. on page 52)

Table 41—(Contd.)

Housing and Furnishing	Recreation	Education	Medical care	Essential Services	Miscellaneous	Total
120 (1.39)	101	7	—	49	45	8,620
571 (1.45)	524	44	25	456	156	39,362
1,483 (1.67)	1,220	513	210	953	452	88,712
731 (1.57)	610	692	671	627	208	48,521
783 (1.26)	736	1,402	368	697	613	62,202
284 (0.85)	519	720	44	454	539	33,536
351 (0.86)	518	726	344	478	824	41,017
511 (0.92)	1,017	1,408	624	1,070	642	55,824
798 (1.17)	1,395	4,770	637	519	1,789	68,374
5,632	6,640	10,282	2,923	4,875	7,696	4,44,168
1.27	1.49	2.37	0.66	1.10	1.74	100

Table 41 shows that housing and furnishing receives the least importance, next to essential services, as it forms only 1.27 per cent in the total annual current expenditure. Priority of expenditure starts from food irrespective of level of income, and it is followed by fuel and lighting and clothing, etc. The level of expenditure on housing is almost at the same level since it does not increase or decrease as the income level increases. This shows the minimum of expenditure for maintenance of housing like white washing, minor repairs, rethatching or retiling, etc. There is no major structural change or new addition in the existing stock.

VILLAGE—RAJAGAMBIRAM

Housing Pattern

There are 446 residential buildings summarised in Table 42 out of which half are tiled. About 8 per cent of the houses are with terraced roofing. The remaining are all thatched.

Table 42—Number of buildings typewise.

No.	Type	Number of buildings	Percentage
1.	Tiled	224	50.2
2.	Terraced	36	8.1
3.	Thatched	186	41.7
	Total	446	100.0

A significant finding in the village is that as many as 60 households are living in rented buildings, though, only 28 households are actually paying rent. Rs. 532 is the total amount of rent paid by these tenants.

Table 43—Number of buildings according to plinth area.

Area of building in sq. feet	No. of buildings
100	14
100—200	69
200—300	55
300—400	80
400—500	33
500—1000	131
1000—1500	25
1500—2000	5
2000—2500	3
2500—3000	—
3000—3500	2
3500—4000	1
4000	—
	418

Of the total 418 buildings registered in Table 43, 91.3 per cent of buildings occupy less than 1000 square feet, 8.7 per cent of the buildings alone occupy more than 1000 square feet.

Table 44—Distribution of income by area occupied.

Residential area occupied in sq. ft.	Income in Rs.										Total
	250	250—500	500—750	750—1000	1000—1250	1250—1500	1500—2000	2000—3000	3000—5000	5000	
100	4	4	2	—	—	—	—	—	—	—	10
100—200	17	39	17	4	2	1	—	—	—	—	80
200—300	10	32	14	4	3	2	—	—	—	—	65
300—400	6	39	30	12	3	2	3	—	—	—	95
400—500	1	10	11	8	4	—	—	—	—	—	34
500—1000	5	33	46	23	13	7	5	3	2	—	137
1000—1500	—	3	4	7	2	4	1	—	1	—	22
1500—2000	—	3	2	1	—	—	—	2	—	—	8
2000—2500	1	—	2	—	—	1	—	—	—	—	4
2500—3000	—	—	—	—	—	—	—	—	—	—	—
3000—3500	—	—	1	—	—	—	—	—	—	—	1
3500—4000	—	—	1	—	—	—	—	—	—	—	1
4000	—	—	—	—	—	—	1	—	—	—	1
Total	44	163	130	59	27	17	10	5	3	—	458

In the total 458 households, referred to in Table 44, six households have more than one building. 86.4 per cent of households earn less than Rs. 1000. About 371 households (80 per cent) whose income is less than Rs. 1000 occupy only less than 1000 square feet. Further, those who earn more than Rs. 1000, also occupy an area of 500—1000 square feet. Only three people occupy more than 3000 square feet. But two of them are earning less than Rs. 750. This shows that as the income increases, the area occupied does not necessarily increase. The fact that high income earners live in medium sized houses may be the result of recent increase in their incomes, the residential area remaining unaltered.

Income Group (Rs.)	No. of Households	Area Occupied (sq. ft.)
0-1000	371	< 1000
1000-2000	87	500-1000
2000-3000	0	> 3000
3000-4000	0	> 3000
4000-5000	0	> 3000
5000-6000	0	> 3000
6000-7000	0	> 3000
7000-8000	0	> 3000
8000-9000	0	> 3000
9000-10000	0	> 3000
10000+	0	> 3000
Total	458	

Table 45 shows that nearly 50 per cent of houses are tiled houses and among the tiled houses 50 per cent are owned by agriculturalists. Nearly 43 per cent of agricultural labour and non-agricultural labour also occupy the 18 per cent of the tiled houses.

VILLAGE—VADAMALAIPURAM

Table 46—Growth of different types of houses in caste village and colony.

Year	Caste Village					In Colony					Grand Total
	Thatched	Tiled	Terraced	Two storied	Total	Thatched	Tiled	Terraced	Two storied	Total	
1916	68	5	32	Nil	105	29	—	—	—	29	134
1936	49	31	53	2	135	30	1	—	—	31	166
1958-59	42	48	42	2	134	26	—	2	—	28	162

In Vadamalaipuram, Table 46 shows that there was no progress in housing during 1936 to 1958-59 but actually numbers were on the decrease. Before 1936, there was an increase of 32 houses in total. More houses were constructed in the caste village. Further, this trend shows that there was growth of tiled houses and terraced houses. Thatched buildings were decreasing. In general, medium type of houses have been picking up and that too in the caste village.

Table 47—Buildings classified according to categories.

Categories	No.	Area (in sq. feet)
Residential buildings	146 (90.1)	1,27,699
Cattle shed	11 (6.8)	6,443
Godown	1	540
Store-room/Kitchen	1	450
Hotel	2	538
Betel shop	1	162
	162	1,35,832

Table 47 shows that 90 per cent of buildings are used for residential purposes. Only 6.8 per cent of the buildings are utilised as cattle shed with poor roof facilities. There are also two hotels, one godown and one store-room/kitchen.

Table 48—Distribution of buildings by area and type.

Area in sq. feet	Terr- aced	Tiled	Tin- sheet	That- ched	Terr- aced tiled	Tiled tin- sheet	Tiled that- ched	Total
0—250	2	1	—	25	—	—	1	29
250—500	9	11	2	24	1	—	—	47
500—750	7	12	1	12	—	2	—	34
750—1000	7	7	—	2	2	—	—	18
1000—1500	7	3	—	3	—	1	1	15
1500—2000	3	—	—	—	—	—	—	3
2000—3000	5	3	1	1	—	—	—	10
3000	3	2	—	1	—	—	—	6
Total	43	39	4	68	3	2	2	162

According to Table 48, there are as many as seven types of buildings showing the Laissez Faire approach in the construction of rural houses with no uniformity in the pattern of housing. A majority of the houses are thatched and except two, the remaining three thatched houses occupy less than 1500 square feet.

Table 49—Distribution of buildings by type and structure.

Structure	Type							Total
	Terr- aced	Tiled	Tin- sheet	That- ched	Terr- aced	Tiled tin- sheet	Tiled that- ched	
Brick and Mortar	43	16	—	—	3	—	—	62
Mud	—	23	4	68	—	3	2	100
Total	43	39	4	68	3	3	2	162

Out of 162 houses, 61.2 per cent of houses are made with mud structure as Table 49 reveals. Only 38.8 per cent or 62 houses are constructed with pucca materials. Among mud buildings, 68 per cent of houses are thatched. Mud and thatched roof always go together since they are within the means of the poor. Nearly, 70 per cent pucca structured houses are terraced and 25.8 per cent of these houses are tiled. Most of the pucca houses are either tiled or terraced.

Table 50—Distribution of buildings by area and structure.

Area in sq. ft.	Brick and Mortar	Mud	Total
0— 250	2	27	29
250— 500	13	34	47
500— 750	13	21	34
750—1000	14	4	18
1000—1500	8	7	15
1500—2000	3	—	3
2000—3000	5	5	10
3000	4	2	6
Total	62	100	162

Table 50 shows that 67 per cent of pucca structure houses (brick and mortar) and 86 per cent of mud houses occupy only less than 1000 sq. feet. The area is small irrespective of type of building and roof.

Table 51—Distribution of type of building by primary occupation of head of households.

Primary occupation	Type of houses							Total
	Terraced	Tiled	Tin-sheet	Thatched	Tiled terraced	Tiled Tin-sheet	Tiled Thatched	
Cultivation	34	32	4	20	2	2	1	95
Agricultural Labour	4	1	—	35	—	—	1	41
Non-Agricultural Labour	—	1	—	1	—	—	—	2
Artisan & Craftsman	—	1	—	3	—	—	—	4
Trade	1	1	—	2	—	1	—	5
Teacher	3	—	—	—	1	—	—	4
Transport	—	—	—	1	—	—	—	1
Other Profession	—	2	—	6	—	—	—	8
Non-cultivating owners of land	1	1	—	—	—	—	—	2
Total	43	39	4	68	3	3	2	162

Table 51 shows that a majority of the cultivating communities lives in pucca houses with terraced or tiled roofs. 85.3 per cent of the agricultural labour lives in thatched houses. Unlike in the other villages, tin is used as roof material and 4 cultivators have used tin for their roofs.

Table 52—Households classified according to area occupied by households and income level and ownership.

Income in Rs.	Area in sq. ft.								Total	Own- ed	Rent- ed	Rent free	Total
	0-250	250- 500	500- 750	750- 1000	1000- 1500	1500- 2000	2000- 3000	Above 3000					
0— 250	7	11	5	—	1	—	—	—	24	20	2	2	24
250— 500	23	11	10	2	5	2	—	1	54	46	5	3	54
500— 750	8	15	9	5	5	—	—	—	42	34	6	2	42
750— 1000	12	9	3	—	2	1	1	—	28	13	14	1	28
1000— 1500	3	3	6	5	1	2	1	—	21	16	3	2	21
1500— 2000	—	—	1	2	—	1	—	—	4	4	—	—	4
2000— 3000	—	1	—	1	1	—	—	2	5	5	—	—	5
Above 3000	1	—	—	—	—	—	—	—	1	—	—	1	1
Total	54	50	34	15	15	6	2	3	179	138	30	11	179
Owned	28	41	31	13	15	5	2	3	138				
Rented	19	6	2	2	—	1	—	—	30				
Rent free	7	3	1	—	—	—	—	—	11				
Total	54	50	34	15	15	6	2	3	179				

Note: Besides these 179, three households are living in landlords' sheds, 4 households in relative's sheds and houses, 1 household in the temple, 1 household in school premises and one household in the field.

Table 52 shows that about 82.6 per cent of households are earning less than Rs. 1000 per annum and among them, 130 households representing 87.8 per cent occupy less than 1000 sq. feet. Among 179 households, 14 per cent of households occupy more than 1000 sq. feet. In general, most of the households earn less and occupy less. Regarding ownership, 77 per cent of the households own their houses and the rest live in rented houses. Few of them are living in rent free houses. As the income increases, the number of the ownership of houses decreases, showing that a large number of persons belongs to the lower income group. Owned houses are fairly distributed in size of the area upto 1500 sq. feet and 5 houses in 1500-3000 sq. feet and three houses are occupying more than 3000 sq. feet.

Table 53—Current expenditure in the village according to levels of income. (in Rs.)

Levels of Income	Food	Conven- tional necessities	Housing & furni- shing	Utensils & furni- shing	Educa- tion of children	Cloth- ing	Fuel	Light- ing	Miscella- neous	Total	
0— 250	8130.96	1227.00	1173.00 (8.4)	25.00	346.00	1682.00	7.44	155.25	1127.10	13873.75	
250— 500	18528.96	2468.88	314.00 (1.07)	50.00	518.00	4432.00	—	357.48	2629.95	29299.27	
500— 750	21984.00	2434.44	823.00 (2.35)	60.00	955.00	4890.00	73.44	373.32	3274.25	34873.45	
750—1000	12956.00	1974.00	583.00 (2.48)	67.00	1082.50	3513.00	333.00	252.60	2952.75	23714.29	
1000—1500	14904.64	2061.00	793.00 (2.93)	174.00	926.00	4289.00	93.00	258.24	3538.37	27037.25	
1500—2000	4496.84	513.00	340.00 (3.7)	106.00	170.00	1510.00	72.00	43.44	1765.00	9016.28	
2000—3000	6548.88	660.00	420.00 (3.7)	51.00	230.00	1660.00	—	159.00	1354.10	11082.98	
3000 and above	20.00	—	—	—	—	65.00	—	—	222.00	307.00	
Total	87570.72	11338.32	4446.00	533.00	4227.50	22047.00	578.88	1599.33	16863.52	149204.27	
Percentage	Total	58.69	7.60	2.98	0.36	2.83	14.78	0.39	1.07	11.30	100

* (1) Conventional necessities includes chewing, smoking, tea, coffee and other beverages and intoxicants.

(2) Figures in brackets show the percentage to the total expenditure.

Table 53 confirms, as in other villages, that the expenditure housing in this village is low compared to other expenditure. Expenditure is incurred in all the income size-group households is fairly of the same level.

Some of the findings from these villages are as follows:

- (1) 68.4 per cent of households earn below Rs. 750 annual
- (2) 95 per cent of households occupy less than 500 sq. feet
- (3) Nearly 2 per cent of the total annual expenditure of household is spent on maintaining the house.
- (4) 48 per cent of houses are thatched and 37 per cent of houses are tiled. By structure, 76 per cent of houses are built with mud walls.
- (5) 67.3 per cent of households occupy less than 250 square feet which is the minimum requirement for living.

North Arcot Village Housing Conditions

The Madras University-Cambridge University Project on Agrarian Change* (MUCUPAC) conducted village surveys in 11 sample villages and one purposively selected village during 1973-74.

The selected villages in North Arcot District are:

No.	Name of the Village	Taluk
1.	Vegamangalam	Arkonam
2.	Sirungathoor	Cheyar
3.	Duli	Cheyar
4.	Dusi	Cheyar (Purposively Selected)
5.	Vengodu	Cheyar
6.	Vinayapuram	Polur
7.	Amudur	Wandiwashi
8.	Nasel	Arni
9.	Kalpattur	Polur
10.	Veerasambanoor	Polur
11.	Meppathurai	Tiruvannamalai
12.	Vayalur	Tiruvannamalai

* In the project, the author worked as Research Supervisor for the whole period of the project.

PRESENT HOUSING CONDITION

Sample villages	Tempo-rary shack	Thatched mud building	Tiled/metal roof mud building	Thatched brick building	Tiled/metal roof brick building	Terra-ced house	Storied house	Others	Total
Vegamangalam	3	147	—	1	45	8	11	—	215
Sirungathoor	1	159	15	1	8	10	—	1	195
Duli	—	49	42	—	1	4	—	4	100
Dusi	5	265	12	1	161	26	2	1	473
Vengodu	—	200	—	—	32	3	—	—	235
Vinayapuram	—	117	—	—	45	5	—	—	167
Amudur	—	160	—	—	29	1	—	—	190
Nasel	—	198	—	—	114	3	—	1	316
Kalpattur	—	263	—	4	6	9	3	—	285
Veerasambanoor	—	76	—	—	31	5	—	—	112
Meppathurai	—	109	1	—	5	—	—	1	115
Vayalur	9	108	7	2	13	1	—	8	132
Total	9	1851	77	9	490	75	16	8	2535
Total except Dusi	4	1586	65	8	329	49	14	7	2062

In the sample villages, 76 per cent of households, as seen in Table 54, live in thatched mud buildings and in all villages 73.2 per cent of households live in kutcha houses. Next 15 to 20 per cent of households have tiled/metal roof with brick buildings.

Table 55—Distribution of households by household structure and nature of houses (only sample villages).

Nature of house/ Household structure	Tempo- rary shack	Thatched roof mud walls	Tiled roof brick walls	Thatched roof brick walls	Tiled roof brick walls	Terraced house	Storied house	Total
Nuclear	2	1101	45	5	189	34	6	1382
Joint Vertical	—	338	14	—	104	13	6	475
Joint Horizontal	—	70	4	—	18	2	1	95
Mixed Joint	—	71	2	3	17	—	—	94
Others not related	—	1	—	—	—	—	—	1
Total	2	1581	65	8	328	49	14	2047

Definition of the concepts for the structure is given in Chapter 1.

Table 55 shows that 77.2 per cent of the houses are kutchha type (thatched roof and mud wall) and nearly 70 per cent of this type of houses are occupied by the nuclear type of households. In general, 67.5 per cent of households in the sample villages belong to nuclear type of family i.e., husband and wife and unmarried children including single member household. It shows more independent living after marriage without other relatives. The traditional Hindu system of the joint family has started declining. This tendency naturally creates a larger demand for houses for independent living. From the table, it is seen that only 32.5 per cent of households belong to joint family, while majority is of the nuclear type. Though nearly 80 per cent of the nuclear households live in kutchha buildings, the remaining 20 per cent belongs to pucca structured house types. 6 families live in multi-storey houses. The majority of households lives in kutchha houses. While 63 per cent of houses are classified as kutchha houses in Tamil Nadu, 77 per cent of houses belongs to this type in the sample villages in the North Arcot District. Irrespective of the size and structure of the households, a majority lives in kutchha type houses.

The demand for a house largely depends on the structure of households. If there are more of the nuclear type, then there will be more of independent houses. Table 56 gives the number of households under each structure of household in all the sample villages.

Table 56—Number of households under household structure.

No.	Villages	Nuclear	Joint vertical	Joint horizontal	Joint mixed	Others	Total
1.	Vegamangalam	135	61	11	8	—	215
2.	Sirungathoor	145	39	6	3	2	195
3.	Duli	69	22	3	3	3	100
4.	Dusi	299	135	15	23	1	473
5.	Vengodu	162	40	17	16	—	235
6.	Vinayapuram	108	46	9	4	—	167
7.	Amudur	119	50	11	10	—	190
8.	Nasel	226	65	14	7	4	316
9.	Kalpathur	194	61	9	20	1	285
10.	Veerambanoor	68	34	6	4	—	112
11.	Meppathurai	68	28	4	14	1	115
12.	Vayalur	93	30	5	4	—	132
13.	Total	1686	611	110	116	12	2535
14.	Total except Dusi	1387	476	95	93	11	2062

In all the enumerated households, 67.2 per cent of households belongs to nuclear type and 23 per cent are of the joint type. In all the sample villages the majority of the households are of the nuclear type which shows the attitude of the people to live independently, creating a natural demand for more houses. This is also confirmed from the analysis of the above tables that out of the total number of households in all the sample villages, 66.5 per cent of people, who occupy 67 per cent of the total houses, belong to the nuclear type of family and further they occupy 69.4 per cent of the total thatched houses of the sample villages. The total thatched houses form 89.8 per cent of the total houses and the incidence of the nuclear family is 69 per cent of these houses. Perhaps this shows the trend of growth of kutchha houses of economically poorer sections, namely agricultural labourers, small farmers, marginal farmers, etc. The sociological break up of the family set up has started and any housing programme must take this into consideration in allocating the plots, finance, etc.

VILLAGE—VEGAMANGALAM

Table 57—Nature of houses and occupation of households.

Primary means of living	Cultivator	Agricultural labour	Other casual labour	Family labour	Trader (Betel)	Village artisan (Carpenter)	Cottage industry (Mat)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Nature of house							
Temporary shack	—	1	—	2	—	—	—
Thatched mud building	60	66	3	—	2	5	4
Tiled/metal roof mud building	—	—	—	—	—	—	—
Thatched brick building	—	1	—	—	—	—	—
Tiled/metal roof brick building	29	3	—	—	—	1	3
Terraced house	4	—	—	—	—	—	1
Storied house	11	—	—	—	—	—	—
	104	71	3	2	2	6	8

Table 57—(Contd.)

Primary means of living	Professional service	Landlord rentier	Money-lender	Unemployed	Domestic work	Student	Others	Total
(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Nature of house								
Temporary shack	—	—	—	—	—	—	1	4
Thatched mud building	3	—	—	—	—	—	4	147
Tiled/metal roof mud building	—	—	—	—	—	—	—	—
Thatched brick building	—	—	—	—	—	—	—	1
Tiled/metal roof brick building	2	6	—	—	—	—	1	45
Terraced house	2	—	—	—	—	—	—	7
Storied house	—	—	—	—	—	—	—	11
	7	6	—	—	—	—	6	215

VILLAGE—SIRUNGATHOOR

Table 58—Nature of houses and occupation of households.

Primary means of living	Cultivator	Agricultural labour	Other casual labour	Family labour	Trader	Village artisan	Cottage industry	Professional services
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Nature of house								
Temporary shack	—	—	—	—	—	—	—	1
Thatched mud building	48	91	3	—	1	3	1	4
Tiled/metal roof mud building	7	2	—	—	—	—	2	2
Thatched brick building	—	—	—	—	—	—	—	1
Tiled/metal roof brick building	3	4	—	—	—	—	—	1
Terraced house	1	—	—	—	—	—	—	9
Storied house	—	—	—	—	—	—	—	—
	59	97	3	—	1	3	3	18

RURAL HOUSING IN TAMIL NADU

Table 58—(Contd.)

Landlord rentier	Money-lender	Unemployed	Domestic work	Student	Others	Total
(10)	(11)	(12)	(13)	(14)	(15)	(16)
—	—	—	—	—	1	2
—	—	—	—	—	8	159
—	—	—	—	—	2	15
—	—	—	—	—	—	1
—	—	—	—	—	—	8
—	—	—	—	—	—	10
—	—	—	—	—	—	—
—	—	—	—	—	11	195

PRESENT HOUSING CONDITION

VILLAGE—VENGODU

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Table 59—Nature of houses and occupation of households.

Primary means of living	Cultivator	Agricultural labour	Other casual labour	Family labour	Trader (Betel)	Village artisan	Cottage industry (Mat)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Nature of house							
Temporary shack	—	—	—	—	—	—	—
Thatched mud building	97	54	5	—	7	6	21
Tiled/metal roof mud building	—	—	—	—	—	—	—
Thatched brick building	—	—	—	—	—	—	—
Tiled/metal roof brick building	23	1	—	4	—	—	1
Terraced house	3	—	—	—	—	—	—
Storied house	—	—	—	—	—	—	—
	123	55	5	4	7	6	22

RURAL HOUSING IN TAMIL NADU

Table 59—(Contd.)

Professional service	Landlord rentier	Money-lender	Unemployed	Domestic work	Student	Others	Total
(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
—	—	—	—	—	—	—	—
7	—	1	—	—	—	2	200
—	—	—	—	—	—	—	—
—	15	33	1	—	—	3	—
2	—	—	—	—	—	1	32
—	—	—	—	—	—	—	3
—	—	—	—	—	—	—	—
9	—	1	—	—	—	3	235

85% of houses are thatched and mud.

98% of such houses are occupied by agricultural labourers.

PRESENT HOUSING CONDITION

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VILLAGE—DULI

Table 60—Nature of houses and occupation of households.

Primary means of living	Cultivator	Agricultural labour	Other casual labour	Family labour	Trader (Betel)	Village artisan	Cottage industry (Mat)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Nature of house							
Temporary shack	—	—	—	—	—	—	—
Thatched mud building	12	33	1	—	—	2	—
Tiled/metal roof mud building	25	13	4	—	—	—	—
Thatched brick building	—	—	—	—	—	—	—
Tiled/metal roof brick building	1	—	—	—	—	—	—
Terraced house	3	1	—	—	—	—	—
Storied house	—	—	—	—	—	—	—
Total	41	47	5	—	—	2	—

Table 60—(Contd.)

Professional service	Landlord rentier	Money-lender	Unemployed	Domestic work	Student	Others	Total
(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	—	—	—	—	—	4	4
	—	—	—	—	—	1	49
	—	—	—	—	—	—	42
	—	—	—	—	—	—	—
	—	—	—	—	—	—	1
	—	—	—	—	—	—	4
	—	—	—	—	—	—	—
	—	—	—	—	—	5	100

VILLAGE—VINAYAGAPURAM

Table 61—Nature of houses and occupation of households.

Primary means of living	Cultivator	Agricultural labour	Other casual labour	Family labour	Trader (Betel)	Village artisan	Cottage industry (Mat)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Nature of house							
Temporary shack	—	—	—	—	—	—	—
Thatched mud building	57	46	3	—	1	5	—
Tiled/metal roof mud building	—	—	—	—	—	—	—
Thatched brick building	—	—	—	—	—	—	—
Tiled/metal roof brick building	36	2	—	—	—	—	3
Terraced house	5	—	—	—	—	—	—
Storied house	—	—	—	—	—	—	—
	98	48	3	—	1	5	3

RURAL HOUSING IN TAMIL NADU

Table 61—(Contd.)

Professional service	Landlord rentier	Money-lenders	Unemployed	Domestic work	Student	Others	Total
(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
—	—	—	—	—	—	—	—
2	2	—	—	—	—	1	117
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
3	—	—	—	—	—	1	45
—	—	—	—	—	—	—	5
—	—	—	—	—	—	—	—
5	2	—	—	—	—	2	167

R. H—6

RURAL HOUSING IN TAMIL NADU

Table 62—Percentage of thatched mud building and agricultural labourers who occupy them in five villages of North Arcot District.

Village	Percentage of thatched mud buildings to the total houses	Percentage of agricultural labourers occupying the thatched mud houses	Percentage of cultivators occupying thatched mud houses	Percentage of tiled metal brick houses to the total houses
Vegamangalam	68.3	92.9	57.6	20.9
Sirungathoor	81.5	93.8	81.3	4.1
Vengodu	85.1	98.1	78.8	13.6
Duli	49.0	70.2	29.2	1.0
Vinayagapuram	70.0	95.5	58.1	26.9
Total	353.9	450.8	305.0	66.5
Average	70.58	90.16	60.1	13.3

Findings: Nearly 70 per cent of the houses are thatched mud buildings while 13 per cent of the houses are pucca, 90 per cent of the agricultural labourers live in thatched mud building. Among cultivators 60 per cent occupy thatched mud houses. Only 13 per cent live in pucca houses.

Table 63—Distribution of nature of houses by religion/caste households.

Religion/Caste	Hindu Brahmin	Achari	Chettiar	Yadava	Gounder	Meenavar	Mudaliar
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Nature of house							
Temporary shack	—	—	—	—	—	—	—
Thatched mud building	—	—	1	19	10	4	1
Tiled/metal roof mud building	—	—	—	—	—	—	—
Thatched brick building	—	—	—	1	—	—	—
Tiled/metal roof building	—	1	—	8	3	—	25
Terraced house	1	—	—	3	—	—	2
Storied house	—	—	—	1	—	—	6
Total	1	1	1	32	13	4	34

(Contd. on page 84)

Table 63—(Contd.)

Agamudaya Mudaliar (8)	Udaiyar (9)	Vanniar (10)	Dobbi (11)	Schedule Caste (12)	Others (13)	Total (14)
—	—	—	—	1	2	3
—	3	1	1	106	—	148
—	—	—	—	—	—	—
—	—	—	—	—	—	1
—	5	1	—	2	—	45
—	1	—	—	—	—	7
—	—	—	—	4	—	11
2	9	2	1	113	2	215

Table 64—Distribution of nature of house and religions of households.

Religion/Caste	Iyengar (1)	Chettiar (2)	Devar (3)	Yadava (4)	Gounder (5)	Karuneegar (6)	Mudaliar (7)	Senguntha Mudaliar (8)	Naidu (9)
Nature of house									
Temporary shack	—	—	—	—	—	—	—	—	—
Thatched mud building	—	6	2	—	30	—	—	—	6
Tiled/metal roof building	5	—	—	—	4	2	—	—	—
Thatched brick building	—	—	—	—	—	—	—	—	—
Tiled/metal roof building	2	—	—	—	—	—	—	—	—
Terraced house	—	—	—	2	2	—	2	2	1
Storied house	—	—	—	—	—	—	—	—	—
Total	7	6	2	2	36	2	2	2	7

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Table 64—(Contd.)

Poosari (10)	Udaiyar (11)	Christian (12)	(13)	Harijan Castes (14) (15)		(16)	Achari (17)	Dobbi (18)	Total (19)
—	—	—	—	—	—	1	—	1	2
1	1	20	5	1	1	83	2	1	159
1	2	—	1	—	—	—	—	—	15
—	—	—	—	—	—	1	—	—	1
—	—	—	1	—	—	5	—	—	8
—	—	—	—	—	—	1	—	—	10
—	—	—	—	—	—	—	—	—	—
2	3	20	7	1	1	91	2	2	195

Out of the total Houses, 46.6 per cent of houses are occupied by Harijans. Among the Harijan houses, 52.2 per cent are thatched. One terraced house also is owned by them.

VILLAGE—VENGODU

Table 65—Distribution of nature of house and religion/caste households.

Religion/Caste	Achari (1)	Chettiar (2)	Vannia Chetty (3)	Dobbi (4)	Yadava (5)	Gramani (6)	Gounder (7)	Karu- neegar (8)	Vannara maistry (9)
Nature of house	—	—	—	—	—	—	—	—	—
Temporary shack	—	—	—	—	—	—	—	—	—
Thatched mud building	2	8	8	1	1	21	6	52	—
Tiled/metal roof building	—	—	—	—	—	—	—	—	—
Thatched brick building	—	—	—	—	—	—	—	—	—
Tiled/metal roof building	—	—	—	1	—	9	2	17	1
Terraced house	—	—	—	—	—	—	—	—	—
Storied house	—	—	—	—	—	—	—	—	—
Total	2	8	8	2	1	30	8	69	1

(Contd. on page 88)

Table 65—(Contd.)

(Contd. on page 88)

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Naidu (10)	Pandithar (11)	Reddiar (12)	Udaiyar (13)	Vanniar (14)	Arundhathi (15)	Harijan (16)	Kesava Chetty (17)	Others (18)	Total (19)
—	—	—	—	—	—	—	—	—	—
6	1	2	2	2	5	71	3	5	196
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
3	—	1	1	—	—	—	—	—	35
—	—	3	—	—	—	—	—	—	3
—	—	—	—	—	—	—	—	—	—
9	1	6	3	2	5	71	3	5	234

RURAL HOUSING IN TAMIL NADU

VILLAGE—DULI

Table 66—Distribution of nature of houses and religion/caste households.

Religion/Caste	Yadava (1)	Gounder (2)	Maruthu- var (3)	Naicker (4)	Vanniar (5)	Harijan (6)	Others (7)	Total (8)
Nature of House								
Temporary shack	—	—	—	—	—	—	4	4
Thatched mud	1	5	1	1	24	17	—	49
Tiled/metal roof	—	—	—	—	42	—	—	42
Thatched brick building	—	—	—	—	—	—	—	—
Tiled/metal roof building	—	—	—	—	1	—	—	1
Terraced house	—	—	—	—	4	—	—	4
Storied house	—	—	—	—	—	—	—	—
Total	1	5	1	1	71	17	4	100

Nearly 50 per cent of the thatched mud houses are owned by Vanniar castes.

71 per cent of households are Vanniars and they occupy major houses of different types.

PRESENT HOUSING CONDITION

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VILLAGE—VINAYAGAPURAM

Table 67—Distribution of nature of houses and religion/caste households.

Religion/Caste	Iyer (1)	Acha- ri (2)	Bar- ber (3)	Dobbi (4)	Yada- va (5)	Goun- der (6)	Pan- daram (7)	Pan- dithar (8)	Uda- yar (9)	Hari- jan (10)	Oth- ers (11)	Total (12)
Nature of house												
Temporary shack	—	—	—	—	—	—	—	—	—	—	—	—
Thatched mud building	—	1	1	3	1	79	1	3	—	28	—	117
Tiled/metal roof building	—	—	—	—	—	—	—	—	—	—	—	—
Thatched brick building	—	—	—	—	—	—	—	—	—	—	—	—
Tiled brick building	3	—	—	—	—	33	—	3	5	—	1	45
Terraced house	—	—	—	—	—	5	—	—	—	—	—	5
Storied house	—	—	—	—	—	—	—	—	—	—	—	—
Total	3	1	1	3	1	117	1	6	5	28	1	167

Table 68— Distribution of nature of houses by religion/caste households (North Arcot Villages).

Name of the villages	Maximum number of houses occupied by		Major structure of their houses and its percentage to the total structure		Major structure of Harijan Community dwellings		Which community possesses maximum pucca houses (Brick and Tiles)		
	Communi-ty/ Caste	Percent- age to the total houses	Struc- ture	Percent- age to the total houses	Struc- ture	Percent- age to the total house structure	Communi-ty/ caste	Percent- age to the total pucca houses	In actual numbers
Vegamangalam	Sched- uled Caste and Tribe	52.5	That- ched & mud	93.8	That- ched & mud	71.6	Muda- liar	55.5	25
Sirungathoor	-do-	46.6	-do-	91.2	-do-	52.2	Sched- uled Caste and and Tribe	62.5	5

(Contd. on page 92)

Table 68—(Contd.)

Name of the villages	Maximum number of houses occupied by		Major structure of their houses and its percentage to the total structure		Major structure of Harijan Community dwellings		Which community possesses maximum pucca houses (Brick and Tiles)		
	Community/ caste	Percentage to the total houses	Structure	Percentage to the total houses	Structure	Percentage to the total houses	Community/ caste	Percentage to the total pucca houses	In actual numbers
Duli	Vanniar	71	Tiled/metal roof with mud Building	59.1	Thatched & mud	34.6	Vanniar	100	1
Vengodu	Scheduled Caste and Tribe	30.2	Thatched & mud	100	Thatched & mud	36.0	Gounder	48.5	17
Vinayapuram	Gounder	70.0	Thatched & mud	67.5	Thatched & mud	16.7	Gounder	73.3	33

Pucca house: Brick building with tiled/metal roof.

VILLAGE—VEGAMANGALAM

Table 69—Distribution of nature of houses by size of operational holding (in acres).

Nature of house	Operational Size					
	00—00 (1)	00.25 to 01.00 (2)	01.00 to 02.00 (3)	02.00 to 02.50 (4)	02.50 to 03.00 (5)	03.00 to 54.00 (6)
Temporary shack	3	—	—	—	—	—
Thatched mud building	47	34	19	9	19	12
Tiled/metal roof mud building	—	—	—	—	—	—
Thatched brick building	—	1	—	—	—	—
Tiled/metal roof brick building	11	7	10	4	2	5
Terraced house	3	—	2	—	1	—
Storied house	—	—	2	—	1	1
Total	64	42	33	13	23	18

(Contd. on page 94)

Table 69—(Contd.)

04.00— 05.00 (7)	05.00— 06.00 (8)	06.00— 07.00 (9)	07.00— 08.00 (10)	08.00— 09.00 (11)	09.00— 10.00 (12)	11.00 12.00 (13)	Total (14)
—	—	—	1	10	—	—	3
4	1	1	—	—	1	—	147
—	—	—	—	—	—	—	1
2	1	1	2	—	—	—	45
1	—	—	—	—	—	1	8
2	1	2	—	—	2	—	11
9	3	4	2	—	3	1	215

VILLAGE—DULI

Table 70—Distribution of nature of houses by operational size householdings (in acres).

Nature of house	00—00	00.00— 00.25	00.25— 01.00	01.00— 02.00	02.00— 02.50	02.50— 03.00	03.00— 04.00	04.00— 05.00	05.00— 06.00	06.00— 07.00
	Temporary shack	—	—	—	—	—	—	—	—	—
Thatched mud	22	1	4	6	—	4	4	6	—	2
Tiled and mud	3	—	1	8	7	4	7	3	1	1
Thatched and brick	—	—	—	—	—	—	—	—	—	—
Tiled and brick	—	—	—	—	—	—	—	—	—	—
Terraced house	—	—	—	1	—	—	1	—	—	2
Storied house	—	—	—	—	—	—	—	—	—	—
Others	4	—	—	—	—	—	—	—	—	—
Total	29	1	5	15	7	8	12	9	1	5

(Contd. on page 96)

Table 70—(Contd.)

(Contd. on page 98)

	07.00— 07.50	07.50— 08.00	08.00— 09.00	09.00— 10.00	10.00— 11.00	11.00— 12.00	12.00— 13.00	17.00— 18.00	Total	
Storied house	—	—	—	—	—	—	—	—	—	
Terraced house	—	—	—	1	—	—	1	—	2	
Thatched mud building	—	—	—	—	—	—	—	—	49	
Thatched brick building	1	—	1	1	1	1	1	1	42	
Tiled and brick building	—	2	—	1	8	1	2	3	17	
Thatched mud building	—	55	1	4	9	4	4	9	85	
Temporary shack	1	—	—	—	—	—	—	—	1	
Storied house	—	—	—	—	—	—	—	—	4	
	—	—	00:32	01:00	03:30	05:20	03:50	04:00	02:00	03:00
	—	00:00	00:00	00:32	01:00	03:00	05:20	03:50	04:00	02:00
	—	—	—	—	—	—	—	—	—	4
	1	1	1	1	1	1	1	1	100	

VILLAGE—SIRUNGATHOOR

Table 71—Distribution of nature of houses by size of operational holdings.

R H-7

Nature of House	Operational size					
	00—00	00.25—01.00	01.00—02.00	02.00—02.50	02.50—03.00	03.00—04.00
Temporary shack	2	—	—	—	—	—
Thatched mud building	61	38	16	14	12	6
Tiled/metal roof mud building	—	7	4	—	1	—
Thatched brick building	1	—	—	—	—	—
Tiled and brick building	1	1	2	1	—	1
Terraced house	9	—	—	—	—	—
Storied house	—	—	—	—	—	—
Total	74	46	22	15	13	7

(Contd. on page 98)

Table 71 — (Contd.)

(Contd. on page 99)

	04.00— 05.00	05.00— 06.00	06.00— 07.00	07.00— 07.50	07.50— 08.00	08.00— 09.00	12.00— 13.00	20.00	Total
	—	—	—	—	—	—	—	—	2
	8	1	—	1	—	1	—	1	159
	—	—	—	—	—	—	3	—	15
	—	—	—	—	—	—	—	—	1
	1	—	1	—	—	—	—	—	8
	—	—	—	—	1	—	—	—	10
	—	—	—	—	—	—	—	—	—
	9	1	1	1	1	1	3	1	195

VILLAGE—VENGODU

Table 72—Distribution of nature of houses by size of operational holdings.

Nature of House	Operational size						
	00—00	00.25—01.00	01.00—02.00	02.00—02.50	02.50—03.00	03.00—04.00	04.00—05.00
Temporary shack	—	—	—	—	—	—	—
Thatched and mud	87	42	37	2	12	7	5
Tiled and mud	—	—	—	—	—	—	—
Thatched and brick	—	—	—	—	—	—	—
Tiled and brick	7	3	6	—	4	5	—
Terraced house	—	—	—	1	—	—	1
Storied house	—	—	—	—	—	—	—
Others	—	—	—	—	—	—	—
Total	94	45	43	3	16	12	6

(Contd. on page 10)

Table 72—(Contd.)

	05.00—06.00	06.00—07.00	07.50—08.00	09.00—10.00	11.00—12.00	12.00—13.00	Total
—	—	—	—	—	—	—	—
4	2	1	—	1	—	—	200
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
3	—	1	1	1	1	1	32
1	—	—	—	—	—	—	3
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
8	2	2	1	2	1	—	235

VILLAGE—VINAYAGAPURAM

Table 73—Distribution of nature of houses by size of operational holdings.

Nature of house	Operational size						
	00.00	00.00—00.25	00.25—01.00	01.00—02.00	02.00—02.50	02.50—03.00	03.00—04.00
Temporary shack	—	—	—	—	—	—	—
Thatched and mud	20	3	37	28	4	14	6
Tiled and mud	—	—	—	—	—	—	—
Thatched and brick	—	—	—	—	—	—	—
Tiled and brick	4	—	5	6	5	5	10
Terraced house	—	—	—	4	—	—	—
Storied house	—	—	—	—	—	—	—
Others	—	—	—	—	—	—	—
Total	24	3	42	38	9	19	16

(Contd. on page 102)

Table 73—(Contd.)

04.00—05.00	05.00—06.00	06.00—07.00	07.00—07.50	07.50—08.00	09.00—10.00	20.00	Total
—	—	—	—	—	—	—	—
1	2	1	—	1	—	—	117
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
2	3	2	1	1	1	—	45
—	—	—	—	—	—	1	5
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
3	5	3	1	2	1	1	167

Table 74—Distribution of nature of houses by size of operational holdings.

Name of the village	Maximum number of houses occupied by		Maximum size of operations in the village		Maximum Kutcha houses possessed by		Maximum pucca houses possessed by	
	Size of operation	Percentage to the total houses	Size	Percentage of the houses occupied by them	Size of operation	Percentage to the total kutcha houses	Size of operation	Percentage to the total pucca houses
Vegamangalam	00—00 (Tenant/landless)	29.7	11.00— 12.00	.46	00—00	73.4	00—00	24.4
Sirungathoor	00—00 (Tenant/landless)	37.9	20.00	0.51	00—00	38.3	01.00— 02.00	25
Duli	00—00	29	17.00— 18.00	1	00—00	44.8	07.00— 07.50	100
Vengodu	00—00	40	12.00— 13.00	.2	00—00	43.5	00—00	21.8
Vinayagapuram	01.00— 02.00	22.7	20.00	.6	00.25— 01.00	31.6	03.00— 04.00	22.2

Kutcha — Thatched roof with mud wall.
Pucca — Tiled/metal roof with brick wall.
00—00 — Size group—tenant, landless.

Table 75—Distribution of buildings by the household, type of the building possessed and age of the building (among samples).

Age/year of purchase/	VEGAMANGALAM					Total	SIRUNGATHOOR					Total
	1972-73	70-71	67-69	62-66	61 earlier		72-73	70-71	67-69	62-66	61 earlier	
Type of building												
Temporary shack	—	—	—	—	—	—	—	—	—	—	—	—
Thatched and mud	—	—	1	5	15	21	—	1	—	18	—	19
Tiled and mud	—	—	—	—	1	1	—	—	1	—	2	3
Thatched and brick	—	—	—	—	—	—	—	—	—	—	—	—
Tiled and brick	—	—	—	—	4	4	—	—	—	—	1	1
Terraced house	—	—	1	—	—	1	—	—	2	—	—	2
Storied house	—	—	—	—	1	1	—	—	—	—	—	—
Others	—	—	2	5	21	28	—	1	3	18	3	25

RURAL HOUSING IN TAMIL NADU

Table 76—Building and age.

Age / year of purchase	DULI					Total	VENGODU					Total
	1972-73	70-71	67-69	62-66	61 earlier		72-73	70-71	67-69	62-66	61 earlier	
Type of Building												
Temporary shack	—	—	—	—	—	—	—	—	—	—	—	—
Thatched and mud	—	—	3	1	4	8	—	1	5	8	18	32
Tiled and mud	—	—	—	—	7	7	—	—	—	—	1	1
Thatched and brick	—	—	—	—	—	—	—	—	—	—	—	—
Tiled and brick	—	—	—	—	—	—	—	—	—	2	—	2
Terraced house	—	—	—	—	—	—	—	—	—	—	—	—
Storied house	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	3	1	11	15	—	1	5	10	19	35

PRESENT HOUSING CONDITION

VILLAGE—VINAYAGAPURAM

Table 77—Distribution of buildings by age.

Age/year of purchase	1972—73	1970—71	1967—69	1962—66	1961 or earlier	Total
Type of Building						
Temporary shack	—	—	—	—	—	—
Thatched and mud	—	—	—	1	8	9
Tiled and mud	—	—	—	—	—	—
Thatched brick	—	—	—	1	—	1
Tiled brick	—	—	—	1	7	8
Terraced house	—	—	—	1	—	1
Storied house	—	—	—	—	—	—
Total	—	—	—	4	15	19

Table 78—Distribution of buildings by the sample households, type of the building possessed and age of the building.

Name of villages	Old houses type and age		Type of old houses (Maximum)		Recently built houses Maximum		Maximum number of sample houses	
	Age group	% to the total houses	Type	% to the total of such houses	Type	% to the total of such houses	Built in which year	% to the total houses
Vegamangalam	1961 or earlier	75	Thatched and mud	71.4	Thatched mud Terraced	4.7	67—69	3.6
Sirungathoor	61 or earlier	12	Tiled and mud	66.6	Thatched mud	5.2	70—71	.2
Duli	61 or earlier	73.3	Tiled and mud	100	Thatched and mud	37.5	67—69	20
Vengodu	61 or earlier	54.2	Thatched and mud	44.4	Thatched mud	5.5	70—71	.3
Vinayagapuram	61 or earlier	78.9	Thatched and mud	88.8	Thatched mud/Thatched brick	Less than 1 % in 2, 5 100% in 4, 6 5+6	62—66	—
Average		58.4%		73.8%				

Table 79—House use and renovation (sample households).

Village	Residential house	Renovated house cattle shed	—	—	Total	% to the total houses	Unrenovated	Total number of houses
Vegamangalam	6	—	—	—	6	21.4	22	28
Sirungathoor	1	—	—	—	1	0.4	24	25
Duli	7	1	—	—	7	46.6	8	15
Vengodu	23	—	—	—	23	65.7	12	35
Vinayagapuram	17	11	—	—	17	89.5	2	19
Total	54	12	—	—	54	44.3	68	122

(1) Renovation of houses takes place only in 44.3% households.
 (2) In the village, Vinayagapuram.

Table 80—Number of wells: ownership and use.

Name of the village	Use		Ownership			Total number of wells	Total number of sample houses	No. of wells per house	Ratio of domestic wells to houses	Ratio of wells used for agriculture to houses	% of wells owned
	Domes- tic	Agricul- ture	Owned	Shared	Rented out						
Vegaman- galam	1	10	10	—	1	11	28	.4	1:28	1:28	39
Sirungathoor	1	5	6	—	—	6	25	.3	1:25	1:5	25
Duli	—	5	3	2	—	5	15	.3	—	1:3	33.3
Vengodu	—	13	7	6	—	13	35	.4	—	1:4	37.1
Vinayaga- puram	1	11	6	6	—	12	19	.6	1:19	1:2	43.1
Total	3	44	32	14	1	47	122	.4	1:41	1:28	38.5%

(1) Only 38% of houses possesses wells.

(2) Among wells, only 6% are domestic wells and ratio of domestic wells to houses is 1:3.

Findings from the analysis of above tables connected to North Arcot sample villages

Among the 11 sample villages, analysis of sample households in five villages reveals the following conditions of housing:

(1) Nearly 70 per cent of the houses are thatched mud buildings while only 13 per cent of the houses are pucca houses. 90 per cent of the agricultural labour class live in thatched and mud buildings. Among cultivators, 60 per cent live in such kutcha houses.

(2) Among these five villages, in three villages, a maximum number of houses are occupied by Scheduled Castes and Tribes people. In two villages, Vanniar and Gounder castes occupy the majority of the houses. In all the villages, majority of houses are thatched and mud buildings and the majority of the kutcha houses are occupied by Scheduled Castes and Tribes people. The castes who occupy the maximum number of pucca houses (brick tiled or metal roof) are Gounders in two villages, Vanniar in one village, Scheduled Castes and Tribes in one village and Mudaliar in one village.

(3) In almost all the villages, it is seen that tenants and landless people occupy maximum number of houses. Among these five sample villages, only in Vinayagapuram, the households which have an operational area of 01.00—02.00 acres occupy the majority of the houses. The maximum size of operational holdings in all these villages ranges from 11.00—20.00 acres and those who fall in these range of size of operation occupy less than one per cent of houses. 99 per cent of houses are occupied by the households which own less than 11 acres. Pucca houses are occupied by households who belong to the various size groups of operational area. In one village all the pucca houses are owned by households who operate area 07.00—07.50 acres.

(4) Nearly 58.4 per cent of the houses are old and were built or purchased before 1961. All such old houses are thatched and of mud walls. The majority of the recently constructed houses also belong to the kutcha type as is evident from Table 78.

(5) 44.3 per cent of houses were renovated and in one village 90 per cent of the houses were renovated. Other houses are left without any maintenance.

(6) Regarding the wells, 38 per cent of sample households possess wells. Among the wells, only 6 per cent are used for domestic purposes. The ratio of domestic wells to houses is roughly 1:3.

In Tamil Nadu, it is seen that people living in temporary structures of mud walls and thatched roof constitutes nearly 61 per cent. The households living in houses on rental basis constitute 10 per cent. The number of persons living in one room houses also constitutes nearly 61 per cent.

Rural Housing Conditions before Independence in Tamil Nadu

At present, Tamil Nadu has a reduced area and population compared to the Province of Madras. One important aspect of sanitation is the proper housing of the population. Housing as a definite problem has hitherto been considered only in urban and industrial areas due obviously to the fact that it is in these areas that the problem of congestion and its attendant evils become directly noticeable and call for continuous attention. The housing problem in the rural areas is of equal, if not of greater importance. Contrary to the popular impression, the actual congestion in some of the villages is greater than in the towns, especially in the deltaic tracts.

In point of numbers it cannot be said that the houses are too few for the population, having regard to the average number of persons per house as revealed by census figures. The following table shows the number of occupied houses and the population in rural and urban in the old Madras Province.

Table 81—Rural and Urban houses and population.

Year	Number of occupied houses		Population		Number of persons per house	
	Village	Towns	Rural	Urban	Village	Towns
1881	51,92,582	5,18,949	2,81,43,573	30,27,058	5.42	5.83
1891	67,96,008	6,40,948	3,57,49,832	35,81,230	5.26	5.59
1901	64,66,794	7,39,314	3,43,27,541	42,95,585	5.31	5.81
1911	70,05,429	8,61,061	3,69,50,684	49,19,476	5.27	5.71
1921	74,54,515	9,61,750	3,74,89,349	53,04,806	5.03	5.52
1931	81,89,346	11,52,443	4,07,76,965	64,16,637	4.98	5.57
1941	82,85,725	14,83,291	4,18,79,082	79,61,482	5.07	5.37

(Average size of household in India is 5) Source: *The Perspective Plan for Tamil Nadu.*

Table 81 indicates that there was no real overcrowding. In fact, from the point of view of overcrowding, statistics of house room in this province did not show the same extent as in European countries. For the Province as a whole, each house contained on an average five persons and this number remained practically constant for several decades. House room has increased at least on a par with the growing population. But it is in . . . regard to the quality of the houses and the area of habitable space available in them, that the position is lamentable.

Houses in rural areas fall into two broad classes viz., (1) labourers' houses and (2) ryots' houses. The former is usually built of mud and has a roof of palmyrah thatch. In front there is a verandah or *pial*, also of mud, and the interior consists of a single room. In many cases even the *pial* is absent. The dwelling of the average ryot is also usually built of mud and the roof is thatched with bamboo and straw or in some cases tiled. The *pial* is raised higher than the ground and the interior consists of four or five rooms opening on to a verandah which surrounds a small courtyard. One of the rooms is used as kitchen, one as a storeroom for grain and other assets and the rest as sleeping apartments. The cattle are sometimes — perhaps often — tethered in the courtyard at night, though usually they are lodged under a sloping roof outside the walls of the house. The houses of even the richer villagers are much the same in form though the rooms may be somewhat larger and more numerous while the courtyard may contain a well or sometimes a cess pool in close proximity. Houses of more than one storey are seldom found in villages and are not numerous even in towns. As a whole, the houses are ill-lighted and ill-ventilated and window openings are either few and narrow or totally absent. But it provides accommodation, floor space or living room reasonably required for its inmates. Though on an average, the census figures indicate that there is one house for about 5 individuals, the living room available in the house is totally inadequate for even a much smaller number and when conditions other than space are considered, perhaps, 90 per cent of the rural houses will be condemned without hesitation as unfit for human habitation. The flooring is damp, the walls are deeply indented, light and air are practically absent, roofing low and flimsy and in short all the conditions make

for sickness and disease. And when it is remembered that the size of the family usually increases as one goes down the social scale, it will be seen that the man with a large family inhabits the smallest hut with other evils mentioned above and the evil of overcrowding added.

Case Study I

Condition of housing and growth in a village of Tamil Nadu (case study): Dusi is a village situated in North Arcot District and it is 5 miles from Kancheepuram Town. Many bench mark surveys were conducted in this village and data are available for the survey periods. The first survey in the village was initiated by the first Professor of Economics in University of Madras, Gilbert Slater during 1916. Successive surveys were conducted during 1936, 1959 and 1973-74 by individual researchers and the Economic Research Department of the University of Madras. The data collected from these surveys reveal certain facts about the trend of growth of the type of houses and of the population.

Table 82—Housing pattern.

Year	Thatched	Tiled	Terraced	Storeyed	Total
1916	180	64	7	—	251
1936	165	111	10	2	288
1959	292	108	7	—	407
1973	271	173	26	3	473

Source: From 1916 to 1959 : Dr. V. Shanmugasundaram, Seminar paper, St. John's College, Cambridge, U. K., 9-16 December 1974.
1973: Project on Agrarian Change, Unpublished report 1974.

The above table shows that huts have increased in 1959 more than tiled houses and this perhaps could be attributed to the influx of agricultural labourers into the village. But after 1959, there is a shortfall in the thatched houses and there is nearly a 60 per cent increase in tiled houses. There is considerable increase in terraced houses indicating some improvement in the economic condition of the villagers — within 60 years, 88.4 per cent in houses. During 1916, a majority of houses i.e., 71.7 per cent were thatched houses, but in 1973, only 57.2 per cent of houses belonged to this category.

	Population		Percentage increase		Houses		Percentage increase	
	Tamil Nadu (000's)	Dusi (in numbers)	Tamil Nadu	Dusi	Tamil Nadu (000's)	Dusi (in numbers)	Tamil Nadu	Dusi
1901	19,253	—	—	—	3,493	—	—	—
1911	20,903	1,266	7.57	—	3,858	250*	10.45	—
1921	21,629	--	3.47	—	4,156	—	7.72	—
1931	23,472	--	8.52	8.52	—	4,540	9.24	—
1936	—	1,316	—	3.95	—	388	—	54.58
1941	26,268	1,701	1.91	29.92	5,064	—	11.56	—
1951	30,119	1,812	14.66	6.52	5,369	—	6.01	—
1959	—	1,896	—	4.63	—	407	—	4.89
1961	33,687	2,369	11.85	24.94	6,365	467	18.57	14.74
1971	41,103**	2,398	22.01	1.22	8,181*	465	28.53	--42

Source: For Tamil Nadu: *Tamil Nadu Economic Appraisal, 1972*
 For Dusi: Dr. V. Shanmugasundaram, Seminar Paper, *ibid* (upto 1959 and census 1961 and 1971).

* For the year 1976: ** provisional.

In the village *Dusi*, there was a marked increase in population from 1936 to 1941 and similarly during 1959-1961 of nearly 30 and 25 per cent respectively. During the last decade, the Tamil Nadu population increased by 22 per cent, whereas in *Dusi*, the percentage of increase is 1.22 per cent. The trend in the increase of houses was erratic and haphazard and not linked with the growth of population. In *Dusi* within 20 years (1916-1936), 54 per cent of houses were added with 251 (in 1916) and from then onwards the growth of houses has slowed. While there was a growth of 28.53 per cent of houses during the last decade in Tamil Nadu, there was no growth at all in *Dusi* village.

Perhaps, the low increase in population and the negative growth rate of houses could be due to the demarcation of the village boundary for the purpose of census enumeration. (In 1961, *Dusi* village included the *Vagai* as one of its hamlets; but in 1971, *Vagai* hamlet became a separate village.) Generally, in the whole of Tamil Nadu the trend of growth signifies the rise in housing activities of the State.

Table 84—Density of number of persons per house.

Year	Tamil Nadu	<i>Dusi</i>
1901	5.5	—
1911	5.4	5.0
1921	5.2	—
1931	5.2	—
1936	—	3.3
1941	5.2	—
1951	5.6	—
1959	—	4.6
1961	5.3	5.0
1971	5.0	5.1

Source: *Compiled from the last table.*

The average number of persons per house in Tamil Nadu is around 5 from time immemorial. It stands close to that of all India, though there is a slight variation in the number of persons per house in the above village during the 30's and the 50's. From 1960 onwards it is in accordance with State and country levels. Hence this table suggests that even for the future this trend will continue and so any future housing programme should consider this fact, that is to say, each house should have a minimum of 250 square feet at the rate of 50 square feet per person.

Case Study II

VILLAGE—MADIGAI (Thanjavur District)

Table 85—Housing growth and direction of growth — building by type and structure.

Structure/ Type		Mud	Brick Mortar	Stone	Pole	Total
Thatched	I Survey	254	2	2	73	331
	II Survey	295	9	8	80	392
Tiled	I Survey	8	8	—	—	16
	II Survey	11	21	1	—	33
Terraced	I Survey	—	7	1	—	8
	II Survey	—	16	2	—	18
Total	I Survey	262	17	3	73	355
	II Survey	306	46	11	80	443

According to the village report, between surveys* there was no fundamental change in the pattern of housing. The most common type of house is one with mud walls and thatched roof. The roofs of houses show that the number of houses

* I Point survey was conducted in 1955-56 } Agro Economic Research
 II Point survey was conducted in 1960-61 } Centre, University of
 Madras.

tiled and terraced increased. Terraced houses increased from 8 to 18 and most of the increase is found in Thuraiyur (Thuraiyur is the hamlet of the village Madigai). In the course of five years a few well-to-do cultivators of Thuraiyur have invested much on the construction of pucca buildings. The high percentage of thatched houses reveals the poor economic conditions of the local people. In the Harijan colonies, one cannot find a single tiled house. Towards the end of the resurvey one member of the Harijan colony belonging to the main hamlet Madigai started the construction of a tiled house. Stone buildings are rare when compared to mud or brick and mortar. The reason is the non-availability of stone in these parts. Most of the stone buildings are cattle sheds, with stone pillars crowned with tiled or thatched roofs.

Further the report says, "the layout of the houses follows no definite plan or order, and the housing conditions are far from satisfactory. Most of the thatched houses are single roomed ones. Quite a good number of houses have no ventilation. In the case of single roomed houses, a corner serves as kitchen without any smoke outlet. In these houses when the house-wife starts cooking, nobody can go inside the house owing to smoke. A majority of villagers are finding the inadequate living space and want of privacy as great handicaps. In many cases the cattle are housed under the slopping roof outside the walls of the house, with the result, the surroundings become insanitary. Almost all the houses have a verandah where the villagers lie down to take rest or sometimes a group of people sit there to chat. The barber and dhobi houses located in '*kallar*' quarters have no verandah so that they may not sit or lie down in the presence of kallars. Only well to do ryots live in tiled or terraced buildings with 4 to 6 rooms. In the hamlet Perandakottai, there is only 1 terraced house, in Madigai 5 and there are 12 in Thuraiyur (hamlet). In most cases, a small garden is attached to the house, where coconut, bananas and flowers are raised. Every cultivator has a manure pit and it is usually found on the backyard of the house. In Thuraiyur, a few more terraced houses are coming up."

At the resurvey out of 443 buildings, 331 are residential quarters and the remaining 112 are either cattle sheds, tea shops, shops, schools, or mat-weaving sheds. 335 families are housed

in 331 buildings. About 38 households have to share a house with other households and this figure was 40 in the former survey. 13 families are utilising more than one building for living purposes in 1960-61.

72 families live in unowned buildings, of which, only two are paying rent for housing tea clubs. Most of the families who are living in other's buildings are immigrant agricultural labourers who at peak seasons have to work on the farm of their house owners, of course for wages. This is a way of securing labour during peak seasons.

Around 125 families are living in dilapidated houses which are not habitable. They are mostly agricultural labourers, essential servants, etc. who belong to the poorer sections of the society. In the period between surveys, 72 houses were constructed but the actual increase during the same period was 65 houses only. This is due to high depreciation of houses on account of their kutchra nature. The value of buildings varies from Rs. 100 in the case of a single roomed thatched house to Rs. 22,000 for a pucca terraced house. In the same way the floor area occupied by a household fluctuates from 50 sq. feet to 9,000 sq. feet. Most of the affluent people live in spacious buildings except with regard to two or three *kallar* well-to-do agriculturists who are now planning to build terraced buildings in place of thatched houses where they lived at the time of resurvey.

CHAPTER 3

POVERTY AND HOUSING IN TAMIL NADU

The Concept

The concept of poverty has been defined in many terms and calculated by many institutions. The study group of the Union Planning Commission set up in July 1962 set the national minimum for each household of 5 persons (4 adult consumption units) at not less than Rs. 100 per month in terms of 1960-61 prices or Rs. 20 per capita expenditure. The national minimum excludes expenditures on health and education which are to be provided by the State according to the Constitution.

Adopting this national minimum, Profs. Dandekar and Rath concluded in their study "Poverty in India—Dimension and Trends" (1971) that 40 per cent of the rural population and 52.3 per cent of the urban population in India were below the poverty line in 1967-68.

B.S. Minhas' study of the rural poor adopting the level of a per capita annual expenditure of Rs. 240 as the bare minimum held that 50.6 per cent of the rural population is below the poverty line.

The Indian Institute of Public Opinion using N. S. S. data for 1963-64 has worked out that 34.6 per cent of the Indian population is below poverty line in 1963-64.

Union Government estimation is that 44.57 per cent of rural people and 51.34 per cent of urban population live below poverty line.

Poverty in Tamil Nadu

The Draft Perspective Plan Frame for Tamil Nadu 1972—1984 observes that 60 per cent of the people of Tamil Nadu are estimated

to be living at or below the poverty line either in urban slums or rural huts consuming daily 1000 to 1800 calories of food. The Tamil Nadu State Planning Commission Secretariat estimate that 52.5 per cent of the people are below the poverty line with an income of less than 67 paise per capita per day at 1960-61 prices.

Rural Poor

The rural poor in the majority of the districts in Tamil Nadu are found in the agricultural sector. The rural poor in this State may be studied in terms of occupation and location. According to the census of 1971, the worker participation ratio is 15.07. If this ratio is applied to 28.71 million poor of the State they can be converted into an equivalent of about 10.50 million workers.

The census of 1971 classified workers into three major categories: (1) agricultural labourers, (2) cultivators and (3) other workers. So the total poor in the State are divided into three major components in terms of worker equivalents. These yield the grand total of 10.95 millions comprising 2.15 million "small cultivators having less than 2.5 acres of land, 4.3 million agricultural labourers and 4.5 million other workers" in the non-organised sector. It is estimated that 21 per cent of the poor in the State are small farmers, 39 per cent agricultural workers and 40 per cent other workers. The first two categories of the poor are all rural poor and the third category is divided between the urban and rural areas. By converting the rural and urban poor into their worker equivalents using the worker participant ratio, it is found that 7.44 million are located in the rural areas and the remaining 3.00 million poor are to be found in the urban areas. These are the classes of people who live in miserable conditions and a majority of them in only thatched and mud houses. This could be seen in the tables presented in the early pages of this chapter. The percentage of poor and percentage of Kutcha houses in each district of Tamil Nadu is set forth in Table 85.

Table 86—Percentage of poor and kutcha houses—Districtwise in Tamil Nadu.

District	Grand total of workers ('000)	Percentage of total poor workers			Total poor workers ('000)	Percentage of poor to total workers	Percentage of thatched houses to the total houses
		Small Farmers	Agricultural Labourers	Other workers			
Chingleput	1,016	17.9	39.2	42.7	794	78.1	76.6
North Arcot	1,268	25.8	38.8	35.4	1,044	76.3	72.2
South Arcot	1,296	29.2	45.2	25.4	1,011	77.9	9.18
Salem, Dharmapuri	1,834	21.7	39.3	39.3	1,221	66.5	87.7
Coimbatore	1,804	7.2	44.0	48.6	1,270	70.4	26.4
Nilgiris	192	3.9	11.6	84.3	124	64.5	14.7
Madurai	1,478	17.8	47.4	34.7	1,086	73.5	54.8
Tiruchirapalli	1,453	29.9	38.2	31.7	966	66.4	70.1
Thanjavur	1,301	18.2	51.8	30.0	1,037	79.7	75.5
Ramanathapuram	1,065	23.5	34.7	41.7	774	62.7	53.3
Tirunelveli	1,999	16.2	36.9	46.8	971	81.0	40.6
Kanyakumari	352	15.9	40.0	44.1	304	86.3	46.6
State	15,074	21.0	39.0	40.0	10,602	72.6	63.0

Source: Census 1971 and Prespective Plan for Tamil Nadu.

Table 87—District Ramanathapuram (Key Table)

Consumption expenditure in the village according to levels of income. (in Rs. and percentages.)

Level of Income	Food	Conventional Necessities	Clothing	Religious	Fuel and Light	Travel
0—250	4804 (55.73)	456 (5.29)	637 (7.39)	291 (3.38)	1951 (22.63)	112 (1.84)
250—500	23370 (59.38)	2926 (7.43)	3299 (8.38)	1270 (3.23)	6039 (15.34)	682 (1.74)
500—750	52752 (59.46)	7581 (8.55)	8293 (9.35)	2716 (3.06)	10768 (12.14)	1771 (2.00)
750—1000	28732 (61.76)	4214 (9.06)	5120 (11.01)	1505 (3.23)	2444 (5.25)	967 (2.08)
1000—1500	37716 (60.63)	4286 (6.69)	6250 (10.05)	1637 (2.63)	6536 (10.52)	1178 (1.89)
1500—2000	19955 (59.50)	2131 (6.35)	3640 (10.85)	990 (2.95)	3485 (10.39)	775 (2.32)
2000—3000	24829 (60.53)	2567 (6.28)	4060 (9.90)	1165 (2.84)	4338 (10.57)	817 (1.99)
3000—5000	31214 (55.92)	4069 (7.29)	5952 (10.62)	1665 (2.98)	6048 (10.83)	1604 (2.87)
Above 5000	32206 (47.10)	5465 (7.99)	7795 (11.40)	1485 (2.17)	6015 (8.80)	3500 (5.12)
Total	255,568	33,695	45,046	12,724	47,524	11,453
Percentage to total	57.4	7.59	10.14	2.86	10.72	2.58

Table 87—(Contd.)

Level of Income	Housing and Furnishing	Recreation	Education	Medical	Essential Service	Miscellaneous	Total
0—250	120 (1.39)	101 (1.18)	7 (0.8)	— —	49 (0.5)	45 (0.52)	8620 (100.00)
250—500	571 (1.45)	524 (1.32)	44 (0.11)	25 (0.06)	456 (0.16)	156 (0.40)	39,362 (100.00)
500—750	1483 (1.67)	1220 (1.37)	513 (0.58)	210 (0.24)	953 (1.07)	452 (0.51)	88,712 (100.00)
750—1000	731 (1.57)	610 (1.31)	692 (1.49)	671 (1.44)	627 (1.35)	208 (0.45)	48,521 (100.00)
1000—1500	783 (1.26)	736 (1.18)	1402 (2.25)	368 (0.59)	697 (1.12)	613 (0.99)	62,202 (100.00)
1500—2000	284 (0.85)	519 (1.55)	720 (2.15)	44 (0.13)	454 (1.35)	539 (1.61)	33,536 (100.00)
2000—3000	351 (0.86)	518 (1.26)	726 (1.78)	344 (0.84)	478 (1.16)	824 (2.01)	41,017 (100.00)
3000—5000	511 (0.92)	1017 (1.82)	1408 (2.58)	624 (1.12)	642 (1.15)	1070 (1.98)	55,824 (100.00)
Above 5000	798 (1.17)	1395 (2.04)	4770 (6.98)	637 (0.93)	519 (0.76)	1789 (5.54)	68,374 (100.00)
Total	5,632	6,640	10,282	2,923	4,875	7,696	444,168
Percentage to total	1.27	1.49	2.37	0.66	1.10	1.74	100.00

Table 86 shows that in North Arcot, South Arcot, Dharmapuri, Salem, Ramanathapuram, Tiruchi and Madurai, the incidence of poverty is in the agricultural sector. The problem of poverty is predominantly prevalent within the rural areas in the above districts, while in Chingleput, Coimbatore, Tirunelveli and Kanyakumari poverty is mostly an urban feature. Nilgiris is a special problem because the majority of the poor consist of plantation workers who do not fall under the class of agricultural labourers as defined in the 1971 census report. Poverty of the people is clearly reflected in the way in which they are housed. In Tamil Nadu as a whole, 72.6 per cent of total workers are poor and 63 per cent of houses are thatched and mud buildings. As poverty is an urban feature in the districts of Chingleput, Coimbatore, Tirunelveli and Kanyakumari, the percentage of kutchha type houses are low compared to other districts.

Case Study

A case study on Uppathur village of the Ramanathapuram District is attempted here to study the magnitude of poverty in Tamil Nadu and the profile of poverty. Further it is also attempted to study the conditions of housing at the poverty level since housing becomes an important consumption good. The Micro study is based on data collected by AERC, University of Madras, during 1959-60. The needed and suitable data are not available to attempt a critical study. With the available data summarised earlier, an attempt is made to assess the dimension of poverty, profile of poverty and housing condition at the poverty line.

The tool which has been used to indicate the poverty line is per capita consumption expenditure per annum Rs. 180 or per month Rs. 15 at 1960-61 prices.

VILLAGE—UPPATHUR (RAMANATHAPURAM DISTRICT)

Table 88—Per capita consumption expenditure in different levels of income. (in Rs.)

Level of income	Number of households	Number of persons	Total consumption expenditure per annum	Per capita consumption expenditure	Above Poverty Below Poverty—
0—250	42	49	8,620.00	175.91	—4.09
250—500	94	219	39,362.00	179.73	—0.27
500—750	138	560	88,712.00	158.41	—21.59
750—1000	60	293	48,521.00	165.60	—14.40
1000—1500	59	300	62,202.00	207.34	27.34
1500—2000	27	161	33,536.00	208.29	28.29
2000—3000	27	176	41,017.00	233.05	53.05
3000—5000	28	202	55,824.00	276.35	96.35
Above 5000	18	160	68,374.00	427.33	247.33
Total	493	2,120	4,44,168.00	209.51	29.51

(Per capita consumption expenditure level to keep above poverty line: Rs. 15 p. m. or 180 per annum at 1960-61 price).

Source: Computed from Table 87 given already.

VILLAGE: UPPATHUR (RAMANATHAPURAM DISTRICT)

Table 89— Number of people below poverty line.

Monthly per capita expenditure group Rs.	Number of people	Percentage of people below poverty line
0—96	—	—
96—132	—	—
132—156	—	—
156—180	1121	52.86
180—216	461	
216—252	176	
252—268	—	
268—336	202	
336—408	—	
408—516	160	
Above 516	—	
	2120	

Consumption level of the village

The table gives the consumption expenditure pattern of the village according to the various levels of income. As the income increases, the consumption expenditure also increases. For the whole village the major consumption expenditure is on food items, as it occupies 57 per cent of total consumption expenditure. The per capita expenditure on food is gradually increasing as the income increases, except in one stage i.e., Rs. 1,500—2,000 level. Next to food item, the item which receives importance is fuel and lighting followed by clothing and medical items.

Identification

The table describes the per capita consumption expenditure worked out from Table 88, of this section in the different levels of income. From this table, the poor can be identified, that is, (1) who are poor and (2) where they are.

The first four groups of persons are found within the level of income Rs. 500—750. The table clearly shows the number of persons who are below the poverty line (since it is arranged in the form of ascending order of expenditure level, it should not be mistaken that 1121 persons or 52.86 per cent are above poverty line).

Profile of poverty

An attempt is made to study the profile of poverty in terms of the following with the micro level data.

- (1) Level of income
- (2) Level of expenditure
- (3) Occupational structure
- (4) Level of earners
- (5) Level of literacy
- (6) Occupied area under house
- (7) Tenorial status
- (8) Structure of houses
- (9) Per house occupied area occupationwise
- (10) Size of family and density of population per house
- (11) Consumption expenditure on housing
- (12) Size of family and food expenditure
- (13) Literacy by occupation
- (14) Direction of consumption expenditure.

Table 90—Levels of income and number of people below poverty line.

Level of income Rs.	No. of persons	Percentage to total persons below poverty line	Percentage to total population
0—250	49	4.4	2.3
250—500	219	19.5	10.3
500—750	560	49.9	26.4
750—1000	293	26.2	13.8
	1121		52.8

VILLAGE: UPPATHUR (RAMANATHAPURAM DISTRICT)

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132—156	—	—
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180—216	461	Poverty line
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252—268	—	
268—336	202	
336—408	—	
408—516	160	
Above 516	—	
	2120	

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750—1000	293	26.2	13.8
	1121		52.8

Among the persons below the poverty line, nearly 50 per cent earn Rs. 500 to 750 per annum and 26 per cent are found in the level of Rs. 750—1000 income. The people who are above the poverty line are earning above Rs. 1000 per annum.

Expenditure

Table 91—Levels of income and per capita expenditure.

Level of income Rs.	No. of persons	Number of households	Per capita expenditure Rs.
0—250	49	42	175.91
250—500	219	94	179.73
500—750	560	138	158.41
750—1000	293	60	165.60
	1121	334	165.22

The per capita expenditure differs from one group to another though they are all below the poverty line. The per capita expenditure is high in the lower rank of income level and decreases as the income rises. It is one of the economic characteristics of the poverty line people.

OCCUPATIONAL STRUCTURE OF THE POVERTY PEOPLE

Table 92—Level of income and number of earners by occupational class.

Level of income Rs.	Cultiva- tion	Agricul- tural labourer	Trade	Trans- port	Arts and crafts	Teach- ing	Mimis- terial services	Essen- tial services	Others	Total
0—100	6	70	—	—	2	—	—	—	2	80
100—250	14	446	5	—	4	—	1	1	21	492
250—500	15	113	13	—	17	—	4	7	24	193
500—750	16	—	8	—	4	2	1	2	11	44
750—1000	17	—	1	—	2	9	1	1	3	34
Total	68	629	27	—	29	11	7	11	61	843

Table 92 shows the number of earners below the poverty line by different occupational classes. Among the 1121 people 843 persons are earners. Nearly 75.2 per cent of the poverty people have earning capacity and majority of these earners are from agricultural labourers. 52.8 per cent of the total population who fall below the poverty line is located in all types of occupation. Agricultural labourers come first, followed by cultivators. Further the incidence of poverty is seen in the other occupations viz., trade, arts, crafts, teaching, ministerial service, essential service and others (in terms of earners). Though the largest number of earners are found in the agricultural labour class, their earning capacities are below Rs. 500. While nearly 44 per cent of cultivators below the poverty line, 100 per cent of agricultural labour is below poverty line. Similarly, a majority in trade sector also falls below the poverty line. In other sectors very few stand above poverty line.

EARNERS

Table 93—Earners in different occupations below poverty line.

Occupation	No. of earners below poverty line	Percentage to the total earners	Total earners of the occupation	Percentage of poverty earners in this group
Cultivators	68	8.02	166	40.96
Agricultural Labourers	629	74.22	629	100.00
Trade	27	3.18	38	71.06
Arts and Crafts	29	3.42	11	37.93
Teaching	11	1.29	11	100.00
Ministerial	7	0.82	9	77.77
Essential services	11	1.29	11	100.00
Others	61	7.19	62	98.38
Total	843	100.00	937	89.96

More earners are found among the agricultural labourers as seen in the percentage of this group followed by cultivating groups. In the whole village, 90 per cent of earners come under the poverty line and 100 per cent of agricultural labourers are below the poverty line and similarly 40 per cent of cultivators.

LITERACY

Table 94—Level of literacy of the people below poverty line.

Income level Rs.	No. of house- holds	Percent of literate (households)	Population	Percent of literate (population)
0—250	42	7.14	48	6.12
250—500	94	23.40	219	15.07
500—750	138	56.52	560	23.75
750—1000	60	71.67	293	31.40

In the whole village, the literacy level is 28.44 per cent—among the different income groups of the poor, the highest income level group people have a higher percentage of literacy, 31.40 per cent. This shows that increase in the income definitely leads to some investment in education also among these people and this tendency becomes another important characteristic of the people in the poverty line.

HOUSING

Table 95—Occupied area in different income level of poverty people.

Income Rs.	Area in sq. ft.							Total persons
	250	500	750	1000	1500	2000	3000	
0—250	33	8	1	—	—	—	—	42
250—500	43	32	11	4	4	—	—	94
500—750	38	67	18	8	5	—	2	138
750—1000	11	20	13	8	4	2	2	60
Total	125	127	43	20	13	2	4	334

Table 95 shows that nearly 75 per cent of people occupy less than 500 square feet and 25 per cent occupy above 500 square feet upto 3000 square feet. Only 4 persons are occupying about 3000 square feet. Particularly in the income group Rs. 0—250 almost all occupy less than 500 square feet. Remaining groups occupy up to the level of 1500 square feet.

HOUSING TENURE

Table 96—House tenurial status of poverty people.

Income Rs.	Owned	Rented	Rent free	Total persons
0—250	31	3	8	42
250—500	68	13	13	94
500—750	99	30	9	138
750—1000	43	12	5	60
Total	241	58	35	334

From Table 96 it is evident that among the people, 72 per cent own houses and 17.3 per cent live in rented houses. The remaining live in rent free quarters. Among the house owning group, 41 per cent are with incomes of Rs. 500—750 and at the same time the highest number of tenant household are also found in this group.

Table 97—Types of houses occupied by the people below poverty line.

Occupation	Tiled		Thatched		Terraced		Tin Thatched		Tin		Total	
	Area in sq. feet	No. of houses	Area	No. of houses	Area	No. of houses	Area	No. of houses	Area	No. of houses	Area	No. of houses
Cultivators	17,125	30	5,634	15	3,650	5	—	—	1,218	4	—	54
Agricultural Labourers	31,895	91	26,249	94	6,390	12	—	—	675	3	—	200
Trade	12,375	20	1,500	6	4,447	6	—	—	—	—	—	32
Arts and Crafts	5,194	13	1,839	8	3,330	3	—	—	—	—	—	24
Teaching	3,430	4	144	1	8,812	5	—	—	—	—	—	10
Ministerial Services	1,616	4	438	2	2,775	3	—	—	—	—	—	9
Essential Services	2,441	5	630	2	2,328	4	—	—	—	—	—	11
Others	8,587	25	1,661	8	4,890	6	—	—	—	—	—	39
Total	82,663	192	38,095	136	36,622	44	—	—	1,893	7	—	379
For the whole village	1,53,654	276	51,766	169	2,61,965	172	1,575	1	5,507	14	—	632

The table is prepared with some limitation. It is reported in the source of this data, that some of the houses have been counted twice, while the computing could not be done to find out the exact number of houses belonging to the poverty people. But as 52 per cent of persons and 90 per cent earners belong to the poverty group, a certain idea of their housing could be reached.

Table 98—Per house occupied area typewise (in square feet) of poor people.

Occupation	Tiled	Thatched	Terraced	Tin and Thatched	Tin	Total per house area occupied
Cultivators	570.8	375.6	730.0	—	304.5	511.6
Agricultural Labourers	350.4	279.2	532.5	—	225.0	326.0
Trade	618.7	250.0	741.1	—	—	572.5
Arts and Crafts	399.5	229.7	1110.0	—	—	431.7
Teaching	857.5	134.0	1762.0	—	—	1238.6
Ministerial services	404.0	219.0	925.0	—	—	536.5
Essential services	488.2	315.0	582.0	—	—	490.8
Others	343.4	207.6	815.0	—	—	267.7
Total	430.7	280.1	832.3	—	270.4	420.2
For the whole Village	556.7	306.3	1523.0	1575	393.3	750.7

52 per cent of the village fall below the poverty line and they occupy 60 per cent of houses of this village. 26.7 per cent of total houses are thatched houses and 80 per cent of this thatched houses are owned by the people below poverty line. Among these poor people, nearly 70 per cent of the thatched houses are possessed by agricultural labour households. Among agricultural houses, thatched houses form 47 per cent. 45 per cent of agricultural labourers' houses are tiled. This shows that though they are poor,

there is some satisfaction as far as the roof is concerned, as nearly 50 per cent of poor people have tiled roof which is stronger than thatched ones against the natural hazards like heavy rain, storm, etc.

Table 98 shows that the area increases as the type of the building becomes pucca i. e., either tiled or terraced. The lowest occupied area per house is found in thatched house group (250 sq. ft.) and it increases to 430 square feet for tiled and further increases to 832.3 for terraced houses. More costly and pucca structures occupy a larger floor area. Among the poor people, the teaching community occupies a larger floor area per house, showing the correlation between the type of house and the area occupied.

Table 99—Density of population per house and per household of the poor people.

Occupation	No. of houses	No. of households	Population	Per house population	Per household population
Cultivators	54	66*	346*	6.4	5.2
Agricultural Labourers	200	195	654	3.0	3.3
Trade	32	28	108	3.3	3.8
Arts and Crafts	24	30	144	6.0	4.8
Teaching	10	7	36	3.6	5.1
Ministerial Services	9	9	33	3.7	3.7
Essential Services	11	11	49	4.5	4.5
Others	39	38	131	3.3	3.3
For the village	632	493	2120	3.3	4.3
Total	379	384	1501	3.9	3.9

*Calculated roughly with the population of wage earners to cultivators.

While the State's and India's average size of households is about 5, for this village it is 4.3 and for the poverty sector it is 3.9. It is seen that one house may be occupied by more than one household. The highest per house population is seen in the cultivating family and their size of family (5.2) also is higher than that of other sectors. It is interesting to note that the agricultural labourers who are economically handicapped, are also those with large family size (3.3).

Table 100—Consumption expenditure of housing of the poor by income group.

Income Group Rs.	Total Expenditure	Expenditure on Housing and Furnishing	Percentage to total
0—250	8,620	120	1.39
250—500	39,362	571	1.45
500—750	88,712	1483	1.67
750—1000	48,521	731	1.57

As the income increases, the consumption expenditure increases up to the Rs. 500—750 class, but suddenly decreases. Similarly, the expenditure increases gradually. But in the Rs. 750—1000 class, the expenditure on housing goes down. Compared to the total expenditure, the expenditure on housing and furnishing is very small, indicating the poor maintenance of the house. This same trend is witnessed for the whole village since the village average expenditure on house maintenance is Rs. 1.27.

Looking at the social factors in housing and consumption expenditure, a correlation between the size of family and housing can be noted. Higher expenditure on food for larger numbers of the household means that sizeable amounts could not be spared for housing.

The family budget data* analysed by Allen and Bowley shows that for a given income level, a rise in family size meant a higher priority for food expenditures and a lower one for housing. The larger the family, therefore, the poorer the housing unit. This hypothesis could be tested with the available data.

*R.G.D. Allen and A.L. Bowley, "Family Expenditure", London.

VILLAGE—UPPAITHUR, RAMANATHAPURAM DISTRICT

Table 101—Size of family and food expenditure for the whole village.

Income level Rs.	No. of households	No. of persons	Size of family	Food expenditure Rs.	Per capita food expenditure Rs.	Per capita total consumption expenditure Rs.	Percentage of food to total expenditure
0—250	42	49	1.1	4804	98.0	175.91	55.73
250—500	94	219	2.3	23370	106.7	179.73	59.38
500—750	138	560	3.0	52752	94.2	158.41	59.46
750—1000	60	293	4.8	28732	98.0	165.60	61.76
1000—1500	59	300	5.0	37716	125.7	207.34	60.63
1500—2000	27	161	5.9	19955	123.9	208.29	59.50
2000—3000	27	176	6.5	24829	141.0	233.05	60.53
3000—5000	28	202	7.2	21214	154.5	276.35	55.92
Above 5000	18	160	8.8	32206	201.2	427.33	47.10
	493	2120	4.3	255578	120.5	209.51	57.54

Source: Computed from the tables given elsewhere in the chapter.

The message from the table is that as the size of income increases, the size of family is also correspondingly increasing as implied in the hypothesis. Further, there is also a similar positive correlation between size of family and per capita expenditure on food, namely, the larger the family, the larger expenditure on food. Moreover, the total per capita expenditure also increases as the size of income and family size increases, since food expenditure forms 57 per cent of total budget.

The following Lorenz curve shows the distribution of family size and food expenditure.

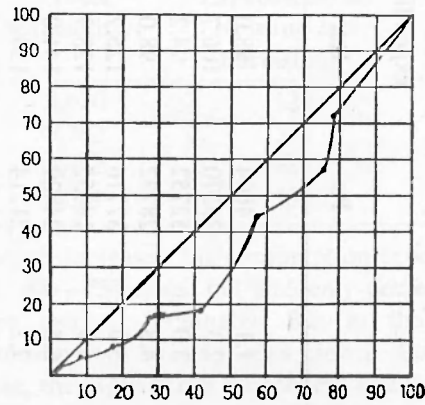


Fig. 3

Table 102—Distribution of number of households and houses by level of area of houses.

Area of House in sq. ft.	No. of houses	No. of households	Owned households	Rented households
0—250	153	131	84	25
250—500	173	143	114	22
500—750	95	67	52	12
750—1000	68	39	35	2
1000—1500	50	35	31	3
1500—2000	20	23	23	—
2000—3000	31	30	29	1
3000—5000	6	15	15	—
Above 5000	9	10	10	—
Total	605	493	393	65

Table 102 shows that as the area occupied by the house increases both the number of houses and the number of households decreases. This trend shows that many of the houses (70 per cent) occupy less than 750 square feet. Nearly 30 per cent of households do not have even minimum requirement of 250 square feet. Even among the rented houses, nearly 40 per cent has below the 250 square feet occupied area. Higher density in the limited space causing congestion, lack of sanitation, etc. are prevalent. This is mainly due to low income and unlimited size of the family.

Table 103— Consumption pattern of the people below the poverty line (in Rs. and percentage).

Income Level Rs.	Food	Conventional Necessities	Clothing	Religious Ceremonies	Fuel and Lighting	Travel
0—250	4804 (55.73)	456 (5.29)	637 (7.39)	291 (3.31)	1951 (22.63)	152 (1.84)
250—500	23370 (59.38)	2926 (7.43)	3299 (8.38)	1270 (3.23)	6039 (15.34)	682 (1.74)
500—750	52752 (59.46)	7581 (8.55)	8293 (9.35)	2716 (3.06)	10768 (12.14)	1771 (2.00)
750—1000	28732 (61.76)	4214 (0.96)	5120 (11.01)	1505 (3.23)	2444 (5.25)	967 (2.08)
Total	109658	15177	17349	5782	21202	3572
Per cent to the total expenditure	59.20	6.19	9.36	3.12	11.44	1.92

Table 103—(Contd.)

Housing and Furnishing	Recreation	Education	Medical	Essential Services	Miscellaneous	Total
120 (1.39)	101 (1.18)	7 (0.08)	—	49 (0.57)	45 (0.52)	8620
571 (1.45)	524 (1.32)	44 (0.11)	25 (0.06)	456 (1.16)	156 (0.40)	39362
1483 (1.67)	1220 (1.37)	513 (0.58)	210 (0.24)	953 (1.07)	452 (0.51)	88712
731 (1.57)	610 (1.31)	692 (1.49)	671 (1.44)	627 (1.35)	208 (0.45)	48521
2905	2455	1256	906	2085	861	185215
1.56	1.32	0.67	0.48	1.12	0.46	100

Table 103 presents the spending pattern of poor people. Whatever the income, the first priority is given to the food item. Next to food comes fuel and lighting. Then comes clothing. Hence food and clothing are essential and both receive due importance, irrespective of the size of income. Conventional necessities occupy the fourth place. More is spent on religious ceremonies than on education, medical care, housing, etc. In the last income group (Rs. 750—1000) though the total expenditure is lower than for the previous group, the expenditure on food has gone up.

Table 104—Literacy level by occupation of poor people.

Occupation	Percentage of literates
Cultivators	25.14
Agricultural Labourers	14.68
Arts and Crafts	21.52
Trade	39.81
Teaching	77.78
Essential Services	—
Ministerial Services	51.52
Others	28.03

Among poor people, the literacy level is very low in the case of agricultural labourers. The highest level of literacy is in the teacher class which is not surprising.

In the foregoing study, the profile of poverty, using the norm of per capita consumption expenditure, Rs. 15 per month, have been identified and located. Among the poor, agricultural labourers suffer most. Most of their houses are poor in condition in relation to population, area occupied, structure with which it is built. Maintenance receives lowest importance.

The urgent need is to provide minimum of decent shelter to the disadvantaged sections of the society who live in dilapidated and improvised structures and unhygienic conditions. The major problem in improving rural housing condition is to find proper house sites and allot them to the landless. A permanent right to a small piece of land means a great deal more to the disadvantaged member of the society than just a shelter for his family. It has an immediate impact on his social status, and gives him greater stability in life and improves his bargaining power. Since possession of a homestead is often a precondition for the grant of financial assistance, many landless labourers do not qualify for assistance under village housing scheme, marginal farmers and agricultural labourers (MFAL) scheme, etc. In effect, they are excluded from the development process unless they have a homestead. The measures taken on this are dealt with in the following chapter.

Housing Culture and Culture of Poverty

From the analysis in this chapter and the previous chapter, the condition and direction of growth in housing and ownership of rural housing can be summarised. In spite of a lot of developmental activities in the sphere of health, education, agriculture, livestock, co-operation etc., there is no progress in the housing sector. The impact of the green revolution in increased income, increased expenditure, and increase in the standard of living in many areas has been noted. But even in these areas, there is not much structural changes in housing. The reason is more non-economic than economic. It is mostly due to the attitude of the people built up by social traditions in the rural areas which stand as a general stumbling-block to economic development. What are the attitudes, social customs and traditions of rural people? These form the culture of poverty which could not be easily eradicated by economic measures. Examples are:

(1) Caste systems are very rigid and yet all the villages enjoy certain freedom on some sociological matters. Harijans on no account are allowed to live inside the main villages. Small cultivators do not build big houses with terrace even with their increased income due to superstitious beliefs. Certain castes

are always dominant ones in all village matters. Brahmins, Naickers, Chettiars, Mudaliars and Harijans all live separately. No non-Brahmin is encouraged to reside in Brahmin colonies. Harijans are not even allowed to enter the caste Hindu house. With such a social structure, housing direction is limited. Houses are built with the limited facilities available according to the whims and fancies of the people. So there is no possibility of house planning. Further, those in services like carpenters, blacksmiths, weavers, barbers, dhobis cannot easily have separate buildings for their work but use their house partially for their work. Regarding the usages of the houses, Chapter 2 indicated that even among residential houses about 2.4 per cent of houses in Tamil Nadu are used as shop-cum-residence or workshop-cum-residence due to immobility within the social structure. Further, some of the heads of the households who are not income earners but decision makers, are traditional in their outlook in all matters. Even now, for selection of a house site, well site, local astrologers are consulted. House design is also planned by local men. Regarding employment, the job is offered within a traditional set of social relations involving a range of obligations and sanctions. Many landless agricultural labourers are permanently attached to some leading landowners. It is found that generation after generation of a certain number of families are attached to certain landowners and have to be satisfied with whatever is given.

In farming practice, regarding HYV cultivation, for example, the decision of the elders is decisive. Most of the old generation are pessimistic over the new technology* and in some villages 80 per cent of persons of all size holdings expect some leading castes and/or big landowners start HYV cultivation, after which they are ready to follow.

If the initiator fails in his attempt due to his negligence or poor understanding of the new technology, the work of the extension agent becomes fruitless. Similarly, utilisation of water

* The facts about the elder's decision on HYV cultivation, irrigation and the initiatives from big landlords were witnessed while the author was doing research survey on Agrarian change in North Arcot and South Arcot districts: 1972-74.

from the tank or river is subject to social customs. That is to say, the people of a certain caste whose number is greatest in the village may utilise the water first and then the caste of the next highest number and so on. Thus purely on caste basis is irrigation done. Another social custom can be seen in the operation of work in the field. Certain operations like ploughing, plucking the seedlings, are exclusively done by men. Operations like weeding and transplanting from the nursery are done by women only. If there is no adequate number of females for the transplantation work, the operation is not completed by men, but continued into the next day by the women.

How seriously this social system affects the economic life of individuals can be seen in the example of an agricultural labour couple, where the wife becomes sick on a day in which only transplanting work is available. As the husband, though he is able to do work, is not allowed to do transplantation and his wife cannot work due to sickness for the whole day neither earns a wage.

In regard to the housing programme, some of these customs must be considered in designing the house, in using the material for that house, locating the site of the house, wells, etc. While importance of utilising the indigenous materials for housing exists, the local culture also should be taken into consideration to form a final shape of the programme.

CHAPTER 4

GOVERNMENT PROGRAMMES ON RURAL HOUSING

RURAL HOUSING IN THE FIVE-YEAR PLANS

First Plan Period

The report of the Environmental Hygiene Committee (1949) outlines the strategy of provision of common amenities as part of the Rural Reconstruction Programmes. The strategy evolved by the Planning Commission of the Government of India during the First Plan period was to integrate rural housing as a part of the Community Development Programme. "On aided self-help basis planned in such a way that improvement over existing conditions is achieved without prematurely advancing such improvement beyond the living habits and means of the villagers." It was also contemplated that an interest free loan (which was in the nature of subsidy), as in Puerto Rico, would ensure improvement in quality at a very low cost. Such pious hopes, however, could not be translated into practice in the absence of adequate financial resources.

The National Extension Service and the Community Development Blocks were organised in a phased manner beginning from the First Five Year Plan period and complete coverage of the rural areas was ensured only by the beginning of the Third Plan period. During the First Plan period out of the total provision of Rs. 15 lakhs per block, a sum of Rs. 1.10 lakhs was set apart for 'Housing' in a community development block. Under the revised pattern, this was reduced to Rs. 1.00 lakh. Similarly for a National Extension Service Block a provision Rs. 0.60 lakh was made for 'Housing' out of the total provision of Rs. 4.00 lakhs. When the pattern of financial assistance was further revised, a provision of Rs. 1.00 lakh out of the total provision of Rs. 12.00

lakhs for stage I Block, and a provision of Rs. 0.30 lakh out of a total provision of Rs. 5.00 lakhs for a stage II Block, were made for rural housing. Originally the entire provision available for rural housing in a community development block was proposed to be utilised by the grant of loans to individuals. Similarly, provision available under other loan schemes was diverted in a National Extension Service Block to advance loans for rural housing.

Necessary rules were also framed for the sanction of loans. Loans were advanced for the construction of temporary, semi-permanent and permanent houses not exceeding Rs. 250, Rs. 500 and Rs. 750 repayable in 5, 20 and 25 years respectively. The land together with the house to be constructed formed the security for the loan advanced. A free grant of two Palmyrah trees standing on poramboke lands was also given to the loanee. But much could not be achieved, since the entire provision under rural housing was later ordered to be utilised for staff housing programmes.

Second Five Year Plan Period

The Planning Commission of the Government of India considered the improvement of housing condition as a task of enormous dimensions in the Second Five Year Plan and linked its expansion with the increase in rural prosperity. So rural housing was viewed not as an isolated objective but as part of the rural reconstruction programme, which included improvement of agricultural production, co-operative endeavour, rural water supply, drainage, village roads and welfare programmes for the weaker sections of the community. The strategy evolved included an educative propaganda to make the villagers conscious of the housing problems, provisions of sites for Harijans and backward classes, construction of model houses, etc., by pooling the resources available under various departmental schemes to achieve this limited objective in the community development blocks.

In the Fifth Development Commissioners' Conference held at Nainital in May 1956, it was proposed to utilise the provision of Rs. 10 crores under rural housing by starting a phased programme of about 200 pilot projects in selected national extension service blocks to serve as Demonstration Centres of Rural Housing

through the agency of a 'Rural Housing Cell' in each State, consisting of a small team of engineers, town planners, etc. The main emphasis in this experiment was laid on the use of local building materials organised on a co-operative basis. The Ministry of Community Development of the Government of India allotted the Pilot Housing Projects (subsequently known as Village Housing Projects) among the various States and also authorised the setting up of the rural housing cells at State headquarters in the year 1956. This is the background of the inauguration of the rural housing cell in each State during the Second Plan Period. A brief outline and the performance of village housing scheme in India and Tamil Nadu is given in the following pages of the chapter.

Third Plan Period

In the Third Five Year Plan period much headway was not made in solving the problems of rural housing. No new strategy was evolved. Rural housing programmes more or less proceeded on the same lines as evolved during the First and Second Plan periods, except for the increased stress laid for the allotment of house sites to the rural poor and in particular to the landless.

Fourth Plan Period

The Fourth Plan did not deviate from the beaten track. Increased emphasis was, however, laid on proper layout and co-operative housing schemes. The notable feature in the IV Plan was the contemplated legislation to protect the homesteads of the landless labourers.

Housing for Harijans

The scheme for the allotment of house sites to the Scheduled Castes was in existence even prior to 1935. But the programme gathered momentum only after the attainment of Independence. A programme for construction of houses for Harijans was also undertaken with the financial assistance from the Government of India. A brief historical note on the scheme for the provision of house sites and housing for Harijans with statements showing the financial and physical achievement is furnished in the following

pages. In the matter of expenditure on this scheme during the Second and Third Plan periods, Tamil Nadu stands far ahead of the other States.

Rural Housing Co-operatives

In the field of housing, urban housing co-operatives have always stood in the forefront. From the year 1950, Rural Housing Societies were organised. Under the rural housing scheme, loans were given upto a maximum of Rs. 7,500 to cover 80 per cent of the cost of construction for the period up to 31.3.1968. 338 registered rural housing societies have assisted in the construction of 1,066 houses over a period of about 15 years. The impact that these societies made on rural housing is, however, not impressive.

The nuclear funds available in the Community Development Blocks for rural housing originally intended for advancing loans to various beneficiaries were, however, later used entirely for staff housing programmes in the block areas. About 1,05 quarters for staff at block headquarters, 596 quarters for *Gramasevaks* and 1,430 quarters for women teachers at a capital cost of Rs. 1.39 crores were constructed.

Plantation Labour Housing

Under section 15 of the Plantations Labour Act of 1951 and Rules 45 to 67 of the Tamil Nadu Plantation Labour Rules of 1955, the plantation management are statutorily required to provide free of charge one house for every resident family and one house for every four single workers. They are expected to ensure the full coverage of the housing requirements at the rate of 8 per cent per year. Each house with an area of about 250 square feet should consist of a living room, a varandha, a bath room and a lavatory as prescribed. In the year 1960, there were only 17,856 houses. As on June 30, 1971, as against the requirements of 33,741 standard houses, the number of houses provided was 31,670. In the entire country, Tamil Nadu stands first in the matter of provision of housing for plantation labour. Under the Plantation Labour Housing Rules, 1958, loan assistance amounting to Rs. 3.72 lakhs was made available till the subsidised industrial housing scheme came into operation.

The pattern of assistance under the subsidised *Industrial Housing Scheme* is 50 per cent loan and 37.5 per cent subsidy (Rs. 1,600 as loan and Rs. 1,200 as subsidy) per house. The insistence upon the production of income tax clearance certificate for availing the assistance under this scheme appears to have retarded the progress under the scheme. Subsequent to the year 1969, the construction of about 80 houses have been sanctioned with a loan of Rs. 1.28 lakhs and a subsidy of Rs. 0.96 lakh in the year 1972.

House to the Landless

The National Development Council has indicated the approach to the problem of housing in the Fifth Five Year Plan. In the strategy of a relentless war on poverty, the two main plans are a programme of expanded employment opportunities to tackle the problem of unemployment and under-employment and a programme for the provision of the basic minimum needs and services to ensure the quality of life to the rural poor. The provision of house sites for landless labour falls in the category of "National Minimum Needs." They are as important to them as employment opportunities. A considerably enlarged programme in this respect is proposed to be taken up in the Fifth Plan with a view to securing a substantial coverage of landless labour in all the States. The Union Minister of State for Works has indicated that the expenditure for the acquisition and development of plots for the landless will be met by Government of India outside the plan schemes during the 25th year of India's Independence. He has also estimated that there are about 150 lakhs of agricultural labour families in the Country without land or house sites.

Assignment of House Sites

The allotment of house sites in the States was and is being made under various schemes as detailed below.

The Harijan Welfare Scheme and Others

The total number of house sites assigned in the State from the year 1947 is given in the following table.

Table 105—House sites assigned in Tamil Nadu from 1947-1972.

Serial Number	District	No. of pattas issued		Extent of land assigned (in acres)	
		1947 to 1967	1967 to 1972	1947 to 1967	1967 to 1972
1.	Cingleput	1,630	30,628	112.30	1,400.64
2.	South Arcot	3,228	84,470	82.92	2,451.03
3.	North Arcot	11,801	49,199	585.75	1,462.61
4.	Thanjavur	4,157	28,631	135.05	1,054.38
5.	Tiruchirapalli	8,945	33,233	345.48	1,369.57
6.	Madurai	5,834	17,158	238.51	495.33
7.	Ramanathapuram	1,003	6,189	49.22	186.98
8.	Tirunelveli	6,513	5,117	282.44	189.29
9.	Salem	3,625	8,785	132.92	253.16
10.	Dharmapuri	743	6,972	28.84	223.62
11.	Coimbatore	16,291	81,631	680.45	2,320.85
	Total	63,770	3,52,013	2,673.88	11,407.46

Source: *The Perspective Plan for Tamil Nadu 1973.*

Table 105 shows that 415,783 pattas involving an extent of about 14,081 acres were issued during the period from 1947 to 1972. In all these cases an average house site (extent divided by the number of beneficiaries) ranges from 3.5 cents to 4 cents and the assignment is free of cost.

The Kudiyruppu (Conferment of Ownership) Act of 1971

Under this Act, it was proposed to confer ownership rights on agricultural labourers and agriculturalists occupying any *Kudiyruppu* on the 19th June 1971 either as a tenant or as a licensee. The Government would acquire such land by paying a compensation to the owners of such land calculated at 100 times the assessment on land and recover the cost of acquisition from the beneficiaries in 1 or 2 annual instalments along with interest at 6 per cent per annum. The Act was extended initially to Thanjavur District and is now proposed to be extended to other districts also. According to the rough estimates furnished in the Collectors' conference held in June 1972, the total number of *Kudiyruppus* to be conferred is 109,580 in the Thanjavur district and 1,42,379 for nine other districts as per details below.

Table 106—Districtwar distribution of *Kudiyruppus*.

Serial Number	District	Number of <i>Kudiyruppus</i> .
1.	Thanjavur	1,09,580*
2.	North Arcot	6,082
3.	South Arcot	5,731
4.	Dharmapuri	391
5.	Tiruchirapalli	12,225
6.	Madurai	35,290
7.	Ramanathapuram	61,331
8.	Coimbatore	4,181
9.	Tirunelveli	13,074
10.	Kanyakumari	4,075
	Total	2,51,959

Source: *The Perspective Plan for Tamil Nadu 1973*.

* Out of this, 26,000 pattas had already been distributed.

Further under the Act, the existing house sites wherever they are, are acquired and assigned. There is no uniformity in the shape or extent of the house sites. It may range anywhere from 1 cent according to the land under occupation.

The figure of about 2.52 lakh *Kudiyiruppus* according to official source is really an underestimate and the actual number if arrived at on the basis of an actual survey will be at least 6 times more than this figure. In this connection it may also be noted that it has been estimated that about 150 lakhs of families in the country do not have land or house sites. Therefore, the presumption is that this type of family for Tamil Nadu is about 10 lakhs.

Strategy for the Allotment of House Sites

The provision of house sites to the landless labourers gets priority in the Government of India's approach to the Fifth Five Year Plan.* For ensuring social justice, it may be necessary to distinguish between the claims of the landless labour and the marginal farmers who benefit under the distribution of surplus land and those who do not. In Chapter 3, the rough assessment of requirements of house sites made in the Perspective Plan for Tamil Nadu is 6 lakhs. Based on this figure the requirements have been projected as follows:

*A sum of Rs. 108.16 crores has been provided in State Plans for nearly 4 million rural house sites to landless agricultural workers as part of the minimum needs programme. The Fifth Plan will aim at (1) preservation and improvement of the existing stock, (2) provision of house sites to 4 million landless labourers, (3) continuance of the existing schemes for subsidised houses for certain weaker sections, (4) extension of support to institutional agencies such as HUDCO and housing boards to enable them to provide assistance to scheme for low income and middle income groups and (5) intensification of research and development of cheap building materials.

(i) Those who benefit under surplus land distribution about 3.00 lakhs to be given house sites of 3 cents each	9,000 acres
(ii) Those who do not benefit under surplus land distribution to be assigned about 8 cents of land as house sites (3.00 lakhs × 8)	24,000 acres
(iii) Land for streets, parks and other community services at 2 cents each for 6 lakhs house sites	12,000 acres
Total	45,000 acres

Source: *The Perspective Plan for Tamil Nadu.*

Roughly about 45,000 acres will be required for the allotment of house sites. Further sites may have different characteristics (high, elevated, etc). The cost may also vary. The Planning Commission estimated that on an average an acre may cost about Rs. 5,000. On this basis, the cost of such land is worked out to be Rs. 22.5 crores. Developmental work for each house is also placed at Rs. 200. So for 6 lakhs sites, the cost of developmental charges will be Rs. 12.00 crores; the grand total outlay being Rs. 34.50 crores.

The Kerala Programme

The Planning Commission of Tamil Nadu has selected the strategies that were evolved in Puerto Rico, Indonesia and Kerala State to tackle the problem of housing for Tamil Nadu.

The Puerto Rico model was adopted in India since conditions in both countries are similar. The programme of housing in Puerto Rico included assignment of building-cum-garden plots, aided self-help in house construction and gardening, and the provision of community services. An interest free loan of 300 dollars was advanced to be repaid in monthly instalments of 2.5 dollars. Similarly scarce building materials like steel and cement were supplied. Each house worth of 1,500 dollars was constructed with

such assistance by co-operative effort. (1)The Indonesian village house construction is carried out in "Gotong Rejong" spirit, which means "to carry collectively". Each villager carries out his portion of duty without any outside sanction behind it. About 10 to 12 families render help to a family which has saved at least 1/3rd of the cost of building. The balance is provided by materials and labour by the remaining families. Food, three times a day, is provided to the voluntary workers. (2)The Kerala programme is considered to be suitable to this State and estimation for future housing programme is made on the basis of this Kerala model. The Government of Kerala have put through a massive programme of allotment of house sites and construction of houses during the year 1972, and hoped to complete it before January 26, 1973. About 500 acres of lands were to be acquired and in an acre 20 house sites were accommodated. This scheme was introduced in 960 panchayat areas to benefit 96,000 families at the rate of 100 families in each panchayat. The cost of acquisition of land and development of plots was expected to be met by the Government of India. What is more revolutionary is the construction of houses for all the 96,000 families, each house was to have an area of 250 sq. feet. It was to be tiled and the walls plastered with cement. It was also to have cement flooring. The money equipvalent of each house was to be Rs. 2,500. To canvass public contributions 'the Chief Minister's Housing Fund' was constituted. Timber was to be supplied by the Forest Department at seigniorage rates and cement and tiles were to be purchased at reduced rates. The staff and students of engineering colleges were to provide the necessary technical supervision. The students' and youth organisations and Trade Unions were also mobilised to contribute voluntary labour. The houses were to be constructed through the agency of the panchayats.

Landless labour

During the initial phase it may be necessary to take up schemes for the landless labour. Among the landless labour the first priority will have to be to those who have not been benefitted in the

(1) More details can be obtained in the handbook on Rural Housing, Part I, Ministry of Works, Government of India and N. B. O.

(2) For more details, see NBO newsletter of Rural Housing Wing, Bangalore, March 1967.

surplus land distribution scheme. To them interest free loans, forest wood at nominal prices and cement and steel at subsidized rates (sale price less excise duty) may have to be ensured. With all these facilities they may be able to construct houses at a cost of Rs. 1250. If they pay a monthly instalment of Rs. 10, they may repay the loan in 10 years. This is similar to the scheme adopted in Puerto Rico. 3 lakhs houses may cost about Rs. 37.50 crores (3 lakhs \times 1,250).

Small and Marginal Farmers

In the next phase the small and marginal farmers may be assisted to put up decent houses. These facilities may be extended to those who have at least saved 1/3 of the cost of construction. They may be given loans to meet the other two-thirds of the cost at a differential rate of interest of 3 per cent. They must be able to repay the loan within a period of 10 years. About 5 lakhs of families can be assisted with a loan of about Rs 2,000 each. This may require an investment of about Rs. 100 crores'. In addition a subsidy of Rs 250 per family may be given to the landless labour or marginal farmers who have taken up co-operative or collective farming. For about 1,00,000 families the subsidy will be about Rs. 2.50 crores.

The ownership of the house sites would vest with the State Government and would not be transferred to the landless families. The decision has been taken in the light of the experience gained from the implementation of the Landless Reforms Act which showed that if ownership rights were given to the poor, they sold the lands immediately to the rich and continued to remain landless defeating the purpose of the legislation.

The State Government has also thought of ways for helping the beneficiaries build their own houses on the provided sites. These houses will have the plinth area of about 23 square metres each and the materials and labour for building them will be found through the co-operative efforts of the Government and the people. While the market value of each house has been worked out to be Rs. 2,000 to Rs. 2,500, the estimated cost of materials required for each house comes to about Rs 500 to Rs. 600. The beneficiaries will be required to contribute Rs. 110 each under the scheme.

Despite free labour, the total cost of constructing about one lakh houses, however low the cost might be for each house, would be around Rs. 10 crores.

Housing for Other Sections of the Community

This has to be attempted purely on a voluntary self-help basis. The families can pool their resources and savings through the Rural Housing Co-operative Societies. Wherever necessary free services of managerial staff may be made available to the co-operatives. The State Planning Commission's Task Force estimates that about 5 lakhs of houses during each plan period can be improved in this way.

Scavengers' Housing Scheme

About 8,100 houses have been constructed for sanitary workers from the Third Five Year Plan. This scheme is implemented by the Director of Rural Development and Director of Municipal Administration. The number of Municipalities, Town panchayats which have availed this assistance and total number of houses still to be constructed may be ascertained, so that the local bodies may be provided with assistance within a reasonable period.

Housing for Teachers

In the Perspective Plan (1972-84), for Tamil Nadu, there is a proposal to construct houses in villages exclusively for teachers belonging to harijan welfare schools and tribal schools.* According to the Task Force Report, there would be 851 Harijan Welfare Schools and 79 tribal schools at the end of 1973-74. Teachers serving in the schools are experiencing difficulty in getting houses in the villages where they are working. At the end of the Fourth Five Year Plan (1973-74), 80 houses for harijan welfare school teachers and 32 houses for tribal school teachers would have been constructed. Since the teachers are reluctant to work in tribal areas which are in hilly tracts without proper residential facilities, there is an imperative need to provide houses to all teachers working in the tribal areas.

* The Perspective Plan for Tamil Nadu, Task Force on Human Resources and Social Change for Economic Development, 1972-84, Vol. II, Project 72, Page 611.

At present the estimated cost for one house is Rs. 5,000. It has been reported that it is not possible to construct houses with this amount of Rs.5,000. Hence it is proposed to construct houses during the Fifth Five Year Plan at the rate of Rs. 7,000 per house in plains and Rs.7,500 in hilly areas in view of the enhanced cost of materials, labour charges, etc. The estimated amount for the Fifth Plan and Sixth Plan are set forth in Table 107 below.

Table 107—Outlay for houses in Fifth and Sixth Five Year Plans

Year	Scheduled Castes		Scheduled Tribes	
	No.	Amount Rs. in lakhs	No.	Amount Rs. in lakhs
Fifth Plan				
1974-75	50	3.50	10	0.75
1975-76	50	3.50	10	0.75
1976-77	50	3.50	10	0.75
1977-78	50	3.50	10	0.75
1978-79	50	3.50	10	0.75
Total	250	17.50	50	3.75
Sixth Plan				
1979-80	150	10.50	40	3.00
1980-81	150	10.50	40	3.00
1981-82	150	10.50	40	3.00
1982-83	150	10.50	40	3.00
1983-84	150	10.50	40	3.00
	750	52.50	200	15.00
Total Perspective Plan	1,000	70.00	250	18.75

Source : *The Perspective Plan for Tamil Nadu 1972-84 Plan Document No. 13; Page 611.*

Houses for Denotified Tribes

Houses were constructed in Second and Third Plans for denotified tribes. During Fourth Plan Period, this scheme was dropped due to pruning. The government in their order No. 193, Social Welfare Department, dated 8-2-1971, have approved a rate of Rs. 1,200 (Rs. 900 subsidy and Rs. 300 loan) per house. During the Fifth and Sixth Plan periods, 1,000 and 1,500 houses respectively will be constructed every year. The financial and physical targets are as follows.

Table 108—Target of houses for denotified tribes in the V and VI Plans.

Year	No. of Houses	Amount (Rupees in lakhs)	
		Subsidy	Loan
Fifth Plan			
1974-75	1,000	9.00	3.00
1975-76	1,000	9.00	3.00
1976-77	1,000	9.00	3.00
1977-78	1,000	9.00	3.00
1978-79	1,000	9.00	3.00
Total	5,000	45.00	15.00
Sixth Plan			
1979-80	1,500	13.50	4.50
1980-81	1,500	13.50	4.50
1981-82	1,500	13.50	4.50
1982-83	1,500	13.50	4.50
1983-84	1,500	13.50	4.50
Total	7,500	67.50	22.50
Total per Perspective Plan	12,500	112.50	37.50

Source: *The Perspective Plan for Tamil Nadu 1972-84. Plan Document No. 13; Page 687, 1973.*

Housing for Harijans

Madras was one of the earliest provinces which considered as early as 1919 the question of improving the social, economic and other disabilities of a large portion of the population described variously as "untouchables" and "depressed classes". In the Government of India Act 1935, they were classified as "scheduled castes", a term which has been adopted in the Constitution of India. Provision of house sites to these depressed classes was undertaken as one of the ameliorative measures in the early years. But they did not own any land and they built only mud houses with thatched roofs. The areas occupied were congested and there was no sanitary facility. There was no good drainage system, no lights and no good roads leading to the houses. The Government, as a first measure, undertook a study of the condition of housing and since government land was inadequate, the government had to acquire to the necessary extent private lands under the Land Acquisition Act (by paying compensation) or by private negotiation. The applicants for sites had to first make an initial deposit towards the cost of acquisition. The loan was advanced either directly to the applicants or through a co-operative society formed for the purpose. During the course of time suitable changes were made in the system of acquisition of house sites. The Government further liberalised concessions since 1949. The house sites were given from 1949, free of cost to all Harijans who did not own land except in the case of those who could afford to pay the cost. Each family was assigned 3 cents in wet areas and 5 cents in dry areas. The Government in 1963 constituted a committee consisting of non-officials only to go into the question of delay in land acquisition for provision of house sites etc., to the Harijans in the State and to suggest measures for speeding up the work of the land acquisition for the purpose.

Whereas the scheme of provision of house sites was to relieve congestion and also to secure tenure of the site for the Harijans, the separate scheme of provision of houses, was taken up from the Second Five Year Plan period. It was felt that a house gives the Harijan occupant a status and develops a sense of ownership in him. He would also automatically develop a sense of responsibility for corporate life.

During the Second Plan period houses were constructed at a cost of Rs. 750 per house (subsidy Rs. 550 and loan 200). During the Third Five Year Plan period the rate per house was raised in 1960. Accordingly, the pattern of assistance was

	Subsidy	Loan
In Plains	Rs. 750	Rs. 250
In Hill areas	Rs. 1,000	Rs. 250

The housing scheme was discontinued from 1966-67 to 1969-70 as the revised pattern of housing scheme was under consideration of the government. During 1970, a scheme for fire proof houses for Harijans was sanctioned. Accordingly, the cost of a single type house was Rs. 940 (subsidy Rs.690 plus loan Rs.250). The cost of the twin type of house was Rs.1,805 (subsidy Rs.1,305 plus loan Rs. 500). The loan amount was to be recovered in 100 equal monthly instalments from each beneficiary. The work was to be executed departmentally by the district welfare officers with the assistance of the supervisors and overseers of the Harijan Welfare Department.

During 1967 proposals were submitted to the government for the sanction of financial assistance for 5,40,000 Harijan families at Rs.250 per hut (subsidy Rs.125 and loan Rs.125) for supply of building materials to them for construction of huts. The government required alternate suggestions. It was suggested that the scheme referred to above (grant of Rs. 250 per hut) may be implemented in respect of 50 per cent of the sites and in respect of the other 50 per cent of the sites, fire proof houses at a cost of Rs. 680 per house, where the beneficiaries come forward to deposit Rs. 180 as contribution, may be constructed. As it was felt that no government funds should be invested towards combustible materials, the scheme of fire proof houses at a cost of Rs. 940 (subsidy Rs. 690, and loan Rs. 250) was finally approved by government in 1970. This scheme is being implemented now.

Table 109—Particulars of number of houses constructed under Housing Scheme for Scheduled Castes — Amount allotted and spent during the plan periods.

Plan Period	Year	Allotment Rs. in Lakhs	Expenditure Rs. in Lakhs	Number of houses constructed
I Five Year Plan	1951-52			
	1952-53			
	1953-54	There was no programme for		
	1954-55	the construction of houses for		
	1955-56	Harijans during this plan period.		
II Five Year Plan	1956-57	75.45	13.38	2,619
	1957-58	—	13.48	2,119
	1958-59	75.45	21.39	2,700
	1959-60	—	22.21	2,718
	1960-61	—	15.09	3,050
			85.55	13,206
III Five Year Plan	1961-62	5.00	12.41	740
	1962-63	6.00	7.23	757
	1963-64	6.00	5.89	839
	1964-65	6.52	7.54	698
	1965-66	7.05	6.51	897
			39.58	3,931
IV Five Year Plan	1966-67			
	1967-68	There was no housing pro-		
	1968-69	gramme during this period.		
	1969-70	(4.69 lakhs 560 under		
	1970-71	5.62 implementation)		
1971-72	5.62			

Source : *The Perspective Plan for Tamil Nadu 1972-84. Plan Document No. 14; 1973.*

The Tamil Nadu Rural Housing Corporation

As mentioned in the earlier sections of this chapter, huge outlays are required to tackle the problem of housing. It is also seen that the State and the Union Governments have to husband their limited resources for various priorities such as the provision of increased employment opportunities and provision of basic minimum needs. Since it would be difficult to earmark large outlays on housing in the budget, Government is considering to form a Rural Housing Corporation for the State with an initial seed capital. This corporation will then be able to mobilise resources for its programmes through institutional finance and other available means. The Task Force on Rural Development including Rural Housing strongly recommends the early establishment of a Tamil Nadu Rural Housing Corporation.

Outlays planned for the Fifth and Sixth Plans

The following table shows the financial outlays for rural housing contemplated in the Perspective plan period.

Table 110—Outlays contemplated for V and VI Plans,

Item	Fifth Plan Sixth Plan (in crores of rupees)	
(i) Assignment of house sites and their development (6 lakh families)	34.50	
(ii) Housing for weaker sections of the community		
(a) 3 lakh houses with interest free loan of Rs. 1,250 each	37.50	
(b) 5 lakh houses with loan assistance of Rs. 2,000 each	—	100.00
(c) Subsidy at Rs. 250 per family for 1 lakh families	—	2.50
(iii) Wider extension of the village housing project scheme	10.00	15.00
Total	82.00	117.50

Source : *The Perspective Plan for Tamil Nadu 1972-84, Plan Document No. 14; page 416.*

Table 111—Progress under the various housing schemes in Tamil Nadu.

Scheme	As at the end of June			
	1956	1961	1966	1967
(1) State Housing Scheme				
(i) Loans issued upto the end of the year (Rs. in crores)	2.36	3.73	4.84	4.84
(ii) Number of houses completed till the end of the year	3834	5525	7473	7473
(2) Low Income Group Housing Scheme				
(i) Loans issued upto the end of the year (Rs. in crores)	0.06	1.11	2.15	2.36
(ii) Number of houses completed till the end of the year	11	1432	3223	3479
(3) Middle Income Group Housing Scheme				
(i) Loans issued upto the end of the year (Rs. in crores)	Nil	0.30	1.40	1.55
(ii) Number of houses completed till the end of the year	Nil	37	838	898
(4) Industrial Housing Scheme				
(i) Loans issued upto the end of the year (Rs. in crores)	Nil	0.27	0.94	1.06
(ii) Number of houses completed till the end of the year	Nil	712	2055	2293
(5) Rural Housing Scheme				
(i) Loans issued upto the end of the year (Rs. in crores)	0.03	0.21	0.57	0.67
(ii) Number of houses completed till the end of the year	70	396	906	981
Total				
Loans issued upto the end of the year (Rs. in crores)	2.45	5.62	9.90	10.46
Number of houses completed till the end of the year	3915	8102	14495	15124

Source: *The Perspective Plan for Tamil Nadu 1972-84; Plan Document No. 14; 1973.*

Tamil Nadu Housing Board

The Housing Board was constituted in 1961, with the assets and liabilities transferred from the City Improvement Trust (CIT) which was functioning for about 15 years prior to that period. The main function of the Housing Board is to acquire land in the neighbouring area of developing cities at reasonable cost much ahead of time and to develop these lands as house sites in conformity with Town Planning regulations and dispose of the sites in dimensions of not more than 15-16 cents in lots of 15, 10, 8, 5 and 1 cents to middle income, low income and artisan groups among the public. The Housing Board is concentrating in the city area on the following schemes :

- (1) Low Income Group Flats and Middle Income Group Flats,
- (2) Tamil Nadu Government Central Housing Scheme,
- (3) Subsidised Industrial Housing Scheme and
- (4) Slum Improvement/Clearance Scheme.

Though this Housing Board is working in the city area, some of its schemes as mentioned below would be suitable for rural people also.

Own Your Home Scheme

The Board in collaboration with Life Insurance Corporation proposes to implement the 'Own your Home Scheme'.

Any person who owns a house site or plot in this State of Tamil Nadu may apply for construction of a house to the Housing Board, furnishing details of the cost of land owned by him and the cost of construction proposed thereon, together with a copy of the approved plan. After scrutiny, the Housing Board will arrange for the construction of the house with assistance from the Life Insurance Corporation for which the applicant may be required to take a policy for the required amount. The applicant will be required to repay in monthly instalments the amount of policy and the interest on the loan amount utilised for the construction of the house at the rate specified by the Housing Board within a maximum period of 20 years.

Save a Rupee a Day Scheme

This is the latest scheme in the repertory of the Board. It requires a person to save a rupee a day. The Board in collaboration

With the Syndicate Bank has made arrangements for regular collection of the savings at the door of every intending depositor. At the end of each month, the money collected will be credited to the account of the individual kept with the Housing Board. The accumulation of such deposits will be utilised for the purchase of a plot or flat and for construction of a house after a period of five years. At the end of five years, the Syndicate Bank makes over the total collection together with the accrued interest. It will also advance to the Board a sum equivalent to three times the total collection. About 1,000 persons have made enquiries and have asked for application forms and other details under the scheme.

Rural Housing Scheme

The Rural Housing Scheme was started as early as 1950 by The Government of India. The progress so far made is given in the following table.

Table 112—Progress of Rural Housing Scheme.

Year	Financial commitments (In lakhs of Rs.)	Houses Built in No.
I Plan)		
II Plan)	56.87	906
III Plan)		
1966-67 to 68-69	26.16	324
69-70	10.41	153
70-71	10.27	140
71-72	10.00	150
72-73	8.77	120
73-74	10.00	120 Target
	(Budget estimate)	
74-75	NIL	NIL
	Total	1913

Source : *Housing in Tamil Nadu, Tamil Nadu Housing Board, Government of Tamil Nadu, 1973-74.*

The progress of the Rural Housing Scheme is steady throughout the period since inception of the scheme. Under the scheme, upto 1972-73, 1793 houses were built and 990 lakhs of rupees were spent. An average of 85 houses were built each year under this scheme. From 1959 onwards, as noted earlier, village Rural Housing Cell has been established along with the Rural Housing Scheme.

Village Housing Project

Introduction: This Village Housing Project is undertaken by the Ministry of Works, Housing and Supply, of the Government of India. A provision of Rs. 10 crores was made in the Second Five Year Plan for Rural Housing. This sum was to be utilised to establish a number of housing projects in selected villages all over the country. These projects were both to ensure adequate housing and other amenities in the selected villages and to serve as a source of inspiration to adjoining areas. Improvement of housing in particular villages or physical reconstruction of villages was accepted on a long term programme spread over a period of about ten years.

RURAL HOUSING CELL IN TAMIL NADU

Pre-requisites for an Application for Loan

The applicant shall own a piece of land suitable for house construction. The extent of land shall not be less than 5 cents and in exceptional circumstances not less than 3 cents. The size of land *i.e.*, in length and breadth shall accommodate a plan acceptable to the department. The width of the site shall not be less than 30 feet. The land where the house will be constructed shall be free of encumbrance. The applicants shall be capable of repaying the loan over a period of not more than 20 years either in monthly or annual instalments. The applicant shall raise the building upto plinth level and produce the no-encumbrance certificate to become eligible to receive the first instalment of loan.

Features

The maximum amount of loan is Rs. 4,000 per individual. The rate of interest chargeable is 6.25 per cent per annum which is the lowest levied by the government. The period of repayment is not more than 20 years. Anyone who desires to opt for shorter

period of repayment can do so. The loan is disbursed in four instalments. The loanee is expected to plough his/her resources to raise the building upto floor level which is not less than a foot above the proposed ground level around the house. At this stage the first instalment of Rs.1,000 is disbursed. Availing this amount, the loanee may raise the building above floor level. When the construction reaches the level of window sill, the second instalment of Rs. 1,000 is disbursed. This enriches the loanee sufficiently and enables him to raise the construction to roof level in a few days. At this level, the third instalment of Rs. 1,500 is disbursed enabling him to buy roof timber, tiles, etc., and engage labour for fixing them and plastering the outside of walls. The fourth and final instalment of Rs.500 is disbursed with which the loanee completes plastering inside, flooring, white washing, colour washing, painting, etc.

The loanee is expected to complete the building within a period of one year from the disbursement of first loan. The repayment will be scheduled to commence eighteen months after the disbursement of the first instalment or six months after the disbursement of the final instalment whichever falls earlier. The loan is disbursed by the respective Union Commissioner. The first instalment is disbursed only when the prospective loanee produces legal documents to establish ownership of land and also no-encumbrance certificate. The loan shall be repaid in a period not exceeding twenty years from the day scheduled for repayment. Repayment of loan is collected by the Tashildar of the Revenue Department and accounted for.

Any loanee failing to abide by the condition cited above will be subjected to enforcement of penal action and summary recovery through "Board Act".

Engineering Specification for Houses

Type designs are available with the Housing Board. The loanees may avail of them free of cost. If they desire to have their own plans they may furnish them to the section Officer, Rural Housing Cell of the area and get them approved. The plinth area of the house shall not be less than 400 sq.ft. The plans should be marked on the site only by the staff of the Rural Housing Department, and execution should follow plans strictly. Subsequent

additions and alterations during the course of construction, shall be approved by the Section Officer, Rural Housing Cell prior to execution. The foundation particulars regarding depth, and width and nature of building materials to be utilised etc., will be advised by the staff of this department taking into account, the site and local conditions. By and large, the loanees are advised to use minimum quantity of cement, restricting its use only to damp proof course and plastering of walls and floors, and to eliminate use of steel, brick, rough stone, mud mortar, lime mortar and country wood shall be liberally used.

Technical Guidance by Rural Housing Cell

Successful implementation of the scheme will depend to a very large extent on the provision of adequate technical services. The main services are as follows:

* (i) Draw up Master Plans for selected villages after carrying out such physical and socio-economic surveys as may be necessary. Layouts should be devised so as to enable the village to be remodeled, sector by sector, the whole process to be completed in 8-10 years. Layouts should preserve as far as possible existing pucca houses, trees and wells,

(ii) Propose suitable design and specifications for houses with due regard to local conditions. Locally available materials should be used to the maximum extent. Houses should be designed on a very modest scale so as to set standards consistent with the stages of growth of the rural economy and the level of incomes over a greater part of the community. Ordinarily, however, the floor area of a house should not be less than 400 sq. ft.,

(iii) Provide overall technical guidance to local authorities in execution of projects under the scheme. Adequate attention should be given to providing roads, drainage, sanitation, drinking water supply and community facilities, and

(iv) Generally ensure that the money available for the project is properly spent.

Procedure for Availing Loan

Those who desire to avail of a loan under the scheme shall apply to the respective Panchayat Union Commissioner, who shall

* A Model prepared by R. H. C. is given on the last page.

then verify the correctness of the particulars furnished by the applicants with the help of village officers and recommend the same, if satisfied, to the Divisional Engineer, Rural Housing Cell, Madras, marking a copy to the respective District Collector. † The Divisional Engineer, Rural Housing Cell, accords, 'Preliminary approval' to eligible cases authorising them to go ahead with the construction. The applicants shall approach the Section Officer and get their plans, 'Approved and Marked' on ground by the Section Officer, Rural Housing Cell and undertake construction. When the building is raised upto ground level, the Section Officer, Rural Housing Cell shall report to the Divisional Engineer, Rural Housing Cell, requesting sanction of loan. The Divisional Engineer, shall then place adequate amount of loan at the disposal of the Panchayat Union Commissioner for disbursement of loans to the individuals. The Panchayat Union Commissioner shall receive certificates from Section Officer, Rural Housing Cell, at specific stages of works *i.e.*, the first at floor level, the second at window sill level, the third at roof bottom level and fourth when the roof has been fixed and outer faces of walls plastered and disburse loan as per guidelines cited earlier.

Before the disbursement of the first instalment, the Block Development Officer should ensure that the individual under reference is the absolute owner of the site established either by a *patta* or a certificate from the Tashildar of the jurisdiction. The individual shall execute a bond in the prescribed form of mortgaging the site and the house to be constructed to the Government. The Block Development Officer shall arrange to have the mortgage deeds registered in the Sub-Registrar's Office.

At regular intervals, say every year, the loan ledger is transferred to the Tashildar so as to enable him to proceed with recovery. If there are disbursements in respect of individuals in the register, details of disbursement shall be communicated to the Tashildar who shall make prompt entry in the ledger and be watchful of the time of recovery.

Recovery of loan is effected over a period of 20 years charging an interest of 6.25 per cent per annum. Recovery is commenced eighteen months after the date of payment of first instalment or six months after the date of final instalment whichever falls earlier.

† The exact address : Divisional Engineer, Rural Housing Cell,
No. 6, V. G. Vyasarpadi Gangadara Mudali Street,
Nungambakkam, Madras-34.

Performance

The Rural Housing Cell of Tamil Nadu was inaugurated in the year 1958 and has been functioning continuously for the last 15 years. Although the grant of loans has been on very liberal terms, the scheme had not been adequately availed of by the public. Over a period of 16 years *i.e.*, till March 1974 about 5,000 houses have been completed with a financial outlay of Rs.200 lakhs. Conscious of the common need for housing in villages and of the inadequacy of the plan allocation, the Chief Minister sanctioned Rs.50 lakhs from the Welfare Fund with a programme to construct 1,200 houses which is nearing completion. The Fifth Plan allocation has also been increased to Rs.1,000 lakhs.

Table 113—Village housing project Scheme — All India (since inception as on 1-10-1975).

State/Union Territory	Number of houses		Amount (Rs in Lakhs)		Latest progress reports on which the figure are based
	Sanctioned	Completed	Sanctioned	Spent	
Andhra Pradesh	6357	4313	105.57	71.21	30-6-1972
Assam	2	—	0.04	0.04	30-6-1972
Bihar	404	131	5.01	4.82	30-6-1971
Haryana	624	298	13.90	13.90	31-3-1972
Himachal Pradesh	454	376	8.48	8.13	31-12-1971
Jammu & Kashmir	—	—	—	—	—
Gujarat	1770	1409	26.78	25.77	31-12-1971
Kerala	5393	4045	110.35	98.91	30-9-1971
Madhya Pradesh	4508	2282	95.50	61.00	31-3-1972
Maharashtra	18435	10341	337.91	254.66	31-3-1969
Mysore	11481	7827	175.05	151.99	31-12-1970
Manipur	180	74	—	1.50	Based on plan document
Orissa	5653	4240	162.93	147.59	—
Punjab	2361	1065	46.73	45.67	31-3-1972
Rajasthan	6585	3125	97.03	70.74	30-6-1967
Tamil Nadu	5633	3391	114.86	104.63	30-6-1972
Tripura	429	373	6.57	6.31	31-12-1970
Uttar Pradesh	5960	3327	165.31	61.54	30-6-1971
West Bengal	3696	3652	20.51	17.27	31-12-1970
Nagaland	—	—	—	—	—
Total	80105	50269	1492.33	1145.72	
Andaman Nicobar Islands	—	—	13.64	8.61	—
Chandigarh	—	—	—	—	—
Delhi	1387	958	38.52	29.24	30-6-1972
Dadra and Nagar Haweli	—	—	—	—	—
Goa, Daman and Diu	121	20	1.95	0.98	—
Arunachal Pradesh	—	—	2.02	0.85	—
Pondicherry	135	92	3.37	2.91	31-3-1972
Laccadive, Minicoy Amindivi Island	47	22	0.70	0.54	30-6-1972
Total	81794	51361	1552.54	1188.85	

Source: *Yojana—Independence Day Special Number*, Aug. 15, 1973, Vol. XVII, No. 114.

It is seen from the above table that Maharashtra State stands first in having the largest number of houses constructed under the Village Housing Scheme. (20 per cent of total houses were constructed in Maharashtra.) Tamil Nadu has 6.7 per cent of total houses constructed under the Village Housing Project and stands seventh in the performance of the scheme. Among Union territories, Delhi leads all the rest.

Table 114—Achievements of Village Project in Tamilnadu (since inception upto 31-12-1974).

No.	Year	Target physical in Nos.	Target financial (Rs. in lakhs)	Physical Achievement in Nos.	Amount spent (Rs. in lakhs)
1.	1959-60	131	15.00	131	2.10
2.	1960-61	—	—	—	10.93
3.	1961-62	555	6.00	555	9.21
4.	1962-63	536	9.87	536	9.88
5.	1963-64	521	3.74	521	10.06
6.	1964-65	235	3.23	235	7.59
7.	1965-66	75	5.74	75	5.14
8.	1966-67	58	4.00	58	7.11
9.	1967-68	214	6.00	214	7.76
10.	1968-69	200	13.00	200	14.86
11.	1969-70	218	6.21	218	7.75
12.	1970-71	240	8.70	240	10.93
13.	1971-72	309	10.52	309	15.38
14.	1972-73	1382	20.99	412	27.16
15.	1973-74	2173	81.96	459	72.15
16.	1-4-1974 to 31-12-1974	1500	50.00	635	37.23
Total		8346	244.96	5798	252.24

Source: Rural Housing Cell — (Office unpublished records)—1974.

In the initial periods of the project, there was steady growth in the construction of houses. But during 1965 to '67, the work slowed down and from then there was some progress every year. In the seventies, the construction work gathered momentum. But there was a gap of 2548 houses between Target and Achievement.

Table 115—Achievements of Village Housing Programme—Districtwise in Tamil Nadu.

Districts	Amount spent upto 31-3-1973 in lakhs Rs.	During 1973-74 in lakhs Rs.	From 1-4-1974 to 31-12-74 in lakhs Rs.	No. of houses completed upto 31-3-1973	During 1973-74 Nos.	From 1-4-1974 to 31-12-1974 Nos.	Number of villages covered
Chingleput	35.18	19.70	7.91	705	513	68	81
Coimbatore	6.50	4.75	2.77	270	93	53	10
Dharmapuri	2.03	0.88	0.27	23	13	10	4
Salem	5.26	13.88	3.19	113	254	140	46
Madurai	8.76	16.26	5.59	356	145	134	31
Ramanathapuram	12.48	4.84	3.73	351	107	32	15
Nilgiris	1.99	0.40	0.57	40	11	1	1
North Arcot	6.95	3.87	2.66	261	14	67	26
South Arcot	6.94	1.16	0.32	180	35	11	6
Thanjavur	6.77	6.84	3.70	216	190	28	51
Trichy	14.40	1.88	1.68	419	10	—	39
Tirunelveli	16.84	3.69	2.96	707	74	50	13
Pudukkottai	—	—	1.88	—	—	41	26
Total	124.10	72.15	37.23	3713	1459	635	349

Source: Rural Housing Cell (unpublished records) 1974.

Among the districts, Tirunelveli district has 18 per cent of total completed houses under V.H.P. and next to Tirunelveli, Chingleput has the highest number of houses constructed under the V.H.P. It shows that people are more interested in these districts by utilising the V.H.P. scheme. During the last year, except Nilgiris and South Arcot, there was good response from all other districts. The highest number of villages benefitted by the V.H.P. is found in Chingleput, followed by Thanjavur district. For the whole of Tamil Nadu in the 9 months of last year alone (*i.e.*, 1.4.74 to 3.12.74) Rs. 37.23 lakhs were spent to construct 635 houses.

Table 116—Amount disbursed since inception of the scheme — Panchayat Unionwise in each district of Tamil Nadu in Rs.

District: **CHINGLEPUT**

Panchayat Union	Amount disbursed upto 31.3.1973	During 1.4.73 to 31.3.74	1.4.74 to 31.12.74
(1) Siruperumbudur	53,000	—	—
(2) Madurantagam	20,000	2,000	43,000
(3) Tiruporur	10,31,300	6,91,000	1,36,000
(4) Uthiramerur	75,600	28,500	5,000
(5) Kattankolathur	12,16,050	8,72,500	2,28,500
(6) Acharapakkam	94,000	3,500	10,500
(7) Kancheepuram	1,00,000	50,000	17,500
(8) Thirukalikundram	1,52,500	1,01,000	67,000
(9) St. Thomas Mount	1,13,000	—	12,000
(10) Pallipet	38,000	—	6,000
(11) Poondi	36,000	—	8,000
(12) Minjur	14,000	—	—
(13) Ramakrishna Rajupet	72,000	—	11,500
(14) Madhavaram	47,000	—	—
(15) Chittamoor	—	21,500	8,000
(16) Walajabad	—	—	9,000
(17) Kunnathur	—	—	28,000
Total	30,62,950	17,70,000	5,91,000

District: SOUTH ARCOT

(in Rs.)

Panchayat Union	Amount disbursed upto 31.3.1973	During 1.4.73 to 31.3.74	1.4.74 to 31.12.74
(1) Cuddalore	1,05,200	45,000	9,000
(2) Gingee	10,200	—	—
(3) Mylam	1,01,750	—	—
(4) Thirukoilur	64,000	—	—
(5) Kallakuruchi	1,44,800	—	—
(6) Chinna Salem	25,400	—	—
(7) Virudhachalam	92,330	—	—
(8) Keerapalayam	13,800	—	—
(9) Portonovo	9,000	—	—
(10) Nallore	70,000	—	—
(11) Malbuvanagiri	2,000	18,500	1,500
(12) Thirunavallur	—	52,000	—
(13) Mangalore	—	—	11,000
(14) Thiruvannainallore	—	—	10,500
Total	6,38,480	1,16,000	32,000

Source: Rural Housing Cell (unpublished records)

District: DHARMAPURI

(in Rs.)

(1)	(2)	(3)	(4)
(1) Dharmapuri	1,46,000	—	—
(2) Krishnagiri	10,000	35,000	—
(3) Uthangarai	30,000	28,000	2,000
(4) Palcode	—	25,000	25,000
Total	1,86,000	88,000	27,000

District: SALEM

(in Rs.)

Panchayat Union	Amount Disbursed upto 31.3.73	During 1.4.73 to 31.3.74	1.4.74 to 31.12.74
(1) Salem	—	3,80,500	35,500
(2) P.Pathy	—	87,500	7,500
(3) Konganapuram	—	1,10,000	18,500
(4) Thadaivasal	45,700	26,500	3,000
(5) Emapattai	2,52,000	—	—
(6) McDonald Choultry	54,000	1,15,500	2,500
(7) Thogamangalam	—	41,000	85,000
(8) Melasamudram	—	13,000	30,000
(9) Rasipuram	—	11,000	16,500
(10) Puduchatram	—	9,000	7,000
(11) Sundamangalam	—	28,000	4,000
(12) Nangavalli	—	57,000	21,000
(13) Attur	—	58,500	3,000
(14) Yercadu	—	40,000	22,500
(15) Ayodhipuram	—	1,43,500	17,000
(16) Omalur	—	30,000	7,000
(17) Kabilarmalai	—	16,000	11,500
(18) Kadayambatti	—	57,500	8,000
(19) Vennandur	—	29,000	19,000
(20) Kollimalai Hills	—	20,000	1,500
(21) Valapadi	—	63,500	—
(22) Gangavalli	—	16,500	—
(23) Kolathur	—	40,000	—
Total	3,51,700	13,87,500	3,19,000

District: **THANJAVUR**

(in Rs.)

Panchayat Union	Amount Disbursed upto 31.3.73	During 1.4.73 to 31.3.74	1.4.74 to 31.12.74
(1) Muthupet	—	1,19,000	21,000
(2) Kottur	—	76,000	13,500
(3) Kodavasal	—	4,000	—
(4) Pattukottai	47,900	—	—
(5) Sirkazhi	3,40,400	1,01,500	—
(6) Kumbakonam	1,38,600	—	—
(7) Papanasam	44,000	—	—
(8) Thiruvaiyaru	25,000	96,500	—
(9) Thiruvarur	3,000	21,000	69,000
(10) Thanjavur	75,000	1,65,000	12,000
(11) Nidamangalam	—	—	—
	6,73,900	5,83,500	2,67,500

District: **MADURAI**

(in Rs.)

(1)	(2)	(3)	(4)
(1) Thiruparankundram	—	71,500	60,000
(2) Vadamadurai	—	—	17,000
(3) Vadipatti	—	1,82,000	27,500
(4) Thoppampatti	—	11,000	29,000
(5) Thirumangalam	24,000	—	—
(6) Madurai East	65,600	—	—
(7) Batlagundu	43,100	—	—
(8) Melur South	55,250	—	18,500
(9) Melur North	55,450	—	—
(10) Challampatti	61,800	16,000	46,500
(11) Alangulam	50,310	—	—
(12) T. Kallupatty	37,050	—	—
(13) Sedapatti	64,200	26,000	9,000
(14) Reddiyar Chatram	6,700	—	—
(15) Theni	64,000	21,000	23,000

Madurai District (Contd.)

(in Rs.)

Panchayat Union	Amount Disbursed upto 31.3.73	During 1.4.73 to 31.3.74	1.4.74 to 31.12.74
(16) Attur	22,800	2,29,000	10,500
(17) Dindigul	—	72,000	64,500
(18) Palani	—	75,000	21,000
(19) Andipatti	—	1,54,500	32,500
(20) Kottampatti	—	1,12,000	25,500
(21) Vedasandur	—	50,000	58,500
(22) Nattam	—	—	16,000
	5,49,360	10,20,500	45,900

District: COIMBATORE

(in Rs.)

(1)	(2)	(3)	(4)
(1) Thookanaicken- palayam	1,30,000	—	—
(2) Periyanaicken- palayam	79,250	31,500	82,000
(3) Palladam	9,000	—	—
(4) Chennimalai	72,400	59,500	8,500
(5) Erode	40,700	—	—
(6) Sarcar Samakulam	28,800	—	—
(7) Anaimalai	97,200	—	—
(8) Pollachi North	50,000	—	—
(9) Pollachi South	71,000	51,000	—
(10) Karamadai	80,000	62,500	45,500
(11) Udumalpet	—	1,64,500	3,500
(12) Perur	—	45,500	31,000
	6,58,350	4,14,500	1,70,500

District: NILGIRIS

(in Rs.)

Panchayat Union	Amount Disbursed upto 31.3.73	During 1.4.73 to 31.3.74	1.4.74 to 31.12.74
(1) Ooty	52,000	39,000	57,000
(2) Kotagiri	1,47,000	—	—
	1,99,000	39,000	57,000

District: TIRUCHIRAPALLI

(in Rs.)

(1)	(2)	(3)	(4)
(1) Thuraiyur	63,750	—	—
(2) Ariyalur	21,300	—	—
(3) K. Paramathi	1,30,700	—	—
(4) Veppanthattai	92,600	—	—
(5) Lalgudi	14,100	—	—
(6) Perambalur	4,65,300	53,000	—
(7) Thiruvarankulam	1,42,000	—	—
(8) Aravakurichi	57,500	—	—
(9) Kulithalai	1,86,000	—	—
(10) Krishnarayapuram	2,58,000	—	—
(11) Ariamangalam	—	76,000	—
(12) Veepur	—	10,000	—
(13) Andimangalam	—	42,000	—
	14,31,250	1,81,000	—

District: **RAMANATHAPURAM**

(in Rs.)

Panchayat Union	Amount Disbursed upto 31.3.73	During 1.4.73 to 31.3.74	1.4.74 to 31.12.74
(1) Mudukulathur	35,250	—	—
(2) Sathur	3,18,850	—	—
(3) Kariapatti	3,900	—	—
(4) Singampunari	2,94,400	80,000	—
(5) Srivilliputtur	1,19,100	—	—
(6) Watrap	1,14,400	—	—
(7) Paramakudi	13,500	—	—
(8) Thirupathur	2,61,050	—	—
(9) Thirupuvanam	40,000	34,000	—
(10) Kallal	19,000	2,36,000	3,000
(11) Sivaganga	—	99,000	3,57,000
(12) Bogalur	—	36,000	2,000
(13) Kannangudi	—	36,000	11,000
	12,19,450	4,85,000	3,73,000

District: **TIRUNELVELI**

(in Rs.)

(1)	(2)	(3)	(4)
(1) Srivaikundam	—	17,000	22,500
(2) Tuticorin	1,83,870	—	8,000
(3) Vallioor	9,30,255	—	—
(4) Sankarankoil	55,500	—	—
(5) Parpakudi	64,000	—	—
(6) Alwar Tirunagari	46,950	—	—
(7) Kurivikulam	10,000	16,500	7,000
(8) Keelapavoor	36,000	—	—
(9) Shencottai	61,350	—	—
(10) Alangulam	—	21,000	2,000
(11) Kovilpatti	—	2,78,000	1,28,000
(12) Kadayanallore	—	36,000	1,03,000
(13) Palayamkottai	—	—	2,000
	13,87,925	3,68,500	2,95,500

District: NORTH ARCOT

(in Rs.)

Panchayat Union	Amount Disbursed upto 31.3.73	During 1.4.73. to 31.3.74	1.4.74 to 31.12.74
(1) Madanur	—	41,000	1,05,000
(2) Thuringapuram	54,450	—	—
(3) Arcot	1,38,700	—	24,500
(4) Chetput	1,09,056	—	—
(5) Kariyambadi	1,61,700	36,000	11,000
(6) Polur	15,000	—	—
(7) Vellore	1,19,000	63,000	17,500
(8) Anicut	3,000	—	—
(9) Wandiwash	62,800	3,000	4,000
(10) Sholingur	7,000	25,500	3,000
(11) Katpadi	—	22,000	34,500
(12) Peranambut	—	1,16,000	16,500
(13) Thimiri	—	80,500	43,500
(14) Thiruvannamalai	—	—	6,500
	6,97,706	3,87,000	2,66,000

District: PUDUKOTTAI

(in Rs.)

(1)	(2)	(3)	(4)
(1) Kadavoor	—	—	7,000
(2) Aranthangi	—	—	96,500
(3) Poonamaravathy	—	—	38,500
(4) Thirumayam	—	—	9,000
(5) Viralimalai	—	—	25,000
(6) Thiruvarankulam	—	—	2,500
(7) Karambakudi	—	—	4,000
	—	—	1,82,500

Source: Unpublished Records; Rural Housing Cell 1975.

Tamil Nadu Harijan Housing and Development Corporation

The Tamil Nadu Harijan Housing and Development Corporation was established on 15th February, 1974. Though this corporation works exclusively for Harijans and their welfare, it also contributed to a certain extent to the Rural Housing progress.

This Corporation has planned to construct 1,00,000 houses exclusively for Harijans during 1974-76. It proposed to construct 10,000 houses by December '74. For each Harijan family the house provides a plinth area of 240 square feet. Lime slacked by Harijan labourers and bricks also made by them are used in the construction of these houses. A number of village kilns using the old traditional method have been started and they will be multiplied as the occasion demands. Bricks out of these kilns are named 'Hari Bricks' to connote that they are made with Harijan labour and for Harijan housing colonies. The foundations and superstructures will be raised only with these country bricks and the roofing will be tiled or made with materials suited to local conditions. These 10,000 houses were completed in 248 villages in fourteen districts. The State Government had made a contribution of Rs.1 crore to the Tamil Nadu Harijan Housing and Development Corporation (THHDC) to which the assignment of building houses for Harijans had been entrusted. The Harijan population of the State is 76.46 lakhs (1971) out of the State total population of 412 lakhs. Exceeding the all India average of 14 per cent, the percentage of the Scheduled Caste population in Tamil Nadu is 17.85. This population is concentrated in South Arcot, North Arcot and Thanjavur, forming 46 per cent of the population of the State's total of Scheduled Castes. To provide housing to all Harijan families in the State at least 14.5 lakh houses may be required. As this is a large problem, the State Government, has made an initial beginning with a decision to build a lakh of houses during 1974-76 and 10,000 such houses were ready by the April 1975.

The house given is of the standard laid down by United Nation Organisation. It has a plinth area of 240 sq. feet with two rooms, one living and the other, store room cum kitchen with facilities of bath room and a latrine. The plinth area of 240 sq. feet costs Rs. 3,500 for each house provided with smokeless kitchen, bathroom and other sanitary facilities.

According to the programme, the idea is that no village in Tamil Nadu will be without housing, for its Harijan population. In many villages, the Corporation provides a community hall, library and a shopping centre. Naturally electricity, good road communication and water supply are inherent in the scheme. The claim of the Corporation is that the 278 villages now provided with Harijan housing colonies would be model villages.

In such mass construction by national designs the cost of earth work, excavation and foundation is reduced. The use of lime as in olden days, releases use of cement for local industries, and that is why the State government had revived the ancient lime kiln industry by starting as many units as possible. The possibility of lime cost going up has also been considered and the larger production of this material is expected to keep the cost low. Use of reinforced wiremesh helps in the economy of steel and the RCC sloping roof adopted in most of the houses in the Thanjavur district has helped to economise materials according to the Corporation engineering staff. Sloping with half inch lime plaster, it is claimed will make the roofing weather resistant.

In the second and next phase of construction, it is proposed to use precast channel slab constructions and avoid getting centring materials such as cement and steel for concrete roofing. Apart from a free house, a Harijan family is also given loans at a low interest rates to raise a poultry farm, or obtain milch cattle to start a dairy farm and other such small business to keep them engaged profitably.

Progress of Work

Upto June 1975, 6,622 houses were completed in different districts in Tamil Nadu. There are no hard and fast rules for the selection of a district or block or village for the construction of housing. Wherever the housing facilities are available, houses are constructed by the THHDC. During the I phase, 10,595 houses were allotted for construction. But the number of houses completed were 6,622. For II phase, 16,501 houses are allotted. During I phase, the backlog works out as 3,972. The cost of a house built in I phase works out to Rs.3,600 and it would be Rs.4,000 for the houses I phase in the II phase with tiled roof.

The following table shows the districtwise number of houses built and amount spent by the Tamil Nadu Harijan Housing and Development Corporation.

Table 117—Houses built and amount spent by THHDC.

Sl. No.	District	Allotment of houses—I phase	No. of Houses completed	Balance	Amount in Rs. Sanctioned	Amount Spent in Rs.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Chingleput	1,062	514	548	38,23,200	18,50,400
2.	North Arcot	1,001	408	593	36,03,600	14,68,800
3.	South Arcot	1,442	777	645	51,19,200	27,97,200
4.	Dharmapuri	321	275	46	11,55,600	9,90,000
5.	Salem	658	651	7	23,68,800	23,43,600
6.	Coimbatore	954	557	397	34,34,400	20,05,200
7.	Nilgiris	235	—	235	14,10,000	—
8.	Madurai	800	604	196	28,80,000	21,74,400
9.	Ramanathapuram	738	274	464	26,56,800	9,86,400
10.	Tiruchirapalli	1,040	936	104	37,44,000	33,69,600
11.	Pudukottai	361	294	67	12,99,600	10,58,400
12.	Thanjavur	1,107	572	535	39,85,200	20,59,200
13.	Thirunelveli	800	664	136	28,80,000	23,90,400
14.	Kanyakumari	96	96	—	3,45,600	3,45,600
		10,595	6,622	3,972	3,87,06,000	2,38,39,200

(Contd. on page 190)

Table 117—(Contd.)

Required for completion	Allotment II Phase	Completion	Balance	Amount Sanctioned Rs.	Amount required for completion in Rs.
(8)	(9)	(10)	(11)	(12)	(13)
19,72,800	1,120	—	1,120	44,80,000	44,80,000
21,34,800	1,150	—	1,500	60,00,000	60,00,000
23,22,000	2,737	—	2,737	1,09,48,000	1,09,48,000
1,65,000	451	—	451	18,04,000	18,04,000
25,000	1,709	—	1,709	68,36,000	68,36,000
14,29,200	1,350	—	1,350	54,00,000	54,00,000
14,10,000	180	—	180	10,30,000	46,80,000
7,05,600	1,100	—	1,100	44,00,000	44,00,000
16,70,400	599	—	599	23,96,000	23,96,000
3,74,400	1,775	—	1,775	71,00,000	71,00,000
2,41,200	590	—	590	23,60,000	23,60,000
19,26,000	2,312	—	2,312	92,48,000	92,48,000
4,89,600	600	—	600	24,00,000	24,00,000
—	58	—	58	2,32,000	2,32,000
1,46,55,300	16,501	—	16,081	6,82,48,000	

Source: Unpublished Records—Tamil Nadu Harijan Housing and Development Corporation 1975 (as on June 1975).

The inputs for the house constructed by THHDC are as follows:

Unskilled labour (men)	38 Numbers
Unskilled labour (women)	47 "
Skilled workers	38 "
Total Bricks	10,155
Cement	1 tonne

The prices of the input vary from time to time due to prevailing inflationary condition. The house is given to Harijans free of cost. During the construction, if the Harijans contributed his labour for construction, he is also paid. In case a person's house is to be replaced by new construction, till the completion of the new house, he is accommodated in his neighbour's or relative's house.

Among the districts, South Arcot stands first in the completion of largest number of houses for Harijans. The performance of this project must be seen against the distribution of the Harijan population in the country, the State and the districts set forth in the two tables below.

Table 118—Harijan population.

	General Population	Scheduled Castes	% of Scheduled Caste to the total
India			
1951	36115669	55170886	15.32
1961	439234771	64511513	14.69
1971	546955945	80472532	14.7
Madras			
1951	29974936	5894035	18.0
1961	33686953	6067327	18.0
1971	41103125	7398562	18.0

Source: *Census of India; Vol. IX, Part VA.*

Table 119—Districtwise population of Harijan Community.

District	% to the total popula- of district	% to the total sche- duled caste population of the State
Madras	12.4	3.5
Chingleput	28.1	10.2
North Arcot	19.7	10.2
South Arcot	26.3	13.2
Salem	14.5	9.1
Coimbatore	15.0	8.8
Nilgiris	19.0	1.3
Madurai	15.3	8.1
Tiruchirapalli	17.7	9.3
Thanjavur	32.1	12.4
Ramanathapuram	15.4	6.1
Tirunelveli	15.8	7.1
Kanyakumari	4.0	0.7

Source: *Census of India, Vol. IX, Part VA, 1961.*

South Arcot District has the highest number of Harijan population in Tamil Nadu. Table 2 in Chapter 2 shows that the maximum number of kutch houses (i.e., 41.2 per cent of total kutch houses of the State) is also found in South Arcot. Table 117 shows that the highest number of houses completed by THHDC is found in South Arcot district. This is one indication that the THHDC construction is going in the right direction. In the second phase, THHDC has planned to construct 2,737 houses for harijans.

Research and Training on Rural Housing

At the initiative of the Government of India, five Rural Housing wings were established in 1958 in five centres for the purpose of research, investigation, training, demonstration and extension, on a regional basis covering all the States in the country. These five rural housing wings are attached to five engineering institutions in different places in India as follows :

- (1) Rural Housing Wing,
School of Planning and Architecture,
Indraprasta Estate,
New Delhi.
- (2) Rural Housing Wing,
Birla Vishvakarma Mahavidyalaya,
Vallabh Vidyanagar,
Gujarat.
- (3) Rural Housing Wing,
Bengal Engineering College,
Sibpur,
Howrah,
West Bengal.
- (4) Rural Housing Wing,
Punjab Engineering College,
Chandigarh.
- (5) Rural Housing Wing,
University Visveswaraya College of Engineering,
Bangalore University,
Bangalore.

The Southern Wing located at University Visveswaraya College of Engineering, Bangalore, functions in collaboration with the State Governments of Karnataka, Tamil Nadu, Andhra Pradesh, Kerala and Pondicherry. The main objectives are to train personnel who are engaged in rural housing schemes and conduct research on indigenous materials of construction and to construct experimental-cum-demonstration houses as extension techniques. An intelligent adoption of these materials, techniques, standards and codes will help in a considerable reduction in the overall cost of construction of a rural house.

With the above objectives, the National Building Organisation, Ministry of Housing, Government of India, New Delhi, finances the construction of experimental-cum-demonstration houses in selected villages served by the wing. Accordingly, the Bangalore wing has constructed some experimental-cum-demonstration houses

in different villages and has done work in this field by developing new building materials, new construction techniques and design procedures.

The threefold activities of the Rural Housing wing are as follows:

Training Courses

To train the technical as well as administrative personnel working in a community development block. The training programme covers various phases of socio-economic and technical aspects of village planning and housing.

Research

To conduct applied research for the improvement of locally available materials and construction techniques.

Extension Work

To extend the research and other analysed data to the field scale for performance evaluation and to construct demonstration houses using the improved construction techniques and materials.

Training Programme

The wing has the programme of training for 3 categories of personnel working in rural housing developments and community development blocks.

(1) Orientation courses for Technical Personnel—Junior Engineers, Assistant Engineers working in community development blocks, Rural Housing Cell and other rural housing sections of state governments are given 2½ months intensive training in different aspects of village planning and housing.

(2) Orientation course-cum-seminar for block development officers. Block development officers deputed by State Governments participate in short term courses on village planning and housing. The duration is 15 days.

(3) Short term course for village level workers in C.D. blocks of 15 days in socio-economic aspect of village planning and housing is being given.

This wing has so far organised a total of 49 courses—30 for junior or assistant engineers, six for B.D.O. and three for Gramsevakas.

The following is the house designs with specification prepared by the Rural Housing Wing (Southern Branch).

House Designs

The houses have been designed in such a way that their character design, construction, appearance and grouping is in harmony with rural landscape and surroundings. The salient features of the experimental-cum-demonstration houses are as follows:

(a) considering the requirement of space, two-roomed houses with other elements of dwelling units like verandah, kitchen, bath room, etc., have been provided. In the case of one-roomed house due provision in the house design has been made for additional space required for future expansion.

(b) Cattle habitation is separated from the human habitation.

(c) Sufficient open space is provided in the walls for proper ventilation so as to bring proper distribution of light to overcome internal darkness, cross ventilation of air and hence a thermally cooler house.

An important consideration in the design of a house is whether it is in a row, or semi-detached or detached. Semi-detached houses have been adopted, since they meet the requirements in most cases of the villages. Detached houses are recommended in the development of villages since provision for the semi-detached type is practically not possible.

(e) Plots size for semi-detached houses. A minimum width of $25' \times 30'$ per unit plot size has been adopted. In the case of re-development of villages plot size varies between $25' \times 30'$ and $48' \times 20'$.

Specifications

The specification adopted in these experimental-cum-demonstration houses have been evolved taking into consideration the extent to which the age old methods of construction need a change

the use of manufactured materials like burnt-bricks, cement, asbestos sheets, etc., and based on the result of research work undertaken by the wing for the economic use of indigenous building materials. The salient features of the specifications adopted in the experimental cum-demonstration houses are as follows :

(1) Foundation

Since the houses are single storeyed and roofed with light materials, the most economical size of shallow foundations have been adopted. The materials used are sand, boulders and rough stone masonry in clay and for basement, size stone in clay with cement mortar pointing for exposed surfaces.

(2) Damp Proof Course

To minimise the dampness in the houses and prevent the attack of wood work by termites, cement concrete bed of 2" to 3" thick in 1:3:6 has been provided.

(3) Super Structure

For external walls burnt-bricks, soil stabilised bricks like soil, cement, bitumen and lime stabilised bricks in clay have been used.

For internal walls raw bricks have been used. Only 9" thick walls for all the walls have been adopted for demonstrating the strength of walls and which reduces the cost of construction. Also adoption of simple brick bonds like common bond is tried. Here four or five courses, could be in stretcher bond and the next one only header. This bond gives sufficient strength and speedy execution, hence it makes it possible to apply an even thickness of mortar when plastering the walls.

(4) Roofing

Roofing is the difficult and expensive item of construction in the rural house. From the consideration of durability, Mangalore Tile and A.C. sheet roofing have been adopted. Also Cuddapah slabs and precast doubly curved cement concrete shells have been tried as an experimental item. To prevent the wood work being attacked by white ants, coal tar or sylox T.R. (phenolic resin) has been applied.

(5) Plastering

For external surfaces cement mortar plastering, bitumen stabilised soil has been adopted. Sylox T.R. a water proof resin point applied on the unplastered surface of brick masonry has been tried. For internal surface mud as well as cement plastering has been adopted.

(6) Flooring

By and large, cement concrete flooring has been adopted. Lime quartz or brick jelly concrete and stabilised soil flooring have also been tried.

(7) Doors and Windows

Jungle wood frames and shutters. In all these cases local labour is utilised to the maximum extent thus, reducing the cost by about 20-30 per cent.

Table 120—Details of Demonstration Houses built by Rural Housing Wing (Bangalore)

No.	Year of Construction	Estimated Cost of Construction	Plinth area sq. ft.	Floor area sq. ft.	Plot Size
EDH. 1.	1962	Rs. 2,375	505	410	35' × 55'
EDH. 2.	1962	Rs. 2,375	504	400	35' × 55'
EDH. 3.	1962	Rs. 2,370	551	361	35' × 55'
EDH. 4.	1962	Rs. 2,375	505	410	35' × 55'
EDH. 5.	—	—	—	—	—
EDH. 6.	1964	Rs. 5,600	975	810	—
EDH. 7.	1965-66	Rs. 3,000	420	375	35' × 55'
EDH. 8.	1965-66	Rs. 2,650	777	666	(35' × 60') × 2
EDH. 9.	1972	Rs. 4,000	325	250	48' × 120'
EDH. 10.	1973	Rs. 5,000	325	241	25' × 30' to 40' × 120'
EDH. 11.	1973	Rs. 5,100	325	241	25' × 30' to 40' × 120'
EDH. 12.	1973	Rs. 5,200	347	265	25' × 30' to 40' × 120'
EDH. 13.	1973	Rs. 5,200	348	265	25' × 30' to 40' × 120'
EDH. 14.	1973	Rs. 7,700	485	345	25' × 30' to 40' × 120'
EDH. 15.	1973	Rs. 5,500	351	265	25' × 30' to 40' × 120'

Blue prints of demonstration houses are given in the annexure. The above noted demonstration houses were constructed in different villages in the States of Karnataka and Andhra Pradesh. The important characteristic of these houses is that cement and iron are eliminated and local materials are used in construction.

Table 121—Costs of the houses designed by Rural Housing Cell in Tamil Nadu.

No.	Plinth Area in Sq. ft.	Tiled (Rs.)	RCC/Madras terrace (Rs.)
RHC 1.	412	6,592	9,064
RHC A and C	451	7,216	9,922
RHC 1 A	497	7,952	10,934
RHC 9.	450	7,200	9,900
RHC 10.	450	7,200	9,900
RHC 11.	558	8,928	12,276

Source: *Blue Prints, Rural Housing Cell, Tamil Nadu.*

It should be noted that the State has not used fully the services of the Rural Housing Cell in Bangalore, which is also true of the other States save Karnataka.

Research in Tamil Nadu

The Department of Town Planning attached to A.C. College of Technology, Madras and the Department of Structural Engineering, Engineering College, Guindy, are doing some research in general on the construction of houses. The Research-cum-Action Centre, with the help of the Ford Foundation in its inception at Poonamallee, Madras, has done valuable work regarding development of sanitary water-sealed latrines and also smokeless *choolas*. The 3/4" water-sealed latrine recommended by National Building Organisation, has been developed and tested satisfactorily. The Poonamallee Research Centre has gone one step ahead and has manufactured burnt clay smokeless *choolas*. These are to be set in position and the *choola* is to be built with clay plaster of 2" to 3" thickness around the burnt

clay mould. The Rural Housing Cell and the Research-cum-Action Centre in consultation with the Rural Housing Wing at Bangalore, devise many programmes for the betterment of village housing. A suggestion has been made that a sum of Rs.100. should be reserved of the loan amount of Rs. 3,000 granted for housing under Village Housing Project Scheme for the construction of latrines by the block overseer with the collaboration of the Research-cum-Action Centre. This suggestion should be acted upon.

Appraisal of the Government's Programme

According to the 1961 census, out of 651 lakh rural houses in India, hardly 124 lakhs or just about 19 per cent were pucca houses. The remaining 81 per cent or 527 lakh houses were kutcha which required to be rebuilt or substantially improved. Further, these 651 lakh houses were occupied by 689 lakh rural households, which meant that 38 lakh households in rural areas did not have any separate dwelling units. Altogether the shortage of housing in rural areas was estimated to be of the order of 565 lakh units in 1961. Since then the population has been increasing at the rate of about 2.4 per cent per annum, creating a fresh demand for houses, while there is the usual depreciation of the existing housing stock at the rate of about 2 per cent per annum, owing to obsolescence and deterioration. Against this, the annual rate of new construction (pucca houses) in rural areas has been estimated to be less than one house per 1,000 population per year, which is so low as to be outstripped by the much faster rate of deterioration. Consequently, the shortage of housing in rural areas was anticipated to rise to 718 lakh units by the commencement of the Fourth Plan period (1969-1974.)

The question that naturally arises, is, what has the government done to meet the situation? In the First Five Year Plan, rural housing was considered to be more or less the direct responsibility of the State Government. In the Second Plan, however, it was realised that some concrete measure of central assistance would be necessary to help the State governments to improve the housing condition in the rural areas. Accordingly, based on the principle of aided self-help, "the Village Housing Project Scheme" was formulated and introduced in August 1957 for implementation

through the State governments. Since, then, the scheme has undergone quite a few changes and at present, it provides broadly for the following:

(a) Loans to villagers for construction of new houses or for improvement of existing houses, to the extent of 80 per cent of the cost, subject to a maximum of Rs. 3,000 per house, the balance of cost is to be provided by the beneficiary either in cash or in the form of building materials or in the shape of labour by himself and his family members;

(b) 100 per cent grants to State governments for provision of streets and drains in selected villages and house sites for landless agricultural workers; and

(c) technical assistance and guidance to villagers and local authorities including provision of lay out plans, designs, specifications, etc., through the State Rural Cells established for this purpose 50 per cent of the cost of pay and allowances of the staff being met through central grants.

Poor Performance

The Scheme came into operation only towards the close of the II Plan period. Against a total provision of Rs.4.85 crores a sum of about Rs.3.77 crores was utilised by the State governments and about 7,200 houses were completed by the end of that Plan. During the Third Plan, implementation of the scheme suffered a setback, primarily as a result of the hostilities with China and Pakistan. Against a total provision of Rs.12.8 crores only Rs.4.4 crores were utilised by the State governments and about 25,200 houses were completed against a target of about 79,000 houses. During 1966-67 and 1967-68, out of the total provision of Rs.1.88 crores, a sum of Rs. 1.11 crore was utilised and about 4,400 houses were built, bringing up the total to 36,800 houses since the inception of the scheme. The programme for provision of streets and drains and of house sites for landless agricultural workers have not made much headway. On the whole, the performance under the Village Housing Projects Scheme is far from satisfactory even in relation to the modest target envisaged in the plans.

Inadequate funds

At the economic level, the weak links were government and the individual. Notwithstanding its importance to the social well being of the people, housing in a developing economy necessarily gets a low priority in the National Plan, in comparison with other more productive fields like agriculture, industry, power, etc., and consequently funds are not processed in proportion to the actual need. Again, under the present system the Housing schemes form part of the State Plans and its funds are required to be accommodated within the State plan ceilings. Within inadequate overall resources, the State governments are forced to divert funds from one development head to another during the course of a year. The result is that provisions made by the State governments in their Annual Plans fall short of the meagre provision made for housing at the national level. The inadequate funds so provided are often diverted to other development heads by the State governments on the basis of the requirements and priority given at the national level gets diluted further at the State and local levels, with the result that housing programmes in general and rural housing in particular do not receive the attention they deserve.

Beyond individual means

The other weak link is the individual himself that is, his general economic condition. The average Indian happens to be one of the poorest in the world. According to the U.N. estimate the per capita income in India computed in U.S. dollars is only 78 dollars, the lowest even among Asian countries except Burma and Nepal where it is 65 dollars and 67 dollars respectively. In Pakistan, the per capita income is 86 dollars, and in Sri Lanka and Malaysia it is as 129 dollars and 254 dollars. The rural average per capita income is much less than 78 dollars as noted in discussion of the poverty sector in Chapter 3. The average villager in India, therefore, finds it beyond his means to set aside the capital required to build a house of his own. Even when a long term loan is given by the Government, he is unable to avail himself of it as the annual instalment of repayment is also beyond his capacity. Besides, the average villager has his own sense of priorities: he would much rather spend money on seeds and fertilisers than on improving his house. (See his income

expenditure table — Survey in some of the villages presented in Chapter 2.)

Finally, at the operational level, the existing machinery for implementation of the rural housing programme is not adequate to the task. It has to be strengthened by the State Government. But here again, we are up against the low priority given for housing. In the absence of a sufficiently high order of priority, the State governments are apparently unable to set apart adequate funds for the purpose.

Revolving fund

If the entire housing shortage is to be wiped out, a total investment of the order of Rs.21,500 crores, on a modest estimate of Rs.3,000 per house is needed. It would also call for an extensive and efficient organisation, which, besides planning and promoting rural housing projects, will also be capable of creating a housing consciousness in the minds of the rural population through the various media of publicity and education. As recently recommended by Shri Shriman Narayan, in his Patel Memorial Lecture, it would be helpful if a revolving fund of Rs.500 crores could be created for rural reconstruction which will boost the rural economy and bring good housing within the means of the average villager, improvement of living conditions in rural areas and the creation of employment opportunities (in the shape of small scale industries—co-operative and otherwise). This could also have the effect of checking the large scale migrations from rural to urban areas and reducing the pressure on essential services in towns and cities.

A realistic solution must, however, take into account the circumstances governing the country at present. The problem is so complex and vast that it would be obviously impossible to find the resources of requisite magnitude to tackle the housing problem entirely at governmental level. Housing has to yield inevitably to other activities with greater productivity potential. In these circumstances a decisive improvement in the housing condition of rural areas, can be attained if the villagers can be induced to help themselves. The greatest single asset of the villager is his spare time and concerted efforts should be made to harness this to useful avocations, such as house building.

Intensive Pilot Project

According to current indications a provision of about eight crore rupees was available for rural housing in the Fourth Plan. Spreading this amount thinly over extensive areas would only lead to diffusion of effort and activity. All the aid available from government sources, through different agencies for housing and rural development should be canalised into selected areas in an integrated manner, so that the various rural reconstruction programmes support each other. In other words, rural housing projects should be planned and promoted in areas where other programmes such as provision of houses/house sites for scheduled castes and tribes, reclamation of waste land and resettlement of landless agricultural labour, rural industrial projects, etc. are being implemented simultaneously. With these objectives in view, the housing programmes in rural areas should be executed in the shape of intensive pilot projects, based on aided self help. If these projects are properly developed they might serve as a source of inspiration to other neighbouring areas, which, in course of time would muster sufficient social and political pressure for greater activity in the field of housing.

New Lines of Action

In present day rural India, there are certain areas which are economically better off. For example, about 1,36,000 villages which are covered by intensive agricultural programmes, are witnessing a sharp spurt in income, which is being spent, among other things, on haphazard construction of houses, shops workshops, agro-industrial units, etc. People in such areas who are relatively economically sound do not require any financial assistance for construction of houses. What is actually required is to educate them on the need to rebuild or improve their houses on proper lines, and to provide adequate technical guidance in village planning and construction of houses and other rural buildings. Besides, a simple set of model building bye-laws should be made available to the village panchayats for adoption and enforcement.

Tamil Nadu Schemes

The State's services to the economically depressed class by providing landsite, house pattas, loans and other aids were discussed earlier. Some of their lacunae may now be reviewed with a view

to remedying them. Under the *Kudiyiruppu* Act, existing house sites are acquired and assigned as noted earlier but there is no uniformity in the shape or extent of the house sites. Many of them have encroached upon the road sides or the tank bund, and there are no approachable road or sanitation etc., A certain uniformity should be maintained, or the available land sites should be pooled and the houses should be constructed on the basis of a local plan.

Further, instead of the haphazard assigning of 1 to 5 cents, which under village housing project, (V.H.P.) makes all those with less than 5 cents ineligible for housing loans, either the minimum area required should be assigned or the eligibility requirement for loan under V.H.P. should be lowered according to the size assigned. In place of the present system wherein different departments handle land assignment loans and housing separately, the distribution of surplus land, assignment of site and funds for housing should all go together.

Also co-operative approach which has so far not been attempted for housing among the nascent small land owners should be emphasised to prevent the newly assigned land to the poor being sold to the rich to clear the past loans and continuing their landless status, defeating the purpose of the legislation. It is recommended that the government should have the ownership of all surplus land till the above purpose is served.

Rural Housing Cell

In Tamil Nadu, a Rural Housing Cell was established in 1958 and has been continuously functioning. So far achievements in the process of sanctioning loans under village housing scheme for rural houses are poor. Over a period of 14 years (i.e.) till March 1974 about 5,000 houses have been completed with the financial outlay of Rs.200 lakhs. The poor performance could be attributed mainly to the poor public response. In spite of the government's propaganda and advertisements, rural folks were not responsive, perhaps due to limited finance, government restriction in adopting the type and design of house, and procedural complexities. In some districts, whatever progress has been made is due to the interest and initiative taken by the officers concerned including

the District Collector. There was a good response during the period 1961 to 1963 but from then there was no steady progress. But in the last year (i.e.) from 1.4.74 to 31.12.1974, there was some progress again made by hectic efforts by government officials. Among the districts, Tirunelveli district has more houses built under V.H.P. and a maximum number of villages covered under V.H.P. is found in Chingleput district. But progress made so far by V.H.P. (5,700) and Rural Housing Scheme (1900) has not made much of a dent on the total housing need which is about 36 lakhs houses as estimated in the Perspective Plan of Tamil Nadu.

For this, there is need for drastic changes in the methods or approach of the scheme. The Perspective Plan document (1972-84) states the following on V.H.P.

“ The village housing schemes need a different approach and a different organisational set up from the present. The present system of drawing master plans for a cluster of 4 or 6 villages is not conducive to smooth and rapid progress. It must be replaced by the formulation of a plan for single village expansion and demarcated plots allotted to the needy. Construction of individual houses can proceed as in suburban satellite towns, one or two in each street without any kind of regimentation of all families to fall in which implies housing for all or housing for none.

Besides this modified approach, a change in organisation is necessary and appropriate now that we have the countrywise establishment of panchayat unions. These community development organisations should give a high priority to housing as high as sanitation and education. Therefore a separate housing extension service, like agricultural, animal husbandry and education services should be created. It should be entrusted with all the organisational matters connected with “core” village housing schemes. It will conduct the village survey and allot developed plots to applicants. It will help to organise the manufacture and transport of bricks and lime. It will arrange for the supply at cost price of housing components like windows, doors, shutters, smokeless ovens, latrine seats, and rain water drains. These components could be manufactured at one convenient centre for each panchayat union, State government supplying the irreducible minimum of scarce resources like M.S.

hinges, pad locks, cement, etc. The housing extension service should organise the employment of the unemployed in the brick works, lime works and timber deposits according to their aptitude.

For village house construction, the approach should be modest and based on the principle of "aided self-help housing". In the words of its ardent advocates, under this principle aid is given to families who build or improve their own houses by their own labour. It is being recognised that with a relatively small outlay of public funds, it is possible to give assistance on crucial matters which the families in question cannot handle unaided. This again need not involve organisation of all the villagers en masse for the fulfilment of the housing target. We may adopt the Puerto Rican example (housing problems and policies in Latin America *International Labour Review*, March 1952, pp. 365-66) of organising groups of 12 to 15 families keen on house building into compact communities working on a self help-basis. Each group discusses its plans thoroughly and for construction depute at least 3 men every day, all the men and women working on sundays. If a similar process is adopted with necessary modification, it is possible to keep organisation efficient. Each group will be alert to avoid waste. Overall supervision together with supply of chief masons to each group will be the only functions of the housing extension wing. The outlay from public functions will be confined to survey, development of sites, street lighting, water supply, sewage and other community facilities which are already on the agenda of the panchayat unions perhaps not involving additional expenditure."

Tamil Nadu Harijan Housing and Development Corporation

This Corporation (T.H.H.D.C.) was set up in February 1974 and it is aiming to complete building one lakh houses for Harijans in Tamil Nadu before 1976. Nearly 1/10th of work has been completed in about 1½ years. There may be some difficulties in regard to access of local materials, formulation of plans selection and other administrative procedures in the initial period. But it has to proceed still faster for the completion of project taking into consideration the past difficulties. Under the scheme the Corporation provides a community hall, a *Balwadi*, library and a shopping centre. There is also provision for electricity, good road, communication and water supply. But how far these associated things along with

the housing could be done effectively remains to be seen. According to the present type construction, there is little open space for livestock. For this purpose, naturally the Harijan will enclose a space with thatched roof on one side of his house. Sometimes there may be thatched projections in front of the house involving occupation of space. Rearing poultry and livestock in this kutcha structure around the house creates sanitary problems. Hence community yards could be built to accommodate livestock, as discussed in detail in the last Chapter.

Further, these houses for Harijans are constructed only at places where facilities like water, mud, and other housing inputs are available. This results in a certain amount of unbalanced growth of houses in different districts as seen in Table 117 under T.H.H.D.C. showing large sections of people deprived of this facility. It is suggested that instead of depending on census data upon which the present schemes are developed, a survey may be undertaken by this Corporation to study the actual condition of Harijan houses and their need in each district and on this basis the priorities could be decided. For example, for some colonies, drinking water may be an immediate need. For some other colonies an approach road and for still others lighting may be an urgent need. These could be attended to first before the mass programme of housing is launched. If the ultimate purpose is to develop the Harijan community, certain immediate steps prior to housing should be attended to in villages where such housing inputs are not available.

A striking example could be cited in support of the above comment. The village 'Perangiyur'* in South Arcot district is a fairly big village situated at the 8th km. from Villupuram in the Trichy-Madras Trunk Road. The village was selected purposively after discussion with the extension officials concerned so as to have a rich village where there could be more of HYV participants for the study. This village has a Harijan colony situated a mile away from this main hamlet, comprising 100 households. During the investigation, it was noted that there was no drinking water facilities and

* The author stayed in the village for the investigation of research study on Rice cultivation and Economic Development undertaken by Department of Economics, University of Madras, 1971-72 in South Arcot. Perangiyur belongs to Thiruvannainallur Block.

Harijans had to walk a mile to fetch drinking water. Of course there were many electric pumpsets near their colony running day and night irrigating the fields. But these people were not allowed to take the water. If they tried, their pots were seized and broken mercilessly by the owner of the pumpsets. The reason was not only social one but also political*. When the author interviewed them, they reported that they did not want anything else if the drinking water problem was solved. To repeat, the immediate requirement of each colony should be assessed and attended to before planning any housing scheme for the community.

Research and Training

The contribution of research in Rural Housing is not encouraging. For the whole Southern Region, there is one Rural Housing Wing attached to University College of Engineering, Bangalore. The unit does good research and has brought out some demonstration-cum-experimental designs with low costs. But in view of the multi-faceted socio-economic structure of villages that has just been reviewed, large number of designs, utilising indigenous materials, is yet to be planned. Further, the training in the unit is only limited to government personnel. Under V.H.P. the extension official's part is limited to sanctioning, with the construction left to the party. Moreover, the extension officials also are not bothered about this since they are preoccupied with other extension works. So a large group of interested people should be invited to a central place where a demonstration could be made. Hence the training should be given to the actual house builder i.e., the private person. Further, special training should be given to rural house technical personnel like carpenters, masons and blacksmiths to utilise the indigenous materials usefully and to build the house to the required standard.

At present, the Rural Housing Wing attached to University College of Engineering, Bangalore, is a Regional Research-cum-Training Centre, serving Karnataka, Tamil Nadu, Andhra Pradesh, Kerala and Pondicherry. There is a heavy demand for this training

* It was said that these colony people had not supported the owner of the pumpset in the village panchayat election.

and one unit is not enough to meet the demand. Since there are different socio-economic and cultural groups in rural areas in different States, each State should have one such unit and do the same job according to the nature of place and desire of the people.

The immediate need is that awareness of decent living with proper housing should be created among rural mass. This awareness could be motivated through the implementation of non-formal education with 'Housing' as an important topic in the curriculum. Hence the research and training cell should also consider the importance of awareness programmes along with the research on buildings. For this, it is suggested that a separate extension officer (similar to that for agriculture, livestock, industry, etc. in the Panchayat Union) should be appointed exclusively for the implementation of non-formal education through problem oriented curriculum including rural housing.

CHAPTER 5

ESTIMATED HOUSING REQUIREMENT

Projections for 1981 for Tamil Nadu

The minimum standards necessary for the construction of dwelling houses and the materials to be used in such construction were considered by a special committee of the Public Health Sub-committee formed in this connection. With the post-war development of the province, the sub-committee has made the following recommendations:

(i) A house has an average of 5 inmates which may be assumed to consist of four adults and one child. At the rate of 70 square feet for each adult member, the minimum floor space required for a dwelling house may be 340 square feet. This will include all occupiable floor area including verandahs.

(ii) The minimum floor area in any living or bed room should not be less than 120 square feet. The height of these rooms should be not less than 9 feet from the floor level. The floor level of the rooms should be generally at least 18 inches above the level of the adjacent street.

(iii) The health of inmates of a dwelling house is very much dependent on adequate ventilation of rooms and proper perflation of air within rooms. Thorough ventilation and free passage of air should be ensured in the living and bed rooms, and as far as possible windows and ventilators should be at least one sixth of the floor area of each room. Every window should have upper and lower shutter leaves so that the lower ones may be kept closed with upper ones alone open whenever necessary. It is an additional advantage if windows and doors have fixed ventilating heads.

(iv) A small compound attached to the house is necessary. An independent open bath and a latrine, preferably of a flush-out type, should be provided in a corner of the compound screened from

the view of the living rooms and sufficiently away from the well if the house is to have its own water supply.

(v) It is better to have a common protected source of water supply for a group of houses forming the hamlet or village.

(vi) The disposal of the house drainage will depend on the arrangements for drainage for the particular scheme of housing as a whole. Subject to this, suitable arrangements must be made in each house for leading of all domestic sewage by the provision of a sanitary type of drain.

(vii) At a convenient place in the compound, rubbish bins of suitable sizes and designs should be provided on low masonry about 2 feet by 1½ feet.

(viii) When it comes to the matter of drawing up a design, difficulties arise. A dwelling house is as expressive of the ideas of the individual as an article of dress. Habits and customs vary as do also climatic conditions. A great variety of tastes has to be catered for, which is by no means easy. Any design which generally incorporates the other features mentioned above and which is acceptable to the local authority in charge may be adopted for any particular scheme of housing. To ensure comfort and reasonably healthy living conditions, there should be at least one main room of about 100 square feet and a kitchen of about 60 square feet fully walled. The other 180 square feet may be in the form of a 'Kudam' and a living space with a minimum of walling but adequately protected from the weather. The living space will be used for sitting during the day and for sleeping at night for relations or guests common to Indian families. The specimen design...appended... includes the features mentioned above and is for roofed building in a single storey generally suitable for rural parts and to open areas in urban localities.

(ix) The materials most suited to each case will be those available near the site. Brick or building stones are available in most localities and would make suitable materials for the walls. Brick should be preferred to stone as giving warmer rooms in winter and cooler rooms in summer. Brick or stone may be in lime mortar or lime cement upto basement level and above that in mud mortar, wherever suitable for purposes of economy. Plastering is essential

nd should be in the lime cement combination mortar. As the floor should be also warm, brick concrete in combination with lime cement mortar is suggested, the cream in concrete being rubbed smooth on the top. Doors and windows will be of wood where it is easily available but as timber shortage is likely it may be necessary to reduce woodwork to a minimum and provide precast concrete frames and cement asbestos panels for shutters. Roofs may be of Mangalore tiles over wooden or palmyrah rafters and country wood creepers. In addition flat tiles should be provided for the main room and living spaces. Ridge ventilating tiles may be also provided. Where facilities exist, it would be very much better to convert the roof into reinforced concrete or Madras terrace roofs thus making for greater permanency and cleanliness. A type of roof composed of galvanized iron sheeting covered over by a thin layer of cement concrete may also be tried as an experimental measure.

(x) One difficulty is the question of cost. Having regard to the level of national income and consequent standard of living and heavy financial commitments that a large scheme involves, cost cannot be altogether ruled out of consideration. The cost of a house with the materials recommended and the floor area proposed is expected to be about Rs.1,100 at the prewar rates, but it may be more or less according to varying local conditions.

National Planning Extract 1948—Extract I

The report of the sub-committee on National Planning Extract 1948 indicates amenities which will be treated on a regional basis (i.e.) for a group of a number of villages :

(i) Marketing and distribution, (ii) Main communications with cross drainage works, (iii) Water supply schemes if the ground of village is favourably situated with respect to the central source, (iv) Irrigation, (v) High schools, (vi) Jails, (vii) Dispensary and Health, (viii) Ambulance, (ix) Library, (x) Post office—one Central and few sub-offices, (xi) Museum, (xii) Electric supply, if possible, (xiii) Cinema, (xiv) Experimental Farm, (xv) Tannery, (xvi) Weaving shed, (xvii) Military training centre, (xviii) Police chowkie, (xix) Dharmashala, (xx) Co-operative institute including a bank, (xxi) Bus stand.

This is only by way of indication. Slight variations may be necessary to meet individual requirements. The following is also an illustrative list of amenities that will have to be provided separately for each village:

(i) approach road, (ii) field tracts, (iii) village streets and squares, (iv) village wells, baths and wash houses, (v) cattle troughs and ponds, (vi) public sanitary arrangements, (vii) meeting hall, (viii) playground, (ix) religious places, (x) primary school, (xi) cemeteries, (xii) work house, (xiii) gymnasium, (xiv) village common, (xv) cattle stand.

It will be necessary that both regional as well as local amenities are worked out on a planned basis. A master plan for the large as well as the small units should be prepared and the work regarding remodelling and future extensions as well as these amenities should be carried out as per plan. The house plan and the domestic amenities to be provided therein will depend upon the class of persons for whom it is intended. These may be any of the following:

Cultivator, labourer, carpenter, blacksmith, potter, tailor, shoemaker, oil miller, carder, weaver, brass-smith, shepherd, village priest or mullah, shopkeeper, barber, washerman, tanner, mechanic, apothecary and village servants. With the revival of cottage industries, there will be a few more classes of workers.

An illustrative list of requirements for a rural house may be given as under, to be oriented in accordance with the sanctioned master plans.

(i) verandah or verandahs, (ii) one or two rooms, (iii) kitchen, (iv) store, (v) grain bin, (vi) fodder store, (vii) cattle shed, (viii) implements store, (ix) fuel shed, (x) bathing platform or enclosure, (xi) sanitary arrangements, (xii) courtyard, (xiii) manure pit, (xiv) main enclosure.

A list of fitments will be as follows:

(1) shelves, (2) pegs, (3) roof pendants (4) cupboard, (5) fire place where necessary, (6) kit platform (7) loft, (8) treasure chest, (9) niches, (10) drying lines, (11) grinding place, (12) pounding block, (13) churning fitment, (14) fodder trough.

Bombay—India

The Government of Bombay had called for a prize design to meet the requirements of working class people which resulted in a first prize design being for a five tenancy group house, single storied net floor area of 260 square feet for each tenant, costing Rs. 1,143 for tile roof covering. There was an additional area for two sanitary annexes of 60 square feet each provided for the common use of five tenants. This design was not however issued to the public as a standard type to be adopted but was only recommendatory. The floor area of 260 square feet was made up of two rooms each of 100 square feet one kitchen 25 square feet and a verandah 35 square feet. Such a design was calculated to provide for 38 tenants to the acre. Taking five persons per tenancy this gives a density of 190 persons per acre. This design, though then considered to be the finest was suggested to be useful for people a little better off than the working class people.

The United Nations Organisation has given the standard for house, as a house with a plinth area of 240 square feet with rooms, one living and the other store room-cum-kitchen with facilities of bath room and a latrine. Tamil Nadu Harijan Housing and Development Corporation is following this standard for the construction of houses for Harijans in Tamil Nadu.

The National Sample Survey of India has estimated the situation of housing with 50 square feet of floor space per person. The average size of family in rural Tamil Nadu (vide Table 76) is roughly 5. So minimum requirement of floor area for a house is 250 square feet.

The Kerala Government have put through a massive programme of construction of rural houses for all 96,000 families. Each house was to have an area of 250 square feet. It was to be tiled and the walls plastered with cement. It was also to have cement flooring. The money equivalent of each house was to be Rs. 2,500.

Village Planning and Housing

The houses in villages are crowded. Detached houses are very rare. The streets are narrow alleys. In recent decades, for reasons of safety, the villagers had built their houses in rows, side to side,

back to back with no backyards or frontage or side space. It may not be possible to demolish and rebuild the houses now or in the future. But once a house decays, the new construction to be raised may be contemplated in well developed sites with proper layout. This will provide space not only as replacement house sites but also as sites for the growing population. In this way over a period of years, built in areas, may be remodelled as congenial sites. As suggested by Rural Housing Wing, Bangalore, it may be necessary to legislate against sub-division of existing or future developed sites either by owners or their heirs whether it be a division of property or sale of it to another owner. Land may be acquired by a public authority or local authority for providing house sites as a service to prevent speculative private estate business. Socialisation of land for dwellings related to the principles of town planning may be much more important than actual house construction for the present. The haphazard dwelling areas have not only to be remodelled but provision should also be made for their future development on the right lines.

The Tamil Nadu Town and Country Planning Act 1971 has been passed and the rules thereunder are now being framed. The Tamil Nadu District Municipalities Building Rules, 1972 provide for the lines of development control in municipal areas. The standards and bye-laws for village planning and housing informally approved by the National Building Organisation and Regional Advisory Committee give the broad guidelines and standards suitable for rural areas. The rules relating to the pattern of land use specify zoning, size of plots, community services, street length, space and height of buildings. The rules can be modified and adopted according to local conditions. It is high time that a beginning is made and development ensured along the right lines during the perspective plan period. The details of the standards and the bye-laws are available in the newsletter of the Rural Housing Wing, Bangalore (special issue dated March 1967). There is urgent need to adopt the rules and implement them. If the growth is haphazard it can never be set right. Provision of common amenities for such ill-planned growth will also be very costly. The amount that the government and the local bodies now invest in village site planning will be more than compensated by the gain in the less costly provision of common amenities in future. So a proper assessment should be made in each panchayat union area.

Growth of Housing

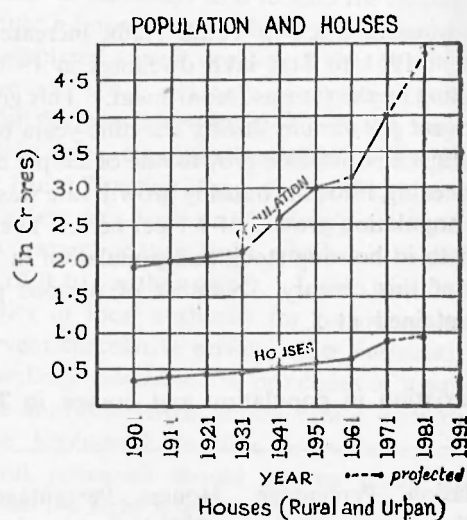
The total housing stock in Tamil Nadu increased from 63.7 lakh dwellings in 1961 to 81.8 lakh dwellings in 1970, according to the house listing by the Census Department. This gives a growth rate of 2.8 per cent per annum during the nine years between 1961 and 1970 as against a population growth rate of 2.0 per cent. During the decade preceding 1961, the housing growth rate was 2.0 per cent as against the population growth of 1.1 per cent. The table below shows the growth in housing stock and population in Tamil Nadu since the turn of this century. Number of persons per house is invariably maintained at 5.

Table 122—Variation in population and houses in Tamil Nadu.

Year	Population (000's) growth	Percentage growth	Houses (000's) growth	Percentage growth	Number of persons per House
1901	19,253	—	3,493	—	5.5
1911	20,903	8.57	3,858	10.45	5.4
1921	21,629	3.47	4,156	7.72	5.2
1931	23,472	8.52	4,540	9.24	5.2
1941	26,268	11.91	5,064	11.56	5.2
1951	30,119	14.66	5,369	6.01	5.6
1961	33,687	11.85	6,365	18.57	5.3
1971	41,103	22.01	8,181	25.53	5.0

Source: (Upto 1971) *Tamil Nadu Economic Appraisal*, 1972.

Population and Houses



F.F. 4

Projections for Rural Houses and Rural Population

Time series data on rural houses and rural population exclusively for Tamil Nadu are not available. From 1881 to 1941, data on rural houses and rural population are found in the Perspective Plan Task Force Report on Rural Housing of Tamil Nadu. But these data relate to Madras Province i.e., before the bifurcation of the area to Andhra Pradesh, Kerala and Karnataka. For 1951, the census data on rural houses and rural population could not be obtained. For 1961 and 1971, exact figures on these two items were collected. So projection of rural houses and population has been done with the following limitations.

(1) In order to find the rural houses and rural population, the total geographical area before the bifurcation is collected. The bifurcation was effected in between 1953 and 1956. The area after bifurcation is obtained and according to the proportion of area, the rural houses and rural population are worked out geographically.

The geographical area before bifurcation—2,30,03,259* hectares

The geographical area after bifurcation—1,29,96,600* hectares

* Season and Crop Reports: 1953-54 and 1969-70.

Nearly 56.49 per cent of area alone is left over for Tamil Nadu. So 56.49 per cent of houses to the total in Madras Province is worked out for the purpose of projection.

(2) The second limitation is that interpolation is used to find out the missing data during 1951.

(3) Since performance was negligible by public sector in rural housing, the rate of growth is treated as natural growth by private enterprise.

Now let us study the progress of natural growth of rural housing and rural population.

Year	Occupied Rural houses before Bifurcation	Occupied Rural Houses at present in Tamil Nadu	Rural population before bifurcation	Adjusted Rural population at present for Tamil Nadu
1881	5192582	2933290	28143573	15898304
1891	6796008	3839065	35749832	20195080
1901	6466794	3653092	34327541	19391628
1911	7005429	3957367	36950684	20873441
1921	7454515	4211055	37489349	21177733
1931	8189346	4626162	40776965	23034907
1941	8255725	4663659	41879082	23657493
1951	—	4813394	—	24176959
1961	—	4963130	—	24696425
1971	—	5658916	—	28734334
1981	—	6105970	—	30688269

Source: Upto 1941, Col No. 2 and 4 Perspective Plan for Tamil Nadu, Task Force Report on Rural Development including Rural Housing.

1951 Interpolated figure.

1961 and 1971—Census of India 1961, 1971.

1981—Projected figure.

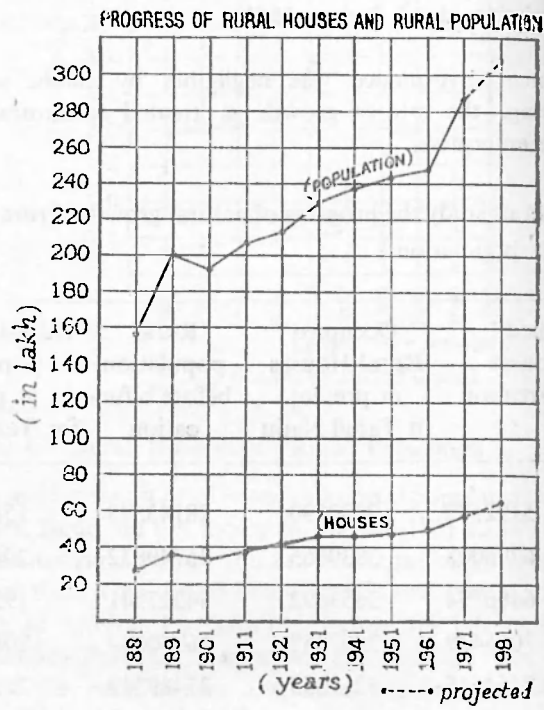


Fig. 5

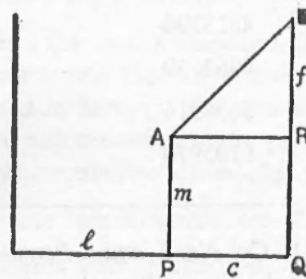


Fig. 6

We can easily establish the formula for the median of a frequency distribution by near interpolation.

Let l and $l+c$ be the lower and upper boundaries of the median class. Let m be the cumulated frequency upto l and f be the frequency in the median class.

Interpolation

To find out the missing data during 1951 for rural houses and rural population, simple linear interpolation is used.

The straight line joining the points (l, m) and $(l+c, m+f)$

can be written as $\frac{y-m}{x-l} = \frac{(m+f)-m}{(l+c)-l}$

$$\text{i.e., } y - m = \frac{f}{c} (x - l)$$

Since the median corresponds to the value of x for which $y = \frac{N}{2}$

$$\left(\frac{N}{2} - m\right) = \frac{f}{c} (x - l) \text{ or } x - l = \left(\frac{N}{2} - m\right) \frac{c}{f}$$

$$\therefore x = l + \left(\frac{\frac{N}{2} - m}{f}\right) c$$

Hence the median of a frequency distribution is $l + \left(\frac{\frac{N}{2} - m}{f}\right) c$

Rural Houses

Here 10 years is one unit. To find out the figure for 1951:-

	t	houses
1941	1	4663659
1951	2	x
1961	3	4963130

Solution: The straight line joining the points (1, 4663659) and (3, 4963130) is

$$\frac{y - 4663659}{x - 1} = \frac{4963130 - 4663659}{3 - 1}$$

$$\text{i. e., } y - 4663659 = \frac{299471}{2} (x - 1)$$

$$\begin{aligned} \text{When } x = 2, \quad y &= 4663659 + \frac{299471}{2} (2 - 1) \\ &= 4663659 + 149735 \end{aligned}$$

$$\therefore \text{ 1951 houses } = \underline{4813394}$$

Rural Population

The straight line joining the points (1, 23657493) and (3, 24696425) is

$$\frac{y - 23657493}{x - 1} = \frac{24696425 - 23657493}{3 - 1}$$

$$\text{i. e., } y - 23657493 = \frac{1038932}{2} (x - 1)$$

$$\begin{aligned} \text{When } x = 2, \quad y &= 23657493 + \frac{1038932}{2} (2 - 1) \\ &= 23657493 + 519466 \end{aligned}$$

$$\text{1951 population } = \underline{24176959}$$

RATE OF PROGRESS FOR POPULATION AND HOUSES

Logistic Model

$$y_t = y_0(1 + r)^t$$

$$\frac{y_t}{y_0} = (1 + r)^t$$

$$\log y_t - \log y_0 = t \log (1 + r)$$

$$\Sigma [\log y_t - \log y_0 - t \log (1 + r)]^2 = 0$$

Differentiating with respect to r , we get

$$\Sigma [\log y_t - \log y_0 - t \log (1 + r)] \frac{t}{1 + r} = 0$$

Since $1 + r > 0$

$$\Sigma t \log yt - \Sigma t \log y_0 - \Sigma t^2 \log(1 + r) = 0$$

$$\therefore \Sigma t^2 \log(1 + r) = \Sigma t \log yt - \log y_0 \cdot \Sigma t$$

$$\log(1 + r) = \frac{\Sigma t \log yt - \log y_0 \cdot \Sigma t}{\Sigma t^2}$$

yt = number of population in the year t

y_0 = the number in 1881

r = rate of progress

Houses

Rate of progress of rural houses and projected houses for 1981.

Year	yt	$\log yt$	t	$t \log yt$	t^2
1881	2933	3.4672	0	—	0
1891	3839	3.5842	1	3.5842	1
1901	3653	3.5627	2	7.1254	4
1911	3957	3.5974	3	10.7922	9
1921	4211	3.6244	4	14.4776	16
1931	4626	3.6652	5	18.3260	25
1941	4663	3.6687	6	22.0122	36
1951	4813	3.6824	7	25.7768	49
1961	4963	3.6958	8	29.5664	64
1971	5658	3.7526	9	33.7734	81
			45	165.4342	285

$$\log(1 + r) = \frac{\Sigma t \log yt - \log y_0 \times \Sigma t}{\Sigma t^2}$$

$$= \frac{165.4342 - 3.4672 \times 45}{285}$$

$$= \frac{165.4342 - 156.0240}{285}$$

$$= \frac{9.4102}{285} = 0.03302$$

$$\log(1 + r) = 0.03302$$

$$(1 + r) = 1.079$$

$$r = 1.079 - 1.000$$

$$= 0.079$$

$$\text{Rate} = 7.9 \text{ per cent}$$

Rate of progress of rural housing is 7.9 per cent

Projected houses for 1981 = 6105970.

Rural Population

Year	y_t	$\log y_t$	t	$t \log y_t$	t^2
1881	1589	3.2012	0	—	0
1891	2019	3.3051	1	3.3051	1
1901	1939	3.2876	2	6.5752	4
1911	2087	3.3181	3	9.9543	9
1921	2117	3.3257	4	13.3028	16
1931	2303	3.3622	5	16.8110	25
1941	2365	3.3738	6	20.2428	36
1951	2417	3.3812	7	23.6684	49
1961	2469	3.3925	8	27.1400	64
1971	2873	3.4584	9	31.1256	81
			45	152.1252	285

$$\begin{aligned} \log(1+r) &= \frac{\sum t \log y_t - \log y_0 \times \sum t}{\sum t^2} \\ &= \frac{152.1252 - 3.2012 \times 45}{285} \\ &= \frac{152.1252 - 144.0540}{285} \\ &= \frac{8.0712}{285} = 0.02832 \end{aligned}$$

$$\begin{aligned} \log(1+r) &= 0.02832 \\ (1+r) &= 1.068 \\ r &= 0.068 \end{aligned}$$

Rate of growth = 6.8 per cent.

Rate of progress of rural population = 6.8 per cent.

Projected population in 1981 = 30688269

Rate of progress of housing output in Tamil Nadu as a whole is 10 per cent whereas for rural housing output it is 7.9 per cent. This difference is due to State Housing Board activities in urban areas. Though village housing scheme was introduced in 1959 and Rural Housing Cell by State Housing Board in 1950, the performance (5163 + 1007 upto 1973-74) does not even touch the fringe of the problem of rural housing.

Demand for Houses

Demand for rural houses is calculated by the Institute of Techno-economic Studies, Madras. Its estimate is as follows:

According to the house list census of 1970, Tamil Nadu had a little over 58 lakh houses in rural areas for 28.7 millions of rural population and 10 per cent of them are living in rental houses. About 75 per cent of the existing houses are of kutchha type to be reconstructed. This is totally inadequate even for an average family with five members. But most of these families living in these houses will have more than five members. Hence there is an urgent need for providing decent houses with at least two living rooms and sufficient space to raise kitchen garden, poultry keeping, etc., to augment the household income.

The demand for houses in the year 2001 will be about 82 lakh units consequent on the increase in population as shown below (Rural).

Year	Demand for houses in '000 units	Additional construction required in '000 units
1971	5284 (actual)	5045
1981	7014	6255
1991	8021	7262
2001	8213	7454

Source: *Second Tamil Nadu—2000 AD* ITES. (1973).

In estimating the above demand the following assumptions have been made:

(1) the rural-urban proportions in the next three decades will be 67:33, 63:37 and 56:44;

(2) the average family size will decrease to 4.75 in 1981, 4.50 in 1991 and 4.25 in 2001 due to the migration and breaking up of common families;

(3) the additional demand for houses in 1971 has been arrived at by adding the replacement of 75 per cent kutchha houses and 10 per cent rented houses.

Assignment of House Sites

Since Independence, 14,081 acres of land have been distributed as house sites to 4,15,783 individuals. On an average each person got 3.4 cents for constructing a house.

In addition, *kudiyiruppu* envisages the free grant of 2.52 lakh pattas for house sites varying from 1 cent to 5 cents. Still it is estimated that 6 lakh more families have yet to be provided house sites free of cost. In all about 18 lakh house sites may have to be provided free of cost to the weaker sections of the community by the year 2001. This would take up a space of 2 lakh acres of which 1.8 lakh acres will be for house construction and 0.2 lakh acres for provision of amenities like parks, community centres, shopping centres, etc. It has been assumed that 50 per cent of additional house sites will be paid for.

Cost of Housing

I.T.E.S. calculates that, even at the modest estimate of Rs.2,500 for the construction of a house, the total investment that would be required over the next 30 years will be of the order of Rs. 1845 crores in the year 2001. But this excludes the cost of sites and depreciation on the houses, which is estimated at 2.4 per cent per annum. Hence about Rs.3,000 crores may have to be spent in the next three decades. That is, a little over Rs.100 crores will have to be spent annually to wipe out the housing shortage in the rural areas, by the year 2001.

Dr. Malcolm S. Adiseshiah* has computed the housing needs involving two exercises. First, a simple calculation of the actual housing progress during a plan period as in

$$I = \frac{Ug(t) - x}{y} \times 100$$

where $Ug(t)$ = the houses to be built in the plan period
 x = the houses needed during the period
 y = the backlog of housing needs.

The second is a computation of housing as part of the physical and social services of the community—such as water supply for each house, number of hospitals, schools and classroom space, markets, etc. needed in the housing area. Here the consumption aspect is integral. To provide a house to a family without drinking water, schooling, marketing and health facilities is no progress. Under such conditions, progress in housing is measured integrally as progress in social and physical services as in

$$I_s = \frac{S(t) - S_r}{S_t} \times 100$$

where I_s = Index of progress in the service in the year
 $S(t)$ = number of service units realised in the same period
 S_r = number of service units required to meet the needs of the population
 S_t = backlog of service units.

Further, for his purpose, he uses a simple method to compute housing needs in both the above senses. The Indian Institute of Public Opinion estimates that, to provide every one with the minimum of 50 square feet of floor space by the end of this decade, Rs. 6,885 crores will have to be spent for rural housing, Rs.4,910 crores for urban housing, plus Rs.2,500 crores for rural and urban housing replacements and Rs.3,565 crores for non-residential housing. This is computed as follows:

* Dr. Malcolm S. Adiseshiah: All India Seminar on Housing, Oota, camund. May 1972.

1959-60 per capita floor space (square feet)	Households			
	Rural		Urban	
	Actual	Cumulative %	Actual	Cumulative (%)
Upto 25	11.61	11.61	15.51	15.51
26-60	25.42	37.03	28.94	44.45

The rural housing gap is 37.5 square feet for 14 per cent people and 12.5 square feet for 29 per cent of the rural population of a total of 543 millions by 1981. The cost of construction is estimated at Rs. 15 per square foot and for the urban housing gap for an urban population in 1981 of 152 millions is computed at Rs. 30 per square foot. This means housing investment which was 2.3 per cent of National Income in the Second Plan, 1.8 per cent in the Third Plan and 1.9 per cent in the three annual plans and 1.8 per cent in the Fourth Plan will have to be 4 per cent in the Fifth and 5 per cent in the Sixth Plan.

Another computation of our housing needs according to Dr. Malcolm S. Adiseshiah, based on the report of the working group, Planning Commission, New Delhi, 1968, is

Housing backlog	718 lakh units
Annual housing needs (at 1.3 crore population increase as in 1972)	27 lakh units
	= 745 lakh units.

Against the 745 lakh housing units needed, we are constructing 2.8 lakh units, which is about 2 pucca houses per 1,000 persons per annum (compared to 10.3 in U.S.S.R., 7.2 in Japan).

Further, he adds that in the State we were 60 lakh houses short in 1961 and by the end of the Fifth Plan backlog would have mounted to 90 lakh units. The State Housing Board is constructing 6,650 housing units during the current plan and Slum Clearance Board plans to replace the 600 slums in Madras city by the eighties with tenements. Against this kind of background, it must be admitted that there are no really effective plans to meet our housing shortage—

either the annual need for 27 lakh units or the backlog of 718 lakhs. Even the Bhagavati Committee's interim report proposing short term measures for employment generation makes guarded recommendations on housing. They start with the 22nd round of the National Sample Survey which records an annual construction of 0.65 unit per thousand persons or 2.6 lakh new houses in 1967-68, estimates that in 1971-72 construction has been 0.7 unit per thousand persons or 3.1 lakh units and recommends that for 1972-73 we should move to 0.8 unit per thousand persons or 4.1 lakh units. This modest programme would involve for the last two years of the Fourth Plan an investment of Rs.231 crores (public sector housing in the Fourth Plan provided for a mere Rs. 2.37 crores). In other words our most forward looking plans involve us in not meeting even 20 per cent of our annual housing needs and not even 8 per cent of our housing demands.

Perspective Plan Estimates

The Task Force on Rural Housing in planning housing estimates the demand for houses and the financial outlay as follows:

“It is seen that people living in temporary structures of wall and roof constitutes nearly 61 per cent. The households living in houses on a rental basis constitute 10 per cent. The persons living in one room houses constitute nearly 61 per cent. About 5,62,000 households live in rented accommodation and they may have to be provided with house sites and assistance for building their houses. Those living in kutchha houses are more or less living in a room with an average family size of about 5 persons. Assuming that assistance is provided on the same basis as in Kerala, the outlay required for the various sections will be as follows:

I. Landless labour in rented houses

(in crores of rupees)

(i) Provision of house sites and development of house sites for 6 lakh families at Rs.800 per site	48.00
(ii) Construction of about 6.00 lakh houses at Rs.2,500 per house as is done in Kerala	150.00
	<u>198.00</u>

II. Other poorer sections living in kutcha structures in single room tenements.

(Rs. crores)

(a) Roughly about 30 lakhs of families

∴ 30 lakhs of houses at Rs. 2,500 per house 750.00

(b) If the construction of pucca houses is to be assisted by replacing either the roof or the wall which are kutcha, about 9,40,000 houses have to be improved.

Even if only the estimate of the cost of improvements is taken at Rs, 2,000 per house, the outlay that may

be required will be: 188.00

The total outlay that will be required for providing housing according to the minimum standards for the poorer and lower middle classes will Rs.1136 crores—(Rs.198.00 + Rs.75000 + 188.00 crores).

The comment of the Task Force report regarding the big outlay (Rs.1136 crores) is as follows. "This indeed is a big outlay. Perhaps this is why in the Government of India's Approach to the Fifth Five Year Plan, the strategy contemplated is the allotment of house sites only and not housing even for the poorest sections of the community."

Projection for materials required

For the purpose of projection of materials required, the following details of construction of houses is essential.

(a) Construction details

Random rubble masonry in mud mortar. Foundations width 37 cm and depth 45 cm. Basement width 37 cm and height 45 cm.

The foundation and basement for the front platform are to be constructed with small granite stones (quarry waste) in mud.

The houses are constructed in twin back to back formation so that two families live on either side with central cross wall dividing the building in two halves. Each half will have

bed room of the size : $9\frac{1}{2}$ feet \times $8\frac{1}{4}$ feet

a middle hall, size : $11\frac{1}{2}$ feet \times $8\frac{1}{4}$ feet

and a kitchen, size : $5\frac{1}{2}$ feet \times $8\frac{1}{4}$ feet

(b) **Superstructure**

Country burnt brick columns 22 cm × 22 cm in cement mortar 1:8 support at corners. In some panchayats these corner columns are built with laterite stones. Inter spaces between the brick or laterite stone columns are being built with sundried bricks of size 22 cm × 15 cm × 10 cm in 15 cm thickness laid in mud mortar.

(c) **Roofing**

1050 numbers of Mangalore tiles and 24 numbers of ridge tiles are used for each block of houses.

(d) **Doors and windows**

There are two doors and two windows. One door is on the front side facing the hall. This door has a window next to it. The other door is on the side leading to the kitchen. The other window is on the bed room side wall.

(e) **Flooring**

This is done by well rammed earth with a 5 cm thick gravel concrete in lime at top (1:4:12) and plastered over with cement mortar 1:4 one coat 1.25 cm thick.

(f) **External surface of walls plastered with cement lime mortar 1:0:25:6 one coat**

The central common wall is to be finished with mud plaster mixed with sand and 8 per cent lime by volume and two coats of lime wash. All other internal walls are to be finished with one coat of lime wash above one base coat of cement wash.

On completion, the house occupies only 31.4 square yards allotted to a person, the remaining portions being the open court yards.

Population forecasts for Tamil Nadu (in '000s)

Year	1964 Projection				Revised Projection			
	Male	Female	Total	G.R.	Male	Female	Total	G.R.
1971	20,260	19,774	40,034	1.8	20,738	20,298	41,036	2.55
1972	20,623	20,103	40,726	1.7	21,162	20,683	41,845	1.97
1973	20,992	20,437	41,429	1.7	21,589	21,072	42,661	1.95
1974	21,365	20,774	42,139	1.7	22,018	21,464	43,482	1.92
1975	21,739	21,114	42,853	1.7	22,450	21,859	44,309	1.90
1976	22,114	21,453	43,567	1.7	22,870	22,242	45,112	1.81
1977	22,448	21,752	44,200	1.5	23,212	22,549	45,761	1.44
1978	22,773	22,045	44,818	1.4	23,545	22,847	46,392	1.38
1979	23,087	22,325	45,412	1.3	23,869	23,137	47,006	1.32
1980	23,380	22,588	45,968	1.2	24,184	23,419	47,603	1.27
1981	23,643	22,824	46,467	1.1	24,489	23,693	48,182	1.22
1986	24,663	23,741	48,404	0.8	—	—	—	—

Source : ITES, Second Tamil Nadu 2000 AD. (G.R. = Growth Rate)

Abstract of change in age composition of Tamil Nadu Population 1971-2001 according to Medium Projection

(No. in Million)

Age-group	1971		1981		1991		2001	
	Nos.	Percentage	Nos.	Percentage	Nos.	Percentage	Nos.	Percentage
0-4	6.10	14.81	6.55	13.15	5.84	10.23	5.46	8.70
5-14	9.46	22.96	12.01	24.12	12.19	21.34	10.90	17.36
15-44	18.43	44.73	21.74	43.65	26.79	46.91	31.57	50.29
45-59	4.84	11.75	6.22	12.49	7.60	13.31	8.63	13.75
60+	2.37	5.75	3.28	6.59	4.69	8.21	6.23	9.90
Total	41.20	100.00	49.80	100.00	57.11	100.00	62.78	100.00

Source : ITES, Tamil Nadu in 2000 AD.

Projected Population in 2001 A.D. in Tamil Nadu

Year	Population Projection (Million)			Birth Rate (per '000)			Death Rate (per '000)			Growth Rate		
	High	Medium	Low	High	Medium	Low	High	Medium	Low	High	Medium	Low
1971	41.149	41.149	41.149	36	36	36	16	16	16	2.0	2.0	2.0
1976	45.515	45.514	45.514	32	32	30	13	14	14	1.9	1.8	1.6
1981	49.869	49.799	49.435	29	27	26	12	12	12	1.7	1.5	1.4
1986	54.236	53.668	52.964	26	24	23	10	11	11	1.6	1.3	1.2
1991	58.633	57.112	56.082	24	21	21	10	11	11	1.4	1.0	1.0
1996	62.605	60.003	59.023	23	19	19	9	9	9	1.4	1.0	1.0
2001	66.979	62.783	61.718	—	—	—	—	—	—	—	—	—

Source : ITES, Tamil Nadu in 2000 AD.

Districtwise breakdown of medium projections of Tamil Nadu population: 1971-2001.

District	Share of State population in 1971 Census	Population (Million)			
		1971	1981	1991	2001
Madras	0.0600	2.469	2.988	3.427	3.767
Chinglepat	0.0706	2.908	3.516	4.032	4.432
South Arcot	0.0878	3.618	4.372	5.014	5.512
North Arcot	0.0912	3.756	4.542	5.209	5.726
Salem	0.0726	2.993	3.615	4.146	4.558
Coimbatore	0.1061	4.373	5.284	6.060	6.655
Tiruchirapalli	0.0934	3.849	4.651	5.334	5.864
Thanjavur	0.0932	3.841	4.641	5.233	5.851
Madurai	0.0956	3.938	4.761	5.460	6.002
Ramanathapuram	0.0694	2.860	3.456	3.994	4.357
Tirunelveli	0.0777	3.200	3.869	4.438	4.878
Kanyakumari	0.0297	1.223	1.479	1.696	1.865
Nilgiris	0.0120	0.494	0.598	0.625	0.753
Dharmapuri	0.0407	1.678	2.027	2.324	2.555
	1.0000	41.200	49.799	51.112	62.783

Source: ITES; 1973. *Second Tamil Nadu in 2000 AD.*

Proportion of the 1971 population Districtwise	Decennial		Percentage growth rate	
	Urban	Rural	1951—61	1961—71
Madras	1.000	—	22.11	42.86
Chingleput	0.348	0.652	12.17	31.54
South Arcot	0.142	0.858	9.77	18.34
North Arcot	0.208	0.792	8.51	18.81
Salem	0.266	0.734	8.44	20.83
Koimbatore	0.356	0.644	12.78	12.47
Tiruchirapalli	0.223	0.777	8.36	20.52
Thanjavur	0.205	0.795	8.82	17.89
Madurai	0.337	0.663	11.05	22.42
Ramanathapuram	0.265	0.735	16.33	17.99
Tirunelveli	0.322	0.678	8.99	17.00
Kanyakumari	0.167	0.833	20.64	23.20
Nilgiris	0.492	0.508	31.30	20.40
Dharmapuri	0.086	0.914	22.05	25.66
	0.306*	0.914	11.85	22.01

* As against the urban population of 30.6% in the State in 1971, the proportion was 26.7% in 1961. It is expected to reach 46% by 2001.

Total requirement of materials for one lakh houses.

(1) Rubble	5.2. lakh cubic meters
(2) Burnt Brick	5 crores numbers
(3) Sundried bricks	22 crores number.
(4) Cement	5.5 lakh bags.
(5) Sand	3 lakh cubic meters.
(6) Lime	3 lakh cubic meters
(7) Timber all varieties	1.607 lakh cubic meters
(8) Tiles	5.25 crores numbers
(9) Ridge tiles	14 lakh numbers
(10) Tower bolts	4 lakh numbers
(11) Wire nails	250 tonnes
(12) Butt Hinges	9 lakh numbers

The labour required for the construction alone is to be

Mason	19 lakh man days
Carpenter	19 lakh man days
Man Mazdoor	18.5 lakh man days
Woman Mazdoor	18.5 lakh
Boy Mazdoor	3.5 lakh

Source: *ITES, The central sector scheme for providing house sites to landless labour in rural area of Tamil Nadu and Kerala, Page 54.*

RECOMMENDATIONS

Despite the programme undertaken by the Government to improve the position of housing, only a small dent on the total requirement of houses has been made thus far. Further, the development of a village through physical planning and housing has been posing numerous difficulties. Even more serious, there is hardly any awareness in the minds of the villagers about the need for better environment and housing facilities. This can be attributed perhaps to the following reasons.

(1) The rural folk have yet to develop a sense of pride in their village in terms of cleanliness, improved layout and amenities. This is also the problem with the urban residents.

(2) This absence of pride is the prime cause for lack of motivation for the villagers to plan group action on their own to seek improvements and thus overcome the present shortcomings in their habitat.

Further, the villagers do not see visually the housing programme since developments are slow. In their opinion, the villages have remained as retarded areas for centuries where nothing worthwhile has been done in spite of the technological advancement in their urban counterparts. The mechanisation in modes of carrying out work, transport and such other amenities which were greatly responsible for social changes in other countries, and other parts of this country, are yet to touch them and change their ways of living. So much so, a certain amount of dissatisfaction and disappointment are mildly perceived in the indifferent rural attitude often exhibited. The above aspects may well impinge on national economic policy, since the improvement of purchasing power, catering to the public and individual demands, conveniences of mechanisation and transport and other amenities, which would demand new social adjustments which might take time to reach

the village. In the meanwhile, the village environment needs immediate help to prepare for the impact of the coming technological advancement. Therefore, in implementing the village housing project schemes and other rural housing development programmes, a great need is felt for the technical personnel and administrators to get into closer contact with the rural population, prompted wholly by the spirit of serving and educating them. The technicalities of planning and housing designs should be subordinated to this human and social imperative.

In this context, the following recommendations are made on Rural Housing in Tamil Nadu.

(1) Need for a Survey

The first requisite for a proper housing programme is to collect necessary data and keep them upto date. Paucity of time series data is posing a serious problem for both the planner and researcher. There is no systematic collection of statistics to assess the exact position of housing of various types and their accompaniments. The Census Department collects data on a 20 per cent sample on housing. Similarly the National Sample Survey (18th Round February 1963-January 1964)⁽¹⁾ covered only 21,710 households from 7,913 sample villages in rural areas for the whole of India. The micro level study on housing conditions as analysed in Chapter 2 reveals that the direction of housing construction in rural areas and the different designs with different structures within the same village are a demonstration of the varying attitudes of the rural folk with regard to housing. In order to remove the lacunae in housing data and to assess the opinion on housing of the rural people, the following proforma may be used for assessing the existing position. The present proforma followed by the Department of Statistics at the instance of the Government of India is so exhaustive and time consuming that none of the local bodies is able to gather the data and furnish it in time. Moreover, only about one third of Tamil Nadu is covered under the present scheme. Hence a simplified proforma as given below, may be useful to cover all of Tamil Nadu.

(1) The National Sample Survey, 18th Round, February 1963—January 1964, Number 170. Table with notes on housing condition by Government of India.

PROFORMA FOR COLLECTING HOUSING STATISTICS AND OPINION OF VILLAGERS

A. HOUSING

I. Location

- (1) District. (2) Taluk. (3) Town/Firka/Panchayat Union/
Village. (4) Division, ward, hamlet, block division. (5) Street.
(6) Door number and sub-number. (7) Survey/revenue survey/
panchayat number, sub-number.

II. Structure

- (1) Kutcha Walls — (earth/mud/wood/asbestos sheet/ thatches/
Reeds)
(2) Kutcha roofs — (thatches/wood/reeds/asbestos sheet/tin)
(3) Pucca Walls — (masonry walls i.e., brick/stone/stabilised
soil/concrete)
(4) Pucca roofs — (R.C./Madras terrace/Bengal terrace tiles/
asbestos/Mangalore tiles/local tiles)
(5) Number of floors — (ground/first/second/third/etc.)
(6) Whether detached house, semi-detached line of houses or
flats (number of stories and apartments in multi-
structure to be detailed).

III. Accommodation

- (1) Total floor area of the house building.
(2) Total floor area occupied by each household.
(3) Number of rooms in each household.

IV. Type of Family

- (a) Family and population
(1) Nuclear (2) Joint vertical (3) Joint horizontal
(4) Joint mixed (5) Others
(Definitions of these concepts are given in Chapter I)
- (b) Population. Age wise, female/male
(1) Occupation of head of the household (2) His annual
income.

V. Sanitation and Services

- (1) Availability of latrine and type (dry/bore/flushout/septic tanks/ and drainage)
- (2) Availability of water (open well/bore, well/tap, public, private/river/canal/tank)
- (3) Drainage (Garden/cesspool drainage/open drainage/under ground)
- (4) Approach Road (earthen/gravel/metal/black top/concrete)
- (5) Lighting (oil lamp/electric light)

VI. Age of Building

- (1) over 50 years (2) 20 to 50 years (3) 10 to 20 years
- (4) 5 to 10 years (5) below 5 years.

VII. Condition of Building

- (a) Design—(Self/local professionals/private engineers/government approved one)
- (b) Structure—(Good/medium/bad)
- (c) Direction—(North/South/West/East)
- (d) Ventilation and light—(adequate/inadequate/unhygienic)
- (e) General location—(in the regular street/in the field/independent location)

VIII. Utilisation of the Building

Residence/residence-cum-shop/residence-cum-workshop/Hotel/ others

IX. Tenure

Owner/tenant

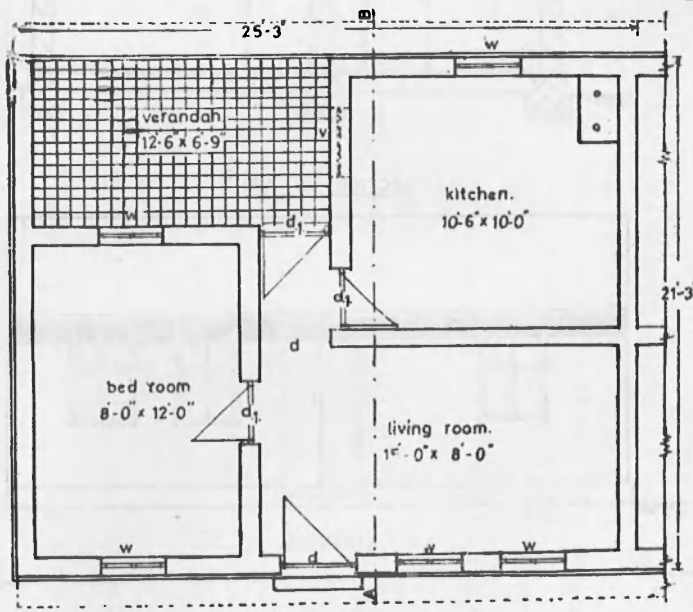
X. Work on the structure

- (1) Renovation—(white washing/repairing/rethatching/refilling/ addition of rooms, etc.)
- (2) Reconstruction—(existing building pulled down and new building raised on the same site)
- (3) New Construction—on open sites
- (4) Additions or alterations to existing structures—all the full particulars in items I to V

HOUSE DESIGN MODEL

UNIVERSITY VISVESWARAYA COLLEGE OF ENGINEERING.
 RURAL HOUSING WING — BANGALORE.,
 demonstration houses at suradhenupura village
 bangalore district.

year of construction 1962
 estimated cost of construction Rs. 2375.
 plinth area 505 sft.
 floor area 410 sft.
 plot size 35 x 55'.
 scale: 1" = 4'



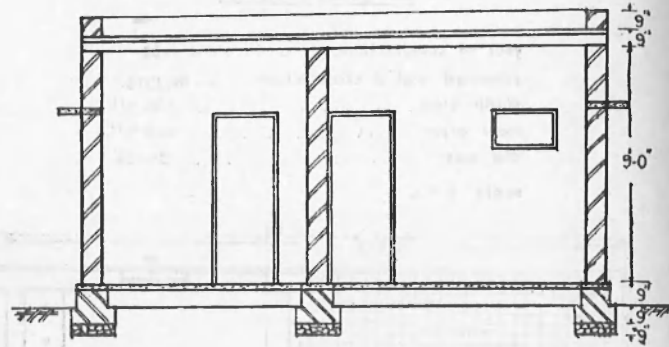
DRG. NO. EDH. 1.	index:	d: door. 3'-0" x 6'-6";	w: window. 2'-6" x 4'-0";
		d ₁ : - - - 2'-6" x 6'-6";	v ventilator. 2'-6" x 1'-3";

HOUSE DESIGN MODEL

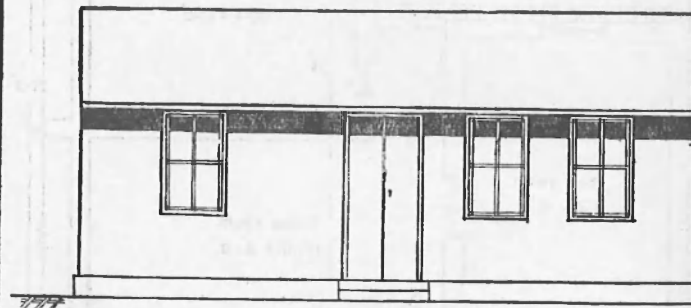
276

EDH. 1.

roofing: cuddapah slab 1.5" thick over 3x5" joists, (mathi wood)



SECTION ON AB.



ELEVATION.

sd/
architect & planner.

sd/
i/c. director

sd/
head of rural wing

ANNEXURE I

Distribution of Inhabited Villages by Population Size: Tamil Nadu and India

Size of village in terms of population	Tamil Nadu		India		Percentage	
	No. of villages	Population (Millions)	No. of villages	Population (Millions)	Villages in Tamil Nadu to total villages in India	Tamil Nadu population to India's population
Less than 200	786	0.08	178,451	17.82	0.44	0.45
200— 499	1,267	0.44	173,572	57.66	0.73	0.76
500— 999	3,216	2.44	119,167	83.92	2.70	2.91
1000—1999	4,771	6.84	65,383	89.58	7.30	7.64
2000—4999	3,539	10.50	26,565	76.69	13.32	13.69
5000—9999	449	2.90	3,421	22.34	13.12	12.98
10,000 and above	96	1.50	776	12.29	12.37	12.21
All Villages	14,124*	24.70	567,338†	360.30	2.49	6.86

Source: 1. *Fact Book on Manpower in Madras State - Part I, Department of Statistics, Tamil Nadu*
 2. *Fact Book on Manpower - Part I - IAMR. New Delhi;*
(A Demographic Appraisal of Tamil Nadu) 1972.

* Besides, there were 615 uninhabited villages at the time of 1961 census.

† As separate population of 3 villages of Tirap frontier division of NEFA is not available, these have been excluded from range of classification.

ANNEXURE II

Proportion between Buildings and Houses as Recorded in 1961 Census

State/ District	TOTAL			RURAL			URBAN		
	Buildings	Houses	Proportion of houses to buildings	Buildings	Houses	Proportion of houses to buildings	Buildings	Houses	Proportion of houses to buildings
Madras State	7,210,283	7,799,674	1.08	5,569,807	5,835,929	1.05	1,640,476	1,963,745	1.20
Madras Chingleput	166,960	273,418	1.64	—	—	—	166,960	273,418	1.64
North Arcot	451,748	745,075	1.05	368,263	381,165	1.04	83,485	93,910	1.12
South Arcot	586,407	638,852	1.09	477,359	519,531	1.09	109,049	119,321	1.09
Arcot	642,719	678,773	1.06	564,834	596,145	1.06	77,885	82,628	1.06
Salem	875,901	910,673	1.04	744,867	770,631	1.03	131,034	140,042	1.07
Coimbatore	735,787	816,855	1.11	550,736	585,751	1.06	185,051	231,104	1.25
Nilgiris	96,711	99,833	1.03	55,795	57,081	1.02	40,916	42,752	1.04
Madurai	625,235	749,099	1.20	461,625	509,232	1.02	163,610	239,867	1.47
Tiruchirappalli	749,795	795,461	1.06	606,751	635,535	1.05	143,044	159,926	1.12
Thanjavur	767,396	784,272	1.02	622,669	630,994	1.01	144,727	153,478	1.06
Ramanathapuram	581,514	614,122	1.06	437,234	453,886	1.04	144,280	160,236	1.11
Tirunelveli	718,567	746,252	1.04	499,628	512,466	1.03	218,939	233,786	1.07
Kanyakumari	211,543	216,989	1.03	180,046	183,512	1.02	31,497	33,477	1.06

Source: MIDS Bulletin, Vol. I, No. 11, PP. 581 1971.

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ERRATA

Page No.	Para	No. of line	For
3	Footnote	—	(1) ibid
5	The Tools applied	13th line	1901
32	Table 24	Col. No. 1 Income class Rs.	200
		Col. No. 1 Income class Rs.	3000
33	Table 25	Col. No. 1 Levels of earnings (Rs.)	100
38	Table 31	Col. No. 1 Area in sq. ft.	200
		Col. No. 3 (Income level in Rs.)	250
		Col. No. 8 (Income level in Rs.)	1500
40	Table 32	Col. No. 3 Income level Rs.	250
		Col. No. 8 Income level Rs.	1500
42	Table 34	Col. No. 1	250
45	Table 43	Col. No. 1	100
		Col. No. 1	4000

	Page No.	Para	No. of line	For	Read
Read	55	Table 44	Col. No. 1	100	Less than 100
			Col. No. 1	4000	Above 4000
			Col. No. 2	250	Less than 250
			Income in Rs.		
			Col. No. 11	5000	Above 5000
The Perspective Plan for Tamil Nadu 1972-1984	60	Table 48	Col. No. 1	3000	Above 3000
	61	Table 50	Col. No. 1	3000	Above 3000
Base Year	66	Table	9th Village	Kalpattur	Kalpattu
Less than 200	67	Table 54	9th Village	Kalpattur	Kalpattu
	70	Table 56	9th Village	Kalpattur	Kalpattu
Above 3000	115	Table 83	Source asterisk	*For the year 1976	*For the year 1916
Less than 100			Col. No. 6	8181*	8181**
	123	Table 87	Title	—	add Uppathur
Less than 200	129	Para I	Second line	Rs.500-750	Rs. 750-1000
Less than 250	148	Para III	Heading	Second Five Year Plan period	Second Plan Period
Above 1500					
	161	Table 108	Data for Sixth Plan	—	Adjusted according to the 6th line of the same page.
Less than 250					
Above 1500	176	Table 114	Source Title	1974 Village Project	1975 Village Housing Project
Less than 250	178	Table 115	Source	1974	1975
Less than 100	187	Para II	21st line	South Arcot	South Arcot
Above 4000					

Page No.	Para	No. of line	For	Read
187	Para II	21st line	South Arcot, North Arcot, Thanjavur	Add Chingleput ...
192	Table 119	Col. 3 Line 10	1,24	12.4
219	Table	Col. 3 Housing	Occupied Rural Houses at present in Tamil Nadu	Adjusted Rural Houses for present Tamil Nadu
220	Table	Col. 5 Heading	Adjusted Rural population at present for Tamil Nadu	Adjusted Rural population for present Tamil Nadu
221	Interpolation	8th & 9th line	$x = l + \left(\frac{\frac{n}{2} - m}{f} \right) c$ $x = l + \left(\frac{\frac{n}{2} - m}{f} \right) \times c$	
—	—	Last but two lines	Rate	Rate of progress
236	Table	Col. No. 1 6th line	Koimbatore	Coimbatore
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