

**A SYSTEM OF SOCIO-ECONOMIC OBSERVATORIES
IN KERALA FOR MEASUREMENT OF REAL
PROGRESS AT THE LOCAL LEVEL**

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TRIVANDRUM

MAY 1976

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INTRODUCTION

A proposal for the measurement of real progress at the local level in India was drawn up in February 1974 (see UNRISD/74/10, GE/74-4160) as part of an international research programme. This proposal was discussed at several meetings in India and elsewhere during the last two years. One suggestion that emerged from these discussions is that a system of Socio-Economic Observatories (SEOs) should be tried out on a pilot basis in one or two States. The present document outlines a programme of pilot work in Kerala State to be carried out by the Bureau of Economics and Statistics with financial assistance from the United Nations Research Institute for Social Development (UNRISD) at Geneva. Technical advice will also be available from the UNRISD.

A network of 18 SEOs will be set up in 12 rural localities and 6 urban localities (see section 3). In each SEO one Observer will be located permanently. It is expected that the observers could be recruited on a part time basis from among retired school teachers in the age group 55 to 60. For three of the SEOs located in remote and isolated areas whole time observers may have to be deputed (see section 6).

Observations will be of four kinds. Firstly there will be a general survey of the locality as a whole noting environmental conditions, socially provided facilities, institutions etc. Secondly a list will have to be prepared of all households noting size of household, occupation of head, scheduled caste or tribe, religion and vital events and illness. This list

INTRODUCTION

A proposal for the management of rural progress in India was drawn up in January 1955. This proposal was discussed at several meetings in India and elsewhere during the last two years. On discussion that emerged from these discussions is that a system of Socio-Economic Research Institutes (SEIs) should be set up on a pilot basis in one or two States. The present document outlines a programme of pilot work in Kerala State to be carried out by the Bureau of Economic and Statistics with financial assistance from the United Nations Research Institute for Social Development (UNRISD) at Geneva. Technical advice will also be available from the UNRISD.

A network of 16 SEIs will be set up in 12 rural localities and 4 urban localities (see section 2). In each SEI one observer will be located permanently. It is expected that the observers could be recruited on a part-time basis from retired school teachers in the age group 25 to 60. For three of the SEIs located in remote and isolated areas whose site observers may have to be deputed (see section 3).

Observations will be of four kinds. Firstly there will be a general survey of the locality as a whole noting economic, social, educational, and other conditions, institutions, etc. Secondly a list will have to be prepared of all households noting also the household, occupation or hand, scheduled caste, etc. Thirdly, religion and other special features will be noted.

will be used primarily for selecting a random sample of 100 households from the locality for more intensive observation. It can also be used for compiling data for some of the indicators required. Thirdly there will be detailed observation (see List C, Section IV) of the 100 selected households making several visits per year. Finally there will be observation on a set of explanatory variables.

The main objective of this project is to provide quantitative measures of selected indicators of progress in the conditions and quality of life of the people of a number of localities in Kerala at periodic intervals so as to be able to answer the question "Are the people better off now than they were before?" Statistics on factors other than the selected indicators may also be collected as explanatory variables or indicators of development not directly reflected in the quality of life.

While there is no intention to produce a composite index for the State as a whole, it should be possible to use local level information in aid of state level decisions. Periodic reports to planners and administrators in the State as well as at the centre will be an integral part of the system of progress monitoring.

It is expected that the system proposed for Kerala, if successful (i.e. if the results are found to be worth the cost; by planners, administrators and analysts) would be extended to other States in India. The results may also be of interest to other developing countries in which similar work is being considered.

II. AVAILABLE DATA ON SOME ASPECTS OF PROGRESS IN
KERALA

Within the time available a comprehensive survey of all available data could not be undertaken. Some data on food consumption, clothing, housing, literacy and health that were readily available at the Bureau of Economics and Statistics are presented in the following pages. It must be emphasized that the reliability of this data has not been examined.

Consumption of foodgrains

Results of consumer expenditure surveys conducted as part of the National Sample Survey in Kerala are brought together in Table 1 for the period 1958-59 (14th round) to 1969-70 (24th round).

Table 1 Per capital consumer expenditure on foodgrains
in Kerala State

YEAR	No. of sample households included			Expenditure in Rs. for 30 days			Average retail price of rice per Kg.	Consumer price index 'Food Group'
	Rural	Urban	Total	Rural	Urban	Total		
1	2	3	4	5	6	7	8	9
1958-59	214	60	274	5.87	6.45	5.96	0.61	563
1959-60	207	60	267	6.18	6.80	6.26	0.60	563
1960-61	144	71	215	6.63	6.67	6.64	0.44	588
1961-62	107	131	238	7.34	7.17	7.31	0.45	593
1963-64	1003	102	1105	7.27	7.48	7.30	0.91	711
1964-65	626	291	917	10.17	9.88	10.21	1.34	802
1966-67	706	400	1106	10.03	9.41	9.95	2.08	943
1969-70	1393	439	1832	11.57	11.08	11.51	1.55	1103

It can be seen from columns 5-7 that the per capita expenditure on foodgrains nearly doubled during the period of 11 years covered by Table 1, the relative increase being a little less in the urban than in the rural areas. To get an idea of the quantities we have to make allowance for the increase in prices during

the same period. A price index for foodgrains is not being prepared at present. However we have compiled from the publication "Statistics for Planning, serial No.5, Prices" issued by the State Planning Board and the Bureau of Economics & Statistics in 1972, the average retail price of rice, and also the average consumer price index for the 'Food group'. These are given in columns 8 and 9. The retail price of rice increased $2\frac{1}{2}$ times during the period and the index for the 'Food group' almost doubled. The quantities consumed may thus have decreased somewhat. It must be remembered that in Kerala it is possible to reduce consumption of foodgrains and still have the same or even more calories by shifting to tubers like tapioca. What has actually taken place can be determined only by more detailed local level observations.

Some data available from the N.S.S. on quantity of rice consumed during the period from 1958-59 to 1964-65 are given in Table 2.

Table 2 Consumption of rice in kg. for 30 days

Year	Rural	Urban	Total
1958-59	7.79	8.68	7.92
1959-60	8.34	10.59	8.68
1960-61	9.63	9.60	9.63
1961-62	9.28	9.27	9.28
1963-64	9.99	9.86	10.47
1964-65	7.03	6.63	6.97

It is not possible to say how much of the fluctuations noticed in Table 2 are due to real changes in consumption as we have no clear idea of the extent of sampling errors and other inaccuracies present in the data. The abrupt decrease in the figures for 1964-65 is partly accounted for by the supply of wheat

the same period. A price index for foodstuffs is not being prepared at present. However, we have compiled from the publication "Statistics for Planning, series 10.5, 10.6, 10.7, issued by the State Planning Board and the Bureau of Economic & Statistics in 1975, the average retail price of rice, and also the average consumer price index for the 'Food group'. These are given in columns 8 and 9. The retail price of rice increased 2 1/2 times during the period and the index for the 'Food group' almost doubled. The quantities consumed may thus have decreased somewhat. It must be remembered that in Kerala it is possible to reduce consumption of foodstuffs and still have the same or even more calories by shifting to tubers like potatoes. What has actually taken place can be determined only by more detailed local level observations.

Some data available from the U.S.S.R. on quantity of rice consumed during the period from 1958-59 to 1964-65 are given in Table 2.

Table 2 Consumption of rice in the U.S.S.R. 1958-59 to 1964-65

Year	India	U.S.S.R.
1958-59	1.72	1.45
1959-60	8.34	10.39
1960-61	9.05	9.00
1961-62	9.28	8.97
1962-63	9.39	9.18
1963-64	9.05	8.83

It is not possible to say how much of the increase noticed in Table 2 is due to real changes in consumption as we have no clear idea of the extent of real price changes and other incentives present in the USSR. The sharp increase in the figures for 1964-65 is partly accounted for by the effect of the

along with rice from the ration shops. For 1964-65 the NSS estimates of consumption of wheat were 1.29 kg. per capita for rural areas, 1.65 kg. for urban areas, and 1.34 kg. for the state as a whole. In the preceding years the consumption of wheat was very little. Figures for periods later than 1964-65 have not yet been compiled. Delay in tabulation is one of the well-known drawbacks of the NSS as it is operated at present.

Consumption of milk and milk products:-

Table 3 gives NSS data on the per capita consumption of milk and milk products. The sample size is the same as in Table 1.

Table 3 Per capita consumer expenditure on milk and milk products in Kerala State

Year	Expenditure in Rs. for 30 days			Retail price of cow's milk in Rs. per litre
	Rural	Urban	Total	
1958-59	0.41	0.93	0.49	.67
1959-60	0.52	1.20	0.62	.69
1960-61	0.62	1.07	0.69	.75
1961-62	0.76	1.09	0.81	.83
1963-64	0.62	1.32	0.70	.90
1964-65	1.17	1.65	1.50	.99
1966-67	0.92	1.21	0.96	1.24
1969-70	1.28	1.86	1.32	1.11

By comparing the expenditure with prices it would appear that the average quantities of milk consumed have increased in the rural areas. But the actual quantities consumed are quite low - some what less than one litre per head per month in the rural areas and a little more in the urban areas. We have no data on the distribution of these small quantities among the rich and the poor or among children and adults. By any standard the milk intake among large sections of the population must be low and inadequate.

Consumption of clothing:-

Per capital consumer expenditure on clothing is given in Table 4.

Table 4 Per capital consumer expenditure on clothing in Kerala State

Year	Expenditure in Rs. for 30 days			Consumer price index for clothing
	Rural	Urban	Total	
1958-59	0.95	0.72	0.92	446
1959-60	0.73	1.08	0.78	495
1960-61	0.87	1.22	0.92	522
1961-62	0.88	1.80	1.02	537
1963-64	1.06	1.58	1.12	567
1964-65	1.98	1.29	1.87	586
1966-67	0.78	1.14	0.83	664
1969-70	0.87	1.51	0.96	762

Except during the period 1963-65, when there was a marked increase, the expenditure in all other years in the rural areas was lower than its value in 1958-59. Thus if anything, there appears to have been a slight fall in expenditure while during the same period the price index for clothing went up 70%. Obviously the quantities consumed must have decreased, if the figures are reliable. It is often maintained that the introduction of nylon fabrics has made clothing cheaper in the long run as the material is much more durable than cotton. If this is true, the standard of clothing in the urban areas must have definitely gone up since the expenditure has increased at a steeper rate than prices.

All the figures in Table 1 to 4 are subject to varying quantities of error into the details of which we have not entered. They are presented here as illustrations of the very few items of time series data that are now available which have bearing on the well being or quality of life of the people.

Housing:-

About the quality of housing there is very little information. The National Sample Survey of 1964-65 collected some data from which the figures in Table 5 and 6 have been compiled.

Table 5 Distribution of households by type of structure, Kerala, 1964-65.

Type	Percentage of households		
	Rural	Urban	Total
Pucca	30	44	32
Semi-pucca	45	34	44
Kutcha	25	22	24
Total:	100	100	100

Table 6 Distribution of households by number of rooms occupied, Kerala, 1964-65.

Number of rooms	Percentage of households		
	Rural	Urban	Total
1	25	25	25
2	35	29	34
3	20	18	20
4	10	10	10
5	5	7	5
6	2	5	3
7 & more	3	6	3
Total:	100	100	100

Housing may not be as acute a problem in Kerala as in some other parts of India though there is plenty of scope for improvement everywhere. We have no readily available data about the trend of changes. That latrines are not good enough even in urban areas can be seen from the figures in Table 7.

Table 7 Distribution of urban households by type of latrines, Kerala, 1964-65.

Type of latrine	Percentage of urban households
Built up for use by individual households	26
Built up for common use of two or more households	21
No built up latrines	54
Total:	100

Literacy:-

That there has been progress in literacy can be seen from Table 8 giving figures taken from the National Sample Survey.

Table 8 Percentage of population (aged 15 and above) who are (a) literates and (b) matriculates.

Year	Rural			Urban			Total		
	Male	Fe- male	Total	Male	Fe- male	Total	Male	Fe- male	Total
	(a) <u>Literates</u>								
1960-61	76	48	62	82	63	72	77	51	63
1971-72	85	67	76	90	73	81	86	68	77
	(b) <u>Matriculates</u>								
1960-61	6.6	2.5	4.4	20.1	9.6	14.6	8.6	3.6	6.0
1971-72	12.0	7.4	9.6	24.7	13.0	18.6	13.9	8.3	10.9

Health:-

Improvement in health as reflected in rates per thousand of population of births, deaths and infant deaths can be seen from Table 9. Data are from the sample registration of vital events in rural areas.

Table 1. Summary of the data collected during the study. The table shows the number of subjects in each group, the mean age, and the standard deviation of the age. The data are presented in the following table:

Group	Number of Subjects	Mean Age (years)	Standard Deviation (years)
Group 1	10	25.5	2.5
Group 2	10	26.5	2.5
Group 3	10	27.5	2.5
Group 4	10	28.5	2.5
Group 5	10	29.5	2.5

Table 2. Summary of the data collected during the study. The table shows the number of subjects in each group, the mean age, and the standard deviation of the age. The data are presented in the following table:

Group	Number of Subjects	Mean Age (years)	Standard Deviation (years)
Group 1	10	25.5	2.5
Group 2	10	26.5	2.5
Group 3	10	27.5	2.5
Group 4	10	28.5	2.5
Group 5	10	29.5	2.5

Table 3. Summary of the data collected during the study. The table shows the number of subjects in each group, the mean age, and the standard deviation of the age. The data are presented in the following table:

Group	Number of Subjects	Mean Age (years)	Standard Deviation (years)
Group 1	10	25.5	2.5
Group 2	10	26.5	2.5
Group 3	10	27.5	2.5
Group 4	10	28.5	2.5
Group 5	10	29.5	2.5

Table 4. Summary of the data collected during the study. The table shows the number of subjects in each group, the mean age, and the standard deviation of the age. The data are presented in the following table:

Group	Number of Subjects	Mean Age (years)	Standard Deviation (years)
Group 1	10	25.5	2.5
Group 2	10	26.5	2.5
Group 3	10	27.5	2.5
Group 4	10	28.5	2.5
Group 5	10	29.5	2.5

Table 5. Summary of the data collected during the study. The table shows the number of subjects in each group, the mean age, and the standard deviation of the age. The data are presented in the following table:

Group	Number of Subjects	Mean Age (years)	Standard Deviation (years)
Group 1	10	25.5	2.5
Group 2	10	26.5	2.5
Group 3	10	27.5	2.5
Group 4	10	28.5	2.5
Group 5	10	29.5	2.5

Table 9 Rates of Births, Deaths and infant deaths
in rural areas of Kerala.

Year	Birth rate	Death rate	Infant death rate
1966	37.4	10.1	74.0
1967	36.3	10.4	
1968	34.8	10.1	
1969	33.3	..	57.4
1970	32.3	9.2	52.6
1971	31.9	9.2	60.9
1972	32.1	9.4	66.0
1973	29.9	8.7	51.7

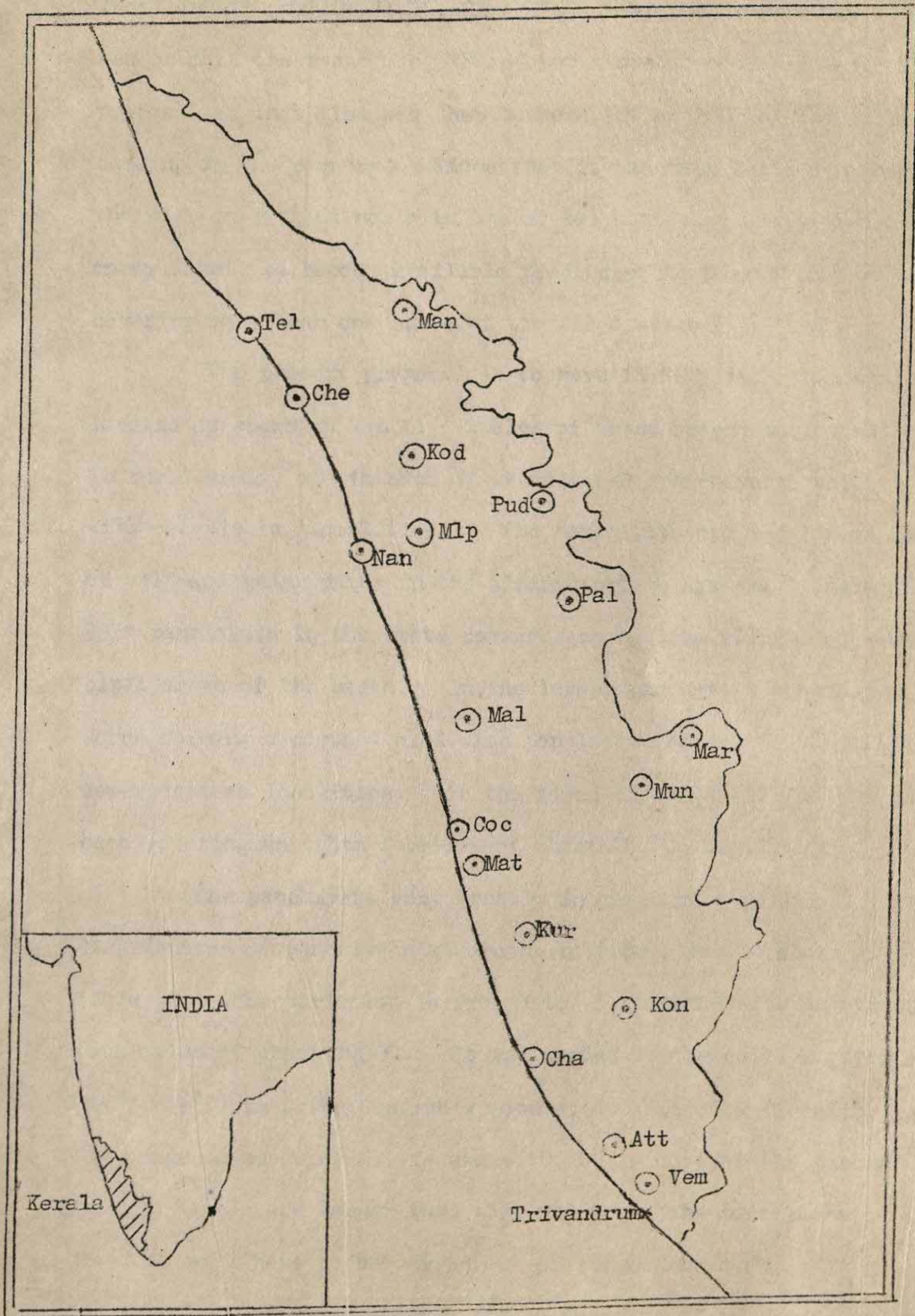
It is evident from the available data that in the rural areas of Kerala health has improved in recent years. There has also been increase in literacy rates in both rural and urban areas. Per capita consumption of milk in rural areas has probably increased. Regarding health in urban areas compiled figures were not readily available. For housing there are no comparative figures relating to different points of time. No definite trend can be established in the consumption levels of food and clothing from available N.S.S. data. These remarks are for the state as a whole. At the local level information is not available even on the few items for which we have some partial data at the state level.

Table 2 Factors of Births, Deaths and Infant Deaths in Rural Areas of Kerala

Year	Birth Rate	Death Rate	Infant Mortality Rate
1957	29.9	10.1	74.0
1958	32.1	10.4	71.4
1959	31.9	10.1	71.6
1960	32.3	..	60.9
1961	31.9	9.2	68.0
1962	32.1	9.4	71.7
1963	29.9	8.7	71.7

It is evident from the available data that in the rural areas of Kerala health has improved in recent years. There has also been increase in literacy rates in both rural and urban areas. Per capita consumption of milk in rural areas has probably increased. Reporting health in urban areas is not reliable. For housing there are comparative figures relating to different points of time. The health trend can be established in the consumption levels of food and clothing from available U.S.C. data. These figures are for the state as a whole. At the local level information is not available even on the few states for which we have more detailed data at the state level.

MAP 1. KERALA SHOWING SOCIO-ECONOMIC OBSERVATORIES



III. LOCATION OF SOCIO-ECONOMIC OBSERVATORIES

In the document on 'Measurement of real progress at the local level' (UNRISD/74/10, GE74-4160) prepared in February 1974 ten or more observatories (SEO's) per state were visualised. The proposal at that time was that between 100 or 200 of them will come up in the country. Since then it has been decided to begin the work on a pilot scale in one or two states. Limitation of money likely to become available precludes the possibility of covering more than one state at the pilot stage.

The present proposal is to have 18 SEOs in Kerala state located as shown in Map 1. Twelve of these observatories will be in rural areas, one in each of 12 selected 'panchayats' which will constitute 'localities'. The panchayats are the lowest level of self-governing units in the administrative system. There are 955* panchayats in the state covering among them all the non-municipal areas of the state. In the larger panchayats a number of wards forming a compact area with population about 10,000 will be demarcated as localities. In the towns six SEOs will be located each covering an urban locality of about 10,000 population.

The panchayats vary greatly in area and population. The distribution of panchayats according to population is shown in Table 10. The variation is from 3 to 65 thousand with an average population of about 19000. It was argued in the earlier paper (GE/74-4160) that the desirable population size of a 'locality' for progress measurement was about 10,000. Most of the panchayats in Kerala are larger than this and hence the localities required will have to be carved out of these panchayats.

*This number undergoes changes due to creation of new municipalities, division of panchayats, etc.

Table 10 Distribution of panchayats in Kerala according to population in 1971.

Population in 1000	Number of panchayats	Population in 1000	Number of panchayats
2 - 4	1	26-28	42
4 - 6	6	28-30	31
6 - 8	12	30-32	29
8 -10	24	32-34	24
10 -12	45	34-36	8
12 -14	92	36-38	8
14 -16	116	38-40	5
16 -18	132	40-42	2
18 -20	123	42-44	2
20 -22	102	44-46	2
22 -24	80	64-66	1
24 -26	68		
		Total	955

The selected panchayats and towns for the 18 SEOs are shown in Table 11. The state can be divided according to level of development into two regions North and South, the South consisting of

Table 11 Location of Socio-Economic Observatories in Kerala

	Low land	Mid land	High land
		<u>North</u>	
Less Developed Rural	P.Chemanchery B.Pandalayani T.Quilandy D.Kozhikode	P.Nannambra B.Tirur Angadi T.Tirur D.Malappuram	P.Pudur B.Attappadi T.Mamarghat D.Palghat
More Developed Rural		P.Kodanchery B.Kunmmangalam T.Kozhikode D.Kozhikode	P.Manantodi B.Manantodi T.N.Wynad D.Cannanore
Urban	Tn.Tellicherry D.Cannanore	Tn.Malappuram D.Malappuram	Tn.Palghat D.Palghat
		<u>South</u>	
Less Developed Rural	P.Mattathilbhagam B.Thaikattussery T.Shertalai D.Alleppey	P.Vembayam B.Nedumangad T.Nedumangad D.Trivandrum	P.Marayur B.Devikolam T.Devikolam D.Idikki
More Developed Rural	P.Kurichi B.Madappally T.Changanacherry D.Kottayam	P.Mala B.Mala T.Makundapuram D.Tichur	P.Kenni B.Konni T.Pathanamthitta D.Quilon
More Developed Rural	P.Chavara B.Chavara T.Karunagapally D.Quilon		
Urban	Tn.Cochin D.Ernakulam	Tn. Attingal D.Trivandrum	Tn.Munnar D.Idikki

P = Panchayat, B=Block, T=Taluk, D=District, Tn=Town.

the former princely states of Cochin and Travancore and the North consisting of areas which came from the former British India at the time of formation of Kerala State in 1956. The North is economically less developed than the South. Both North and South can again be divided into three zones each (Lowland, Midland, Highland) depending on soil, weather, altitude and other environmental conditions. Thus there will be six divisions in all. We have located three SEOs (two rural and one urban) in each of these divisions except in the lowland where we have taken one rural SEO from the North and three from the South. This was done because the area and population in the lowland is much smaller in North than in the South. This can be seen from Table 12 which gives the area and population of the six divisions.

Table 12 Area and Population of the six divisions

Natural zone	Area in 1000 Sq.Kms.			Population in 1000's		
	North	South	Total	North	South	Total
Highland	8.5	10.1	18.6	1,740	1,470	3,210
Midland	8.1	8.1	16.2	5,240	7,380	12,620
Lowland	0.8	3.2	4.0	1,030	4,480	5,510
Total:	17.4	21.4	38.8	8,010	13,380	21,340

Within each division the two rural SEOs were located one in the most developed and the other in the least developed panchayat. For this purpose a list of taluks (arranged according to the level of development) prepared by the Bureau of Economics and Statistics was made use of. Within the least developed taluk in a division the panchayat with the lowest literacy rate was chosen, and within the most developed taluk in a division the

panchayat with the highest literacy rate was chosen. One rural SEO (at Pudur in Attapadi) is located in the tribal area. This also happened to be the least developed panchayat in the division. Two other rural SEOs (Chemanchery and Chavara) have sizeable populations of fishermen.

The urban SEOs were chosen so as to represent large, medium and small towns.

All these selections are tentative and could be changed if further examination reveals that some other locations are preferable.

IV. OBSERVATIONS PROPOSED

Provisional lists of observations arranged under the four main headings mentioned earlier (see section 1) are given below. These will be modified and improved after discussion with experts. The actual 'formatting' to produce schedules for field work together with definitions, instructions etc. will be taken up later. The schedules will be field tested in one or two of the proposed observatories for a period of three months. At this stage the feasibility of carrying out the measurements and of completing the work within the available time will be verified. The cost of statistical analysis will also become clearer after some observations are received and processed.

A. Observations on the locality:-

1. Total area
2. Total population
3. Number of schools, teachers and pupils in different categories of schools.
4. Number of hospitals, dispensaries, primary health centres.
5. Number of hospital beds.
6. Number of doctors and other medical personnel
7. Number of domestic electric connections
8. Length of roads (a) pucca, (b) katcha
9. Number of banks, co-operative societies etc.
10. Number of (a) Post Offices, (b) Telegraph Offices
11. Number of telephones
12. Number of letters delivered from post offices
13. Total value of money orders coming into the locality.

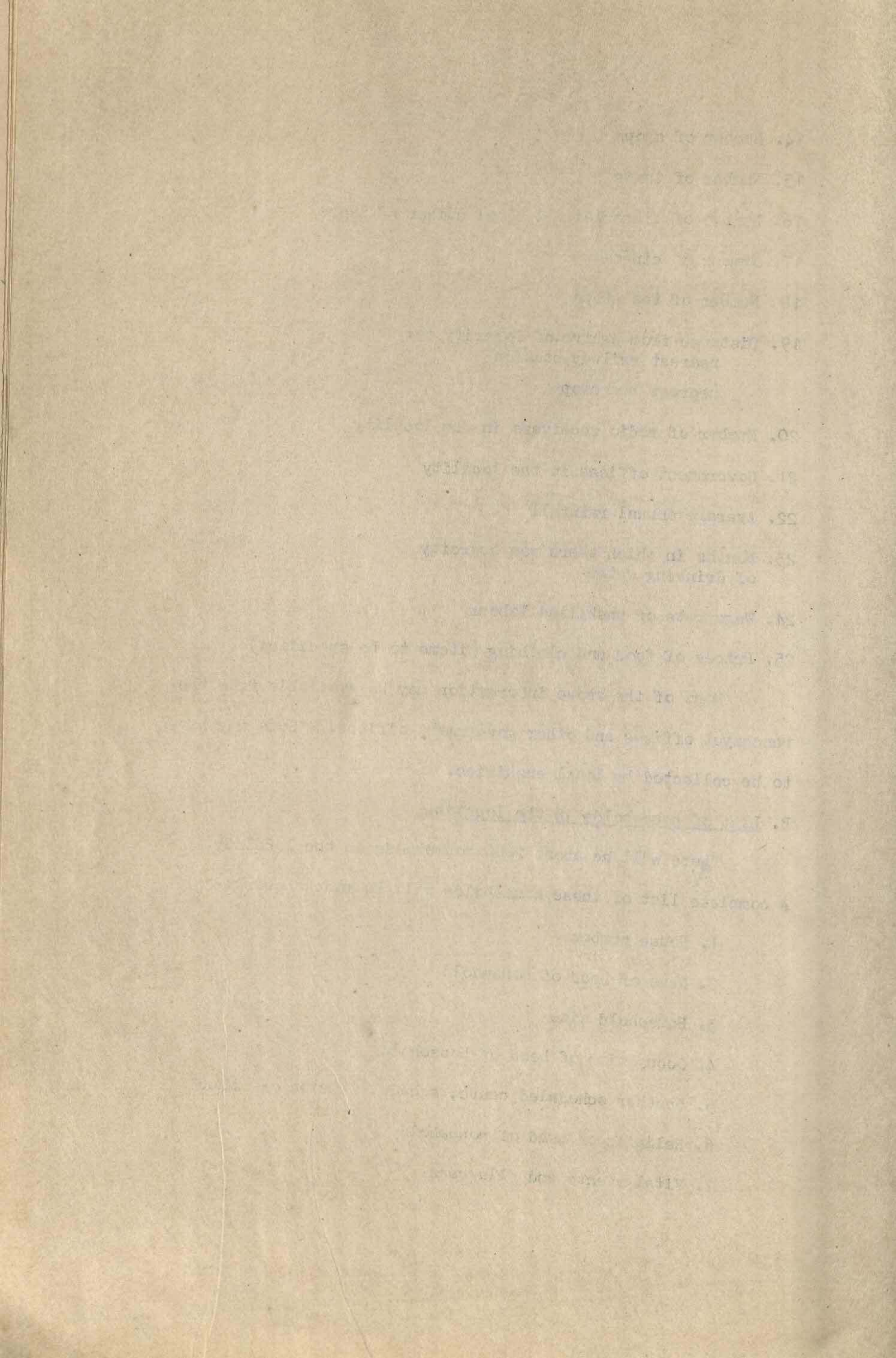
14. Number of shops
15. Number of taxis
16. Number of libraries and total number of books
17. Number of cinemas
18. Number of tea shops
19. Distance from centre of locality to:
 nearest railway station
 nearest bus stop
20. Number of radio receivers in the locality
21. Government offices in the locality
22. Average annual rainfall
23. Months in which there was scarcity
 of drinking water
24. Wage rate of unskilled labour
25. Prices of food and clothing (items to be specified)

Most of the above information may be available from the panchayat offices and other government offices. Some may have to be collected by local enquiries.

B. List of households in the locality

There will be about 2000 households in the locality.
A complete list of these households will be made showing:-

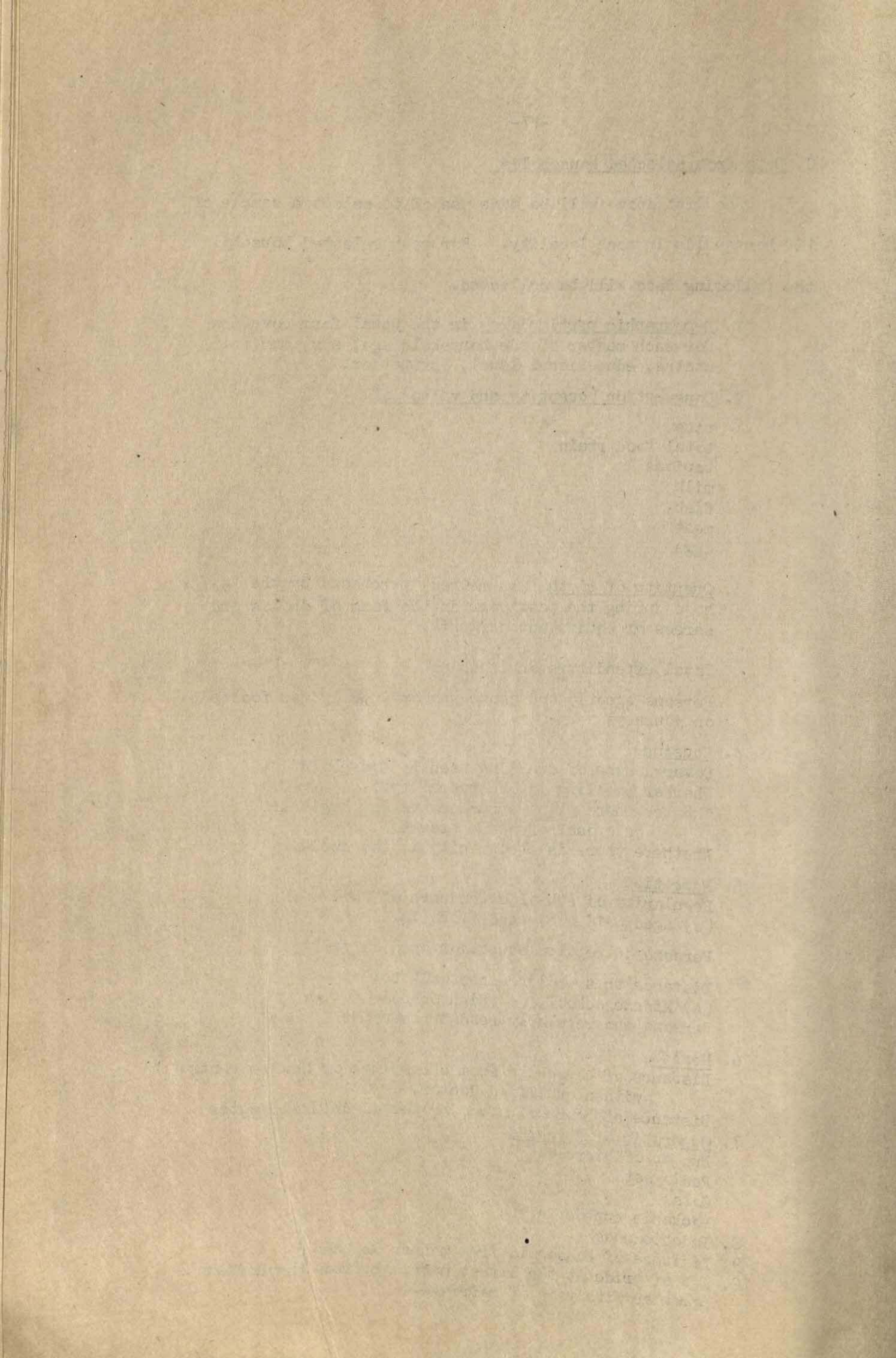
1. House number
2. Name of head of household
3. Household size
4. Occupation of head of household
5. Whether scheduled caste, scheduled tribe or other
6. Religion of head of household
7. Vital events and illnesses



C. Data from selected households

The list above will be made use of to select a sample of 100 households in each locality. For each selected household the following data will be collected.

1. Demographic particulars in the usual form covering for each member of the household age, sex, marital status, educational level, occupation.
2. Consumption (quantity and value) of
 - rice
 - total food grain
 - tapioca
 - milk
 - fish
 - meat
 - eggs
3. Quantity of cloth (in metres) purchased by the household during the past year in the form of dhotis and sarees or equivalent garments.
 - Total expenditure on clothing
 - Persons aged 15 and above who ordinarily use footwear on journeys
4. Housing
 - Covered area of dwelling used by household
 - Whether dwelling is of 'pucca' type
 - Whether there exist arrangements for hygienic disposal of human exereta
 - Whethere there is electricity in the dwelling
5. Education
 - Regularity of school attendance of children (a) aged 6-10, (b) aged 11 to 14
 - Persons in regular education aged 15 to 22
 - Distance that children mustwalk to:
(a) Middle school, (b) High School
 - Persons who regularly read a newspaper
6. Health
 - Distance of household from a hospital or health centre with a qualified doctor.
 - Distance of household from protected drinking water
7. Ownership of durables
 - Number of bicycles
 - Radio sets
 - Cots
 - Lockable cupboards
8. Indebtedness
9. Distance of household from market or bazar
10. Age of bride at the latest marriage from the household together with year of marriage.



D. Explanatory Variables

1. Distribution of land ownership
2. Social mobility
3. Consumption of fertilizer
4. Investment expenditure in the locality
5. Quality of local leadership
6. Traditions such as expenditure on dowry, marriage and other ceremonies etc.

The above lists appear incomplete due to several reasons. Firstly data on some of the items which should have appeared in these lists can be obtained from administrative sources and need not be collected directly. Secondly the objective is not complete accounting but the production of certain indicators. Thirdly some of the items have to be further refined before actual data collection. And lastly some additions to the list will be found necessary after further discussions.

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V. WORK PROGRAMME

After approval of the scheme for local level measurements by all concerned agencies and authorities the programme of work will be as follows:-

1. Form a Committee of Direction with representatives of (a) Planning Commission, (b) Central Statistical Organisation, (c) State Statistical Bureau, (d) other Government departments concerned (e.g. Department of Tribal Welfare (e) UN Research Institute for Social Development.
2. Draft detailed field schedules and formulate definitions and instructions for observers
3. Recruit train and station Observers in two SEOs
4. Collect observations during a testing period of three months
5. Analyse the data from 3
6. Repeat 1 using the results from 4
7. Recruit and train Observers for all SEOs
8. Recruit and train processing staff
9. Operate the full system for two years
10. Calculate indicators quarterly and annually and search for correlations with relevant factors
11. Supply periodic reports to users
12. If results are found to justify the cost arrange to continue the system on a long term basis.

VI. ORGANISATION AND ESTIMATE OF COST

It is proposed that field work in all observatories except three (namely Pudur, Marayur and Munnar) should be carried out by employing on a part-time basis retired school teachers in the age group 55 to 60 who have aptitude for and interest in this kind of work. Whole time observers will be required* at Pudur, Marayur and Munnar as it is not likely that part-timers will be available in these remote and isolated places. A monthly remuneration of Rs.150 plus Rs.50 for incidental expenses and small journeys should be adequate for the part-time observers. Provision at the rate of Rs.500 per month will be necessary for the whole time observers.

Supervision will be entrusted to the senior staff of the Bureau of Economics & Statistics. No special payment is proposed as remuneration, but provision will have to be made for the additional travel to be undertaken.

The staff required for statistical processing and analysis is not being spelt out at present. Past experience has shown that the cost for statistics will be roughly of the same order as the cost in the field in this type of work.

An Officer-in-Charge of the level of Assistant Director aided by a Research Assistant and one Clerk will be in overall charge of both field and statistical work under the guidance of the Director of the Bureau of Economics & Statistics. The estimated cost for one year's work is given in Table 13.

*The possibility of one whole time observer serving all the three SEOs will be considered.

THE ORGANIZATION AND THE FIELD OF WORK

It is the purpose of this report to set forth the organization and the field of work of the Bureau of Entomology and Plant Quarantine, United States Department of Agriculture. The Bureau is one of the principal agencies of the Department and is charged with the responsibility of protecting the crops and livestock of the United States from insect pests and diseases. The Bureau is organized into several divisions, each of which is responsible for a specific phase of the work. The field of work of the Bureau is divided into several major areas, each of which is also the responsibility of a specific division. The Bureau is currently engaged in a number of important projects, and it is expected that these projects will continue to be of great importance in the future.

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The Bureau is currently engaged in a number of important projects, and it is expected that these projects will continue to be of great importance in the future.

Table 13 Estimate of cost in rupees per annum

Officer-in-Charge	12,000
<u>Field work</u>	
15 Part-time Observers	36,000
3 Whole-time Observers	18,000
Supervision	8,000
Statistical work	50,000
Contingency, Stationery, \emptyset Printing etc. \emptyset	8,000
Total:	<hr/> 132,000 <hr/>

The provision of Rs.50,000/- for statistical work would be the equivalent of one Supervisor and six Clerks for twelve months.

VII. DISCUSSION WITH CONCERNED AGENCIES

The proposals in this document were discussed on several occasions with the Officers of the Bureau of Economics and Statistics. Discussions were also held with Dr.U.S.Nair, former Director of the Bureau and former Professor of Statistics, Kerala University, Mr.T.Madhava Menon, Director of Tribal Welfare, Kerala State, Dr.P.K.Gopalakrishnan, Secretary, Planning Department, Kerala State, Mr.K.T.Chandy, Vice-Chairman, Kerala State Planning Board and Prof.T.N.Krishnan of the Centre for Development Studies, Trivandrum. A number of suggestions which arose at these discussions were made use of in preparing the document which is still in a draft form.

The proposals were also discussed informally in March 1976 with Dr.S.Chakravarty (Member, Planning Commission), Mr.B.D.Pande (Cabinet Secretary), Mr.V.R.Rao (Director, Central Statistical Organisation), Mr.J.P.Rajput and Mr.S.D.Holla (Joint Directors, Central Statistical Organisation), Mr.B.D.Sharma (Joint Secretary, Tribal Welfare and Mr.R.B.Chari, Registrar General of India. The Planning Commission and the Central Statistical Organisation are to consider this document in a more formal way.

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VIII. CONCLUSION

The purpose of local level measurements as distinct from national or state level was explained in a previous paper. Local level measurements are more relevant for assessing progress in the quality of life of the people, they can reveal distribution of the ingredients of welfare and they facilitate the study of inter-relationships such as those between health and productivity or education and income. In the present document the available statistics dealing with progress in Kerala have been briefly examined. Local level measurements (except the census data on literacy) are scarce and even state level data are inadequate in many respects.

A system of Socio-Economic Observatories for the collection of local level data is proposed and the location of 18 SEOs in Kerala is suggested. A tentative list of observations has been prepared. The estimated cost of operating the system comes to Rs.132,000 per year which is a minute fraction of the annual development expenditure of about 230 crores in Kerala.

As an illustration of the type of results that may be expected from the progress monitoring system we present in Table 14 some data on literacy compiled (with adjustments for changes in administrative units) from the censuses of 1961 and 1971 for the panchayats and towns in which SEOs are proposed to be located.

Table 14 Progress in literacy in selected localities

Localities	Population in 1971 in thousands			Percent literate								
				1961			1971			Difference		
	M	F	T	M	F	T	M	F	T	M	F	T
<u>Panchayats</u>												
Chemanchery	10.2	11.0	21.2	63	39	51	69	48	58	6	9	7
Nannambra	7.9	8.9	16.8	32	18	25	51	34	42	19	16	17
Pudur	4.1	4.0	8.1	14	5	9	17	5	12	3	0	3
Kodanchery	8.5	7.6	16.1	55	55	55	65	58	62	10	3	7
Manantodi	13.4	12.4	25.8	53	36	45	62	49	56	9	13	11
Mattathil- bhagom	9.9	9.8	19.7	58	31	44	70	48	59	12	17	15
Vembayam	12.1	11.9	24.0	52	30	41	69	54	62	17	24	21
Marayur	2.4	2.2	4.6	33	14	24	43	25	35	10	11	11
Kurichi	11.0	10.8	21.8	71	60	66	77	70	74	6	10	8
Chavara	14.2	14.2	28.4	58	41	50	70	59	65	12	18	15
Mala	12.7	13.3	26.0	57	46	51	69	61	65	12	15	14
Konni	12.6	12.7	25.3	58	45	51	74	67	70	15	23	19
<u>Towns</u>												
Tellicherry	33.8	35.0	68.8	68	53	60	75	67	71	7	14	11
Malappuram	15.9	16.1	32.0	67	50	59	66	54	60
Palghat	47.8	48.0	95.8	54	36	45	68	53	60	14	17	15
Cochin	113.0	109.0	222.0	62	47	54	77	68	73	15	21	19
Attingal	13.3	13.7	27.0	61	46	54	75	63	69	14	17	15
Munnar	2.5	1.9	4.4	71	61	67	76	63	70	5	2	3

Table 14 shows the wide differences among localities in the existing levels of literacy as well as among the rates at which progress is taking place in different places. The differences between North and South, between urban areas and rural areas between males and females and among the environmental zones are also obvious. In some of the localities where literacy is low the rate of progress is also low. Further analysis taking into account the special characteristics of different localities and groups of localities could be extremely useful. The main point to note is that much interesting and useful information is lost when data are aggregated into global averages for the state as a whole.

Table 1. The results of the analysis of variance for the different localities.

Localities	F							D.F.	P
	1	2	3	4	5	6	7		
Channachery	17.3	11.0	11.2	11.5	11.8	12.1	12.4	7	0.01
Perambur	7.8	8.0	8.2	8.4	8.6	8.8	9.0	7	0.05
Thiruvananthapuram	5.1	5.0	5.1	5.2	5.3	5.4	5.5	7	0.10
Kozhikode	8.5	7.8	8.1	8.4	8.7	9.0	9.3	7	0.02
Malappuram	12.4	12.1	12.3	12.5	12.7	12.9	13.1	7	0.01
Kannur	9.8	9.5	9.7	9.9	10.1	10.3	10.5	7	0.05
Wazirpet	12.1	11.9	12.1	12.3	12.5	12.7	12.9	7	0.01
Kannur	2.4	2.3	2.4	2.5	2.6	2.7	2.8	7	0.10
Kannur	11.0	10.8	11.0	11.2	11.4	11.6	11.8	7	0.05
Kannur	14.2	14.0	14.2	14.4	14.6	14.8	15.0	7	0.01
Kannur	12.7	12.5	12.7	12.9	13.1	13.3	13.5	7	0.05
Kannur	12.8	12.7	12.9	13.1	13.3	13.5	13.7	7	0.01
Town									
Kannur	23.8	23.5	23.7	23.9	24.1	24.3	24.5	7	0.01
Kannur	12.3	12.1	12.3	12.5	12.7	12.9	13.1	7	0.05
Kannur	11.5	11.3	11.5	11.7	11.9	12.1	12.3	7	0.10
Kannur	11.0	10.8	11.0	11.2	11.4	11.6	11.8	7	0.05
Kannur	12.7	12.5	12.7	12.9	13.1	13.3	13.5	7	0.01
Kannur	12.8	12.7	12.9	13.1	13.3	13.5	13.7	7	0.05

The results of the analysis of variance for the different localities are given in Table 1. It is seen that the differences between the localities are highly significant. The analysis of variance for the different localities is given in Table 1. It is seen that the differences between the localities are highly significant. The analysis of variance for the different localities is given in Table 1. It is seen that the differences between the localities are highly significant.

Collection of data on literacy is not, however, the justification for setting up SEOs. Gross literacy rates can well be left to the decennial census. Table 14 is presented only because local data on other variables like consumption of food or clothing is at present not available. These and many other variables relevant for the study of real progress at the local level will be the work of the proposed observatories.

The figures in Table 14 do not distinguish between the effect of ageing of the population (whereby the more illiterate elderly die out) and real improvement in education effort as reflected in increased school attendance rates, as well as expansion of out-of-school learning. SEOs should be able to provide the data for studying these questions.

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