



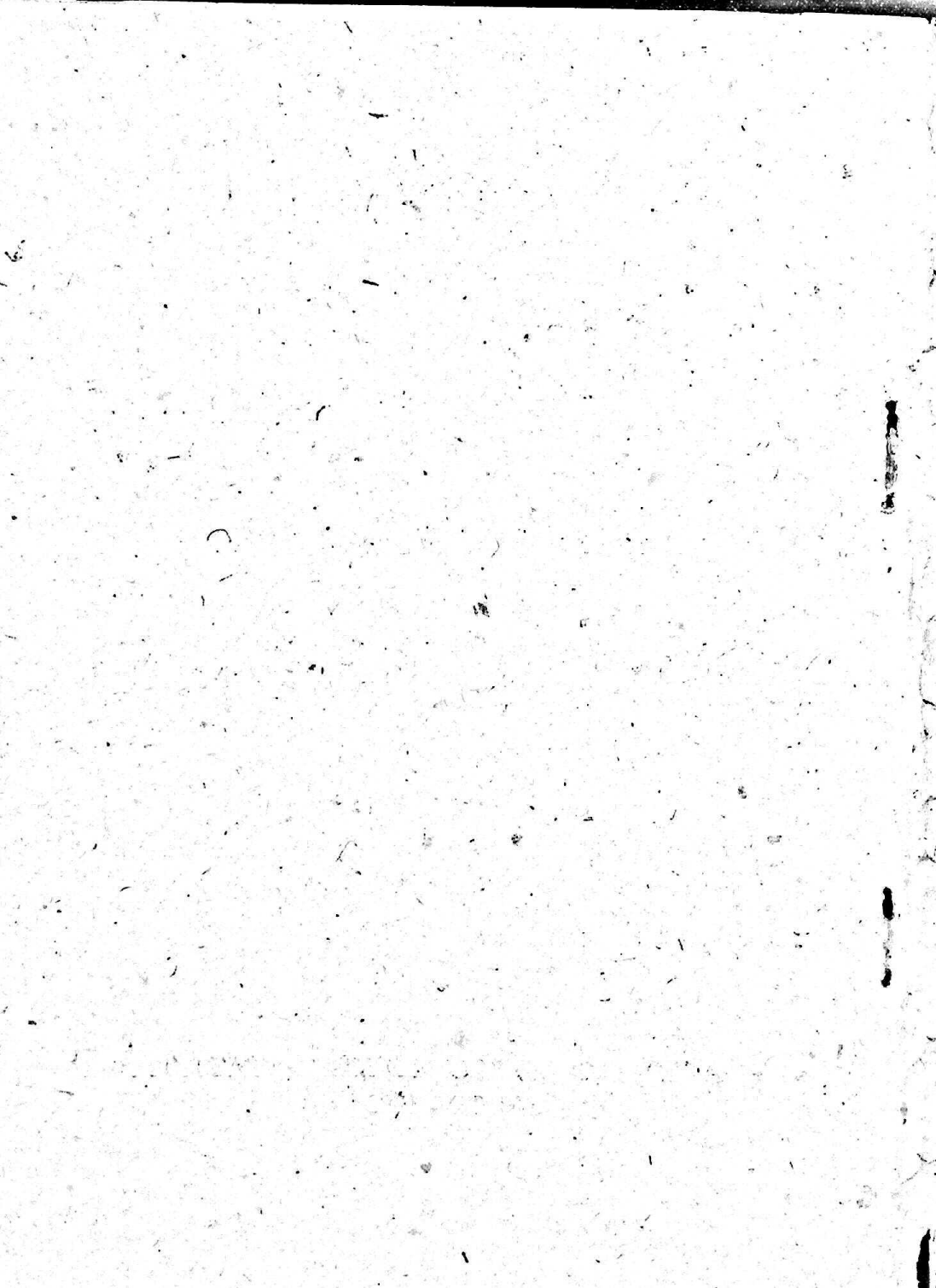
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GOVERNMENT OF KERALA

**SAMPLE REGISTRATION
KERALA—RURAL
ANNUAL REPORT—No. 21-1983**

DEPARTMENT OF ECONOMICS & STATISTICS
MARCH - 1986

Pub : 4th March 1986



**SAMPLE REGISTRATION
KERALA RURAL
ANNUAL REPORT No. 21 1983**

**DEPARTMENT OF ECONOMIC & STATISTICS
MARCH 1986**

STATE REGISTRATION
NEPALA BORAL
APRIL 1953

DEPARTMENT OF REVENUE
KATHMANDU

CONTENTS

Chapter 1	Introduction
Chapter 2	Population
Chapter 3	Measures of fertility
Chapter 4	Mortality measures
Annexures:	1 to 20

Subject

1. Introduction
2. History
3. Development
4. Current Status
5. Future Prospects

6. Conclusion
7. References
8. Appendix
9. Glossary
10. Index

11
12
13

14
15
16

PREFACE

Sample Registration scheme is implemented in all the States in India, under the directions of the Registrar General, India with the objective of getting reliable and accurate estimates of birth and death rates and growth rate of population, in the absence of other sources.

This report presents the results of the operation of the Scheme in rural areas of Kerala during the year 1983. Besides the crude birth rates and death rates, a number of other details, derived from Sample Registration data is included in this report.

This report was prepared by the Sample Registration Unit of the department of Economics and Statistics. Smt. S. Suneetha, Deputy Director (Population), Shri H. Johnson, Regional Statistical Officer (SR) and Shri N. Ummamaheswaran Asari, Research Assistant were associated with the work.

Trivandrum,
4-3-1986.

N. GEORGE JOHN,
Director.

1912

Received of the Treasurer of the
Board of Education the sum of \$100.00
for the year ending June 30, 1912.

Witness my hand and the seal of the
Board of Education this 1st day of
July, 1912.

Attest:
Secretary of the Board of Education

1912

CHAPTER I

INTRODUCTION

The deficiencies in Civil Registration System, has made Sample Registration System (SRS) a unique technique to provide reliable and accurate vital rates.

Started as a pilot project in 1964-65 in 20 rural and 5 urban samples, the full-fledged Sample Registration Scheme was introduced on 1-7-1965 in 150 samples in rural areas on a regular basis. The Directorate of Economics and Statistics took up the work in rural areas and the Directorate of Census Operations, Kerala in urban areas.

The Sample Registration System is basically a sample survey. The sample design adopted is stratified uni-stage sampling. Initially samples were selected after stratifying the villages into four types according to population of below 500, 500-999, 1000-1999 and 2000 and above, under the three natural regions of low land, mid-land and high land. The number of samples was allocated to different strata, in proportion to the population, as per 1961 Census. But as per the instructions of the Registrar General of India, 75 old samples were replaced during 1982 and the remaining samples replaced during 1983. The selection of new samples, was done according to the population figures of 1981 census. Contrary to the previous distribution of samples under three natural regions, new samples were allocated under two strata namely Northern region and Southern region. All the northern districts of the State, beyond Trichur, form the northern region, while all the remaining districts, the southern region. Estimation of vital rates, furnished in this report, is done as per annexure I appended.

1.2. Staff:

150 Part-time Enumerators were engaged in the regular field survey and 13 Computers deputed from Census Department in half yearly surveys, Additional District Officers in each District conducted reverification work. At the State head-quarters, the nucleus staff, consisting of a Regional Statistical Officer, a Research Assistant, a Computer and two Compilers attended to the work relating to the Sample Registration System.

1.3. Field work:

The Enumerators collected the details of births and deaths on regular basis through informants and house visits and reported to the District and

State Headquarters every month. The Computers conducted half yearly surveys independent of the Enumerators for updating the population and collecting details of births and deaths. The data collected by both the Enumerators and the Computer supervisors were matched at the District Headquarters and the reverification of unmatched and partially matched events was done by the Additional District Officers, concerned.

1.4. *Overlapping survey:*

With every half yearly survey, the details of the previous half year were also collected, in order to bring out the events, missed if any, by both the Enumerator and Supervisor. By this procedure 106 births and 20 deaths were detected during the year.

1.5. *Intensive enquiry:*

An intensive enquiry was conducted in 45 samples by Senior Officers of the Department, through which 58 births and 10 deaths were detected

CHAPTER 2

POPULATION AND ITS GROWTH

The population of Kerala rural, estimated through the Sample Registration System, was seen as 212,04,811 on 1-7-1983 and 212,91,861 on 1-1-1984 recording an increase of 0.41 per cent for the second half of 1983. The increase in population for the period in the northern region was 0.61 per cent and that in southern region was 0.26 per cent. Percentage of population of Hindus, Muslims and Christians in rural Kerala, during the year 1983 was 58.3, 20.1 and 21.6 respectively. As in the previous year, the Hindus were almost equally distributed both in Malabar and Travancore—Cochin areas, while 68.65 per cent of Muslims concentrated in Malabar and 84.82 per cent of Christians in Travancore—Cochin.

2.2. *Sex ratio and percentage distribution of population by age:*

The sex ratio and the percentage distribution of population by age for the years 1971, 1982 and 1983 are furnished in table 1.

TABLE 1

Sex ratio and percentage distribution of population by age—in rural Kerala

Age group	1971		1982		1983	
	Sex ratio	Population %	Sex ratio	Population %	Sex ratio	Population %
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0-4	980	13.5	966	11.0	989	10.8
5-9	974	13.6	978	11.3	959	11.2
10-14	983	13.5	987	11.9	988	12.0
(0-14)	(976)	(40.6)	(977)	(34.2)	(979)	(34.0)
15-19	1078	10.9	1036	11.8	1080	11.9
20-24	1046	9.2	1122	10.6	1152	10.5
25-29	1103	6.4	1096	8.3	1129	8.4
30-34	1080	5.6	1030	6.5	1049	6.3
35-39	1080	6.0	1103	5.3	1085	5.6
40-44	1005	4.6	1090	4.6	1073	4.3
45-49	941	4.5	1101	4.5	1065	4.6
50-54	969	3.2	1068	3.8	1052	3.6
55-59	982	2.7	984	3.1	992	3.0
60-64	1044	2.3	1054	2.6	1067	2.7
65-69	1086	1.6	1045	2.0	1152	2.2
70 +	1116	2.4	1165	2.6	1229	2.9
All	1020	100.0	1041	100.0	1054	100.0

sex ratio—No. of females per 1000 males.

CHAPTER 3

MEASURES OF FERTILITY

3.1 *Introduction*

The crude birth rate which is the most common measures of fertility, age specific fertility rate, general fertility rate, total fertility rate, gross reproduction rate and net reproduction rate for the year 1983 have been estimated from the data collected and presented in this chapter.

3.2 *Crude birth rate*

Crude birth rate is defined as the number of live births per 1000 of mid year population. Only the birth to the usual residents of the area and the usual resident population are taken into account for the calculation of the vital rates.

The crude birth rate for Kerala rural for the year 1983 was estimated as 23.49 which is 0.85 less than that in the previous year. Birth rates for rural Kerala and rural India for the years 1977 to 83 are given in table 2

TABLE 2

Crude birth rate for rural Kerala and rural India (1977-83)

<i>Year</i>	<i>Rural Kerala</i>			<i>Rural India</i>
	<i>Northern Region</i>	<i>Southern Region</i>	<i>Total</i>	
1977	28.9	23.6	26.2	34.2
1978	30.6	21.7	25.8	34.6
1979	31.8	22.2	26.8	34.3
1980	30.5	23.4	26.8	35.0
1981	28.0	21.5	24.7	35.5
1982	27.9	21.3	24.3	35.5
1983	29.3	19.5	23.5	35.3

3.3. Birth rates in Malabar and Travancore—Cochin area of the State (Rural)

Based on the historical and socio-economic conditions, the State forms two distinct regions as Malabar and Travancore—Cochin regions. The former comprising of the northern districts beyond Trichur and the latter the remaining southern districts i.e. from Trivandrum to Trichur. Out of 150 samples selected for the rural areas, 61 samples fall in Malabar region and 89 in Travancore—Cochin areas.

From table 2, it can be seen that the birth rate in Malabar area is always higher than that in Travancore—Cochin area. This is mainly due to the social conditions, such as lower age of marriage of females, reluctant attitude towards family welfare activities, low literacy etc., prevalent among the majority of the residents in Malabar region.

3.4 Birth rates in rural areas of neighbouring states :

As far as the neighbouring States are concerned, lakshadweep, a Union territory keeps the highest birth rate i.e. 34.6 during the year 1983 and Andhra Pradesh having the birth rate 31.5 stands second. As in the previous year, Kerala keeps the lowest birth rate.

3.5 Birth rates in rural and urban areas :

The birth rate in rural areas is always seen higher than that in urban areas. But it is seen that the birth rate for the year 1983 was the same in urban and rural areas of Kerala. The difference between the birth rates in urban and in rural areas is given in table 3.

TABLE 3

Combined birth rate and difference between Rural and Urban birth rates

States	Combined birth rate Rural and urban	Difference between Rural and urban birth rates	
		1982	1983
(1)	(2)	(3)	(4)
Andhra Pradesh	30.7	4.3	3.8
Karnataka	28.7	3.1	4.0
Tamilnadu	27.8	4.9	3.4
Kerala	24.9	2.2	..
All India	33.7	7.7	7.0

Source: Registrar General, India.

As in the previous years, Andhra Pradesh is having the highest rural and urban birth rates during 1983 also.

3.6 Birth rates by religion:

Table 4 presents the birth rates among major religious groups in the State for the year 1983.

TABLE 4

Birth rates among different religions—1983

Regions	Religions		
	Hindu	Muslims	Christians
(1)	(2)	(3)	(4)
1. Northern	25.73	36.75	24.46
2. Southern	19.67	24.67	17.39
State	22.24	32.96	18.46

Compared to the birth rates among major religious groups, the highest birth rate is among Muslims and lowest among Christians as in the previous year.

The Muslims in Malabar area, who form 32.96% of the total population in the area and 68.65% of total Muslim population in the State are having the highest birth rate during the year, i.e., 36.65 as against 34.04 in the previous year. Contrary to the conditions during the previous year, the lowest birth rate is recorded in the Southern region, i.e., 17.39 as against 19.43 in the previous year, and it is among Christians who form 31.53% of the total population of the area and 84.82% of the total Christian population.

3.7 Distribution of sample villages under different birth rates:

The distribution of sample villages by birth rate is given in Table 5.

TABLE 5

Distribution of samples under different rates of birth 1983

Region	Birth Rates														All					
	Less than 16	16-19.9	20-23.9	24-27.9	28-31.9	32-35.9	36-39.9	40-43.9	44 and above											
(1)	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %					
1983 Malabar	2	3.3	7	11.5	6	9.8	18	29.5	9	14.8	7	11.5	5	8.2	4	6.5	3	4.9	61	100.0
Travancor- Cochin	21	23.6	30	33.7	24	27.0	7	7.9	5	5.6	1	1.1	1	1.1	..	..	..	..	89	100.0
Total	23	15.3	37	24.7	30	20.0	25	16.7	14	9.3	8	5.3	6	4.0	4	2.7	3	2.0	150	100.0
1982 Rural Kerala	11	7.3	39	26.0	30	20.0	27	18.0	19	12.7	16	10.7	5	3.3	2	1.3	1	0.7	150	100.0
1981 Rural Kerala	20	11.3	16	10.7	41	27.3	29	19.3	18	12.0	13	8.7	5	3.3	5	3.3	3	2.0	150	100.0

Comparing the birth rates in the different sample villages with the State's rate, it is seen that 15 samples (forming 24.6%) in Malabar area and 75 samples (forming 84.3%) in Travancore-Cochin area were having birth rate less than 24 (The State rate 23.5 falls in the group 20-23.9) during the year 1983. No sample of the Travancore-Cochin area was having birth rate above 40, but in Malabar area, there were 7 such samples. It shows that the majority of residents in Malabar area is having no response to the call for limiting family size.

3.8 Age specific fertility rate:

Age specific fertility rate can be defined as the number of live births in an year to 1000 women of specific age group. The age specific fertility rates in 1983 and the previous years are given in Table 6.

TABLE 6
Age specific fertility rate in rural Kerala 1977 to 1983

Age group	1977	1978	1979	1980	1981	1982	1983
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
15-19	44.2	43.6	48.5	47.0	39.3	31.8	34.9
20-24	186.2	183.2	184.8	197.2	175.9	176.5	172.7
25-29	171.9	169.1	181.4	184.3	166.2	168.0	161.0
30-34	113.1	112.7	121.5	105.8	98.6	95.4	87.5
35-39	75.9	71.4	65.1	59.5	53.9	53.8	42.5
40-44	24.3	22.6	19.4	15.9	19.4	18.1	13.6
45-49	5.6	3.7	5.5	3.6	4.9	3.8	3.1

Compared to the previous year age specific fertility rates have decreased in all age groups except the age group 15 to 19. The reason for the increase seen in the age group 15-19 is the early marriage of females in Malabar area; since the age specific fertility rate in that age group in Travancore-Cochin region was 17.1 while that in Malabar region was 61.3.

3.9 General fertility rate (G.F.R.)

General Fertility rate (G.F.R.) is the number of live births in an year to 1000 women in the reproductive age group 15-49. The General Fertility rate for the years 1977 to 1983 are given below:

Years	1977	1978	1979	1980	1981	1982	1983
G.F.R.	99.4	97.7	101.3	101.1	92.2	90.8	87.1

General Fertility rate in Malabar area was 112.3 while it was 70.5 in Travancore-Cochin are during the year 1983.

3.10 Total fertility rate (T.F.R.)

Total fertility rate denotes the average number of children that would be born to a woman during her life time, if she was to pass through her child bearing years conforming to the age specific fertility rate of the year. Total fertility rates for rural Kerala during 1983 and previous years are given below:

Year	1977	1978	1979	1980	1981	1982	1983
T.F.R.	3.1	3.0	3.1	3.1	2.8	2.7	2.6

Before a decade ie, in 1973, the total fertility rate was 3.9. The total fertility rates in Malabar and Travancore-Cochin areas were 3.4 and 2.0 respectively during the year under report, as against 3.3 and 2.3 respectively during the previous year.

3.11 Gross reproduction rate (G.R.R.)

Gross reproduction rate is the average number of female children, that would be born to a woman during her life time, if she was to pass through her child bearing years, conforming to the age specific fertility rates of the year. The Gross reproduction rates for rural Kerala for the year 1977 to 1983 are given below:

Years	1977	1978	1979	1980	1981	1982	1983
G.R.R.	1.5	1.5	1.5	1.5	1.3	1.3	1.2

3.12 *Net reproduction rate (N.R.R.)*

Net reproduction rate shows the average number of female children that would be born to a woman during her life time conforming to the age specific fertility rate and mortality condition in the year. It is obtained by multiplying the age specific female birth rates of the child bearing age groups by corresponding proportion of survivors as per life table for female (1x01) and then repeating the process as in gross reproduction rates. Net reproduction rate for the year 1983 is 1.15 as against 1.22 during the previous year:

Net Reproduction Rates for the year 1983 and previous years are given below:

Years	1977	1978	1979	1980	1981	1982	1983
N.R.R.	1.37	1.33	1.37	1.34	1.21	1.22	1.15

3.13 *Still birth rate (S.B.R.)*

Still birth rate is the number of still births to 1000 births (both the live births and still births). The still birth rates for the year 1983 and previous years are given below:

Year	1977	1978	1979	1980	1981	1982	1983
S.B.R.	19.3	23.7	20.5	18.3	20.8	12.6	13.5

The Still birth rates in Malabar and Travancore regions during the year 1983 were 20.5 and 6.1 respectively as against 17.9 and 6.7 respectively during the previous year. Still birth rates for males and females are estimated as 16.2 and 10.6 respectively during this year, while they were 13.4 and 11.7 respectively during the previous year.

3.14 *Comparison between the vital rates under sample registration system and civil registration system:*

Civil Registration System is a statutory system to record all the events of deaths and births. But the study on the comparison of vital rates under Sample Registration System and Civil Registration System reveals that the performance of the Civil Registration System has to improve to a great extent.

TABLE 7

Vital rates under rivil registration system and sample registration system—Kerala rural

<i>Years</i>	<i>Birth rates</i>		<i>Still birth rates</i>	
	<i>Civil Regi- stration</i>	<i>Sample Re- gistration</i>	<i>Civil Regi- stration</i>	<i>Sample Re- gistration</i>
(1)	(2)	(3)	(4)	(5)
1977	16.0	26.2	6.3	49.3
1978	16.1	25.8	6.1	23.7
1979	16.3	26.8	6.1	20.5
1980	15.7	26.8	5.4	18.3
1981	15.9	24.7	5.1	20.8
1982	N.A.	24.3	N.A.	12.6
1983	N A	23.5	N.A.	13.5

3.15 *Order of birth:*

The observed number of births by age of mother and order of birth of child for 1983 is presented in Table 8 below. It is seen that out of 5696 births, observed during the year 1983, 81, 42% came under first three orders of birth, while it was 79.25% during 1982. The birth under seventh order and above, during the year was 3.45% of the total births as against 4.01% during the previous year.

TABLE 8

Age of mother and order of birth of child-1983

Age of Total number mother of births	Order of births												
	1	2	3	4	5	6	7	8	9	10			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(12)	(12)
15-19	531	470	57	3	..	1	..	..	..	..	..	..	..
20-24	2300	1150	769	314	58	7	2	..	..	..	..	..	..
25-29	1784	358	555	541	220	73	28	8	1	..	..	..	..
30-34	703	57	119	166	132	109	52	40	23	3	2	2	2
35-39	285	11	24	34	48	51	46	33	18	10	10	10	10
40-44	74	..	3	6	7	7	11	11	13	9	7	7	7
45-49	19	..	1	..	3	2	4	2	3	1	3	3	3
Total	5696	2046	1528	1064	468	250	143	94	58	23	22	22	22

3.16 Medical attendance at birth:

The percentage of births under different types of medical attendance during the year 1977 to 1983 is given in Table 9 below:

TABLE 19

Medical attendance at birth (Percentage)

<i>Years</i>	<i>Institutional</i>	<i>Trained professional</i>	<i>Untrained professional</i>	<i>Non-Professional</i>	<i>Not stated</i>
(1)	(2)	(3)	(4)	(5)	(6)
1977	35.6	17.6	31.8	13.9	1.1
1978	40.8	16.4	40.6	2.2	..
1979	45.4	27.5	25.9	1.2	..
1980	46.6	24.4	28.2	0.7	0.1
1981	47.8	26.7	23.6	1.7	0.2
1982	59.1	21.8	18.2	0.9	..
1983	68.9	16.1	13.1	1.9	..

More and more people were seen utilising the institutional facilities, provided for maternal and child health during all these years. Comparing the conditions in Malabar and Travancore-Cochin regions, it is seen that the institutional medical attention for the child birth in Malabar was less than that in Travancore-Cochin region. The service of untrained professionals in both the regions was seen decreasing during the year.

3.17 Sex ratio at birth:

Sex ratio at birth is the number of males per 100 females. Sex ratio at birth during the year 1983 and previous years are given below:

<i>Years</i>	1977	1978	1979	1980	1981	1982	1983
Sex ratio	103.6	104.9	104.4	107.4	108.8	107.2	108.1

Sex ratios at birth in Malabar and Travancore-Cochin areas during the year were 111.4 and 104.6 respectively as against 105 and 107.2 respectively during 1982.

3.18 Child-Woman ratio (CWR)

Child-woman ratio is defined as the estimated number of children in the age group 0-4 years per 1000 women in the reproductive age group 15-49.

The child-woman ratios during the year 1983 and previous years are given below:

Years	1977	1978	1979	1980	1981	1982	1983
C. W. R.	459	441	451	466	441	401	400

3.19 Number of marriages and age at marriage:

The rate of marriages and re-marriages per 1000 population for males and females separately) which took place during the year 1983 is presented in Table 10.

TABLE 10

Rate of marriage per 1000 population for the year 1983

Age group	First marriage		Re-marriage		All marriages	
	Male	Female	Male	Female	Male	Female
(1)	(2)	(3)	(4)	(5)	(6)	(7)
15-19	1.1 (1.3)	45.2 (37.2)	..	0.5 (8.9)	1.1 (1.2)	45.7 (35.9)
20-24	34.5 (34.8)	64.8 (48.5)	0.6 (12.1)	2.2 (32.2)	35.1 (33.7)	67.0 (47.7)
25-29	53.8 (44.0)	20.1 (12.0)	1.9 (31.0)	2.6 (31.1)	55.7 (43.4)	22.7 (12.9)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
30—34	25.6 (16.3)	4.6 (2.0)	1.9 (24.1)	2.1 (17.8)	27.5 (16.7)	6.7 (2.7)
35—39	5.9 (3.3)	0.4 (0.2)	1.5 (17.3)	0.8 (6.7)	7.4 (3.9)	1.2 (0.5)
40—44	0.8 (0.3)	0.4 (0.1)	0.8 (6.9)	0.2 (1.1)	1.6 (0.7)	0.6 (0.2)
45—49	..	..	0.9 (8.6)	0.3 (2.2)	0.9 (0.4)	0.3 (0.1)
All	19.7 (100.0)	27.8 (100.0)	1.0 (100.0)	1.4 (100.0)	20.7 (100.0)	29.2 (100.0)

(Figures given in brackets are percentage of marriages)

The highest rate of first marriage per thousand female population during the year 1983 was 64.8 in the age group 20-24, as against 54.9 in the same age group during the previous year. In the case of males the highest rate of first marriage during the year was 53.8 in the age group 25 to 29 as against 47.8 in the same age group during the previous year. The rate of marriage of females in the age group 15-19 was seen increased by 9.4 from that in the previous year. 4.73% marriages were remarriages for both the males and females during the year, while it was 3.15% during the previous year.

The median age at marriage for males and females was 26.8 and 21.2 respectively, during the year as against 27.1 and 21.5 respectively during the previous year.

CHAPTER 4

MORTALITY MEASURES

4.1. *Crude death rate*

The crude death rate for rural Kerala in 1983 is estimated as 6.59 as against 5.93 during 1982. As in the case of births, the deaths, occurred to usual residents only were taken into account for calculating the death rate.

The crude death rates for rural Kerala and rural India from 1977 onwards are given in Table 11 hereunder.

TABLE 11

**Crude death rate in Kerala rural and All India Rural
1977-1983.**

Years	Kerala Rural			All India Rural
	Northern region	Southern region	Combined	
(1)	(2)	(3)	(4)	(5)
1977	8.39	6.64	7.3	16.0
1978	8.37	6.22	7.2	15.3
1979	8.63	5.84	7.2	13.9
1980	7.51	6.71	7.1	13.7
1981	6.91	6.07	6.5	13.6
1982	6.32	5.60	5.9	13.1
1983	7.19	6.18	6.6	13.1

Malabar region recorded the highest death rate during the year 1983, as in the previous year.

4.2. Death rate in rural areas of neighbouring States.

Compared to the death rate in the rural areas of neighbouring states, Tamil Nadu recorded the highest death rate during 1983, while Kerala the lowest, as in the previous year.

4.3. Death rates in rural and urban areas.

As regards to the urban areas of the neighbouring states, Karnataka, recorded the lowest death rate during the year 1983, while Tamil Nadu, the highest. As in the case of birth rates, the rural death rates were seen higher than the urban rates, in all the southern states except in Kerala, where the urban death rate was 0.2 higher than the rural death rate. Contrary to the condition in the previous year, the urban death rates in the neighbouring states, except Karnataka during the year, were seen increased from those in the previous year. The combined death rates and the increase in rural death rates over urban death rates are presented in Table 12 below:—

TABLE 12

Combined death rate and increase in rural death rates over urban death rates.

States	Combined death rates (Rural & Urban) 1983	Increase in rural death rate from urban death rates.	
		1982	1983
(1)	(2)	(3)	(4)
Andhra Pradesh	10.3	5.6	4.3
Karnataka	9.2	3.8	4.6
Kerala	6.7	0.4	(—)0.2
Tamil Nadu	11.6	6.3	5.2
All India	11.9	5.8	5.2

Sources: Registrar General, India.

4.4. Death rates among religious groups.

Table 13 below, presents the death rates among major religious groups in rural Kerala for the year 1983.

TABLE 13

Death rates among major religious groups 1983

<i>Regions</i>	<i>Hindus</i>	<i>Muslims</i>	<i>Christians</i>
(i) Northern	7.48	7.45	4.03
(ii) Sourthern	6.39	5.46	6.09
State	6.85	6.83	5.78

As in the previous year, the highest and the lowest death rates were in Malabar area the highest was among Hindus and the lowest among Christians. During the previous year, there was a considerable decrease in the death rates among Hindus and Muslims, in both the two regions, but during the year 1983, the death rates were seen increased among all the religions and in all the regions.

As such, at State level, the highest death rate during the year, was among Hindus and the lowest was among Christians, while the lowest death rate was among Muslims, last year.

4.5. Distribution of samples by death rates.

The distribution of samples by death rates for the year 1983 is given in Table 14 that follows:—

TABLE 14

Distribution of samples under different rates of death—1983

Region	Death rates													All											
	Sample Below 2	2-2.9	3-4.9	5-5.9	7-8.9	9-10.9	11-12.9	13-14.9	15-16.9	17 & above	(12)	(11)	(10)		(9)	(8)	(7)	(6)	(5)	(4)	(3)	(2)	(1)		
1983																									
Malbar	No.	1	..	10	18	15	13	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	61
	%	1.6	..	16.4	29.5	24.7	21.3	4.9	1.6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	100.00
Travancore-Cochin	No.	4	4	22	28	22	7	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	89
	%	4.5	4.5	24.7	31.5	24.7	7.9	2.2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	100.00
Total	No.	5	4	32	46	37	20	5	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	150
1982	%	3.3	2.7	21.3	30.7	24.7	13.3	3.3	0.7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	100.00
Rural Kerala	No.	7	8	40	43	31	15	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	150
	%	4.6	5.3	26.7	28.7	20.7	10.0	2.7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	100.00
1981	No.	4	14	20	50	37	17	6	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	150
Rural Kerala	%	2.7	9.3	13.3	33.3	24.7	11.3	4.0	0.7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	100.00

During the year under report 29 samples forming 47.5% in Malabar area and 58 samples forming 65.2% in Travancore-Cochin area were having death rate less than 7 (the State level falls in the group 5-6.9) as against 56.7% in Malabar area and 72.3% in Travancore-Cochin area during the previous year. In regard to State, 87 samples forming 58%, were having the above death rates during 1983 as against 65.3% during the previous year.

4.6. Age specific death rate

Age specific death rate is the number of deaths in a specific age-group in a particular year among 1000 persons of that age group. The age specific death rates of males and females in the two regions of the State are presented in annexure 10 appended:

The age specific death rate was highest in the age group 70 and above, and lowest in the age group 10-14 during the year 1983, as in the previous year.

As far as the males and females are concerned, the age specific death rates of males in all the age-group except the age groups 15-19 and 20-24 were seen higher than those of females. During 1982, the difference between the age specific death rates of males and females in the age group 70 and above was 9.9, but during the year 1983, it was 32.26.

4.7. Infant mortality rate (I.M.R.)

Infant mortality rate is the estimated number of deaths of infants below one year of age, out of 1000 live births in an year. The infant mortality rates for rural Kerala for the year 1977 to 1983 are furnished below:—

Years	1977	1978	1979	1980	1981	1982	1983
I.M.R.	50.7	44.8	48.6	42.5	40.4	30.3	38.9

As in the case of the State as a whole, the infant mortality rates in Malabar and Travancore-Cochin regions during 1983 were higher than those in the previous year. Infant mortality rates in Malabar and Travancore-Cochin regions during the year were 46.2 and 31.2 respectively as against 35.6 and 22.4 respectively during the previous year.

4.8 Neo-natal death rate

Neo-natal death rate can be defined as the number of deaths to children of below 28 days of age per 1000 live births in an year. It is estimated as 28.3 during the year as against 20.3 during the previous year. Neo-natal

death rate for male during the year was 29.7 while that for female was 26.7. The infant mortality has been distributed according to the period within which the infant died before completing one year of age, such as less than 7 days, 7 to 27 days and 28 days and above. The following table provides rates in each period.

TABLE 15

Infant death rates, distributed over different periods within which the infants died

<i>Region</i>	<i>Less than 7 days</i>	<i>7 to 27 days</i>	<i>Less than 28 days</i>	<i>28 days & above</i>	<i>Total</i>
(1)	(2)	(3)	(4)	(5)	(6)
Northern	28.4	4.2	32.6	13.6	46.2
Southern	19.0	4.3	23.3	7.9	31.2
<i>State:</i>	23.7	4.4	28.1	10.8	38.9

A.9 Vital rates under civil registration and sample registration system

The vital rates under Civil Registration and sample Registration System are furnished in table 16.

TABLE 16

Vital rates under civil registration and sample registration system 1977-1983

<i>Year</i>	<i>Death rate</i>		<i>Infant mortality rate</i>	
	<i>Civil Registration</i>	<i>Sample Registration</i>	<i>Civil Registration</i>	<i>Sample Registration</i>
(1)	(2)	(3)	(4)	(5)
1977	4.2	7.3	16.3	50.7
1978	4.1	7.2	13.2	44.8
1979	4.1	7.2	11.4	48.6
1980	4.0	7.1	11.7	42.5
1981	4.0	6.5	12.2	40.4
1982	N.A.	5.9	N.A.	30.3
1983	NA	6.6	NA	38.9

The table above, shows how the 'Civil Registration System,' fails to serve its moto, and to what extent its activities should be improved.

4.10 Medical attendance at death

The percentage of deaths under different types of medical attention at the time of death is furnished in table 17.

TABLE 17.

Medical attendance at death (percentage) Kerala rural—1977-1983

Year	Institutional	Reccognised Practitioner	Un-recognised Practitioner	None
(1)	(2)	(3)	(4)	(5)
1977	22	33	19	26
1978	22	34	24	20
1979	30	34	11	25
1980	32	32	19	17
1981	41	31	12	16
1982	44	31	10	15
1983	46	26	7	21

In regard to Malabar and Travancore-Cochin areas, the percentage of deaths to persons who received institutional service in Travancore-Cochin area was more than that in Malabar area during the year.

Deaths without medical service was seen increased during the year and the percentage of such deaths in Malabar and Travancore-Cochin area was 23.4 and 18.5 respectively

4.11 Expectation of life

Life tables have been constructed using the age specific death rates for 1981, 1982 and 1983 and are presented in annexures 18, 19 and 20. The expectation of life at birth for the year 1983 was 68.77 years, as against 68.46 years during the previous year. Females outlive males in this regard.

ANNEXURE I

Number of units and population in the universe and in the samples

Stratum	No. of Census villages in the Universe	Population (1981) (P)	No of units selected	Population (1981) (p)	Percentage of sample population	Raising factor for sytratum estimates (P)/(p)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
I A	73	33158	2	658	1.98	50.39210
B	217	171582	2	1540	0.90	111.41688
C	519	773395	6	7992	1.03	97.01392
D	1265	7421252	51	87246	1.17	85.06123
Northern-region	2074	8399387	61	97416	1.16	..
II A	260	87991	2	723	0.82	121.70263
B	415	325570	3	1915	0.59	170.01044
C	894	1353880	10	14845	1.09	91.20108
D	2134	10515577	74	120631	1.15	87.17143
Southernregion	3703	12283018	89	138114	1.12	..
Kerala	5777	20682405	150	235530	1.14	..

The population in the sample was estimated by using the ratio method

2. Observed population in the samples and estimated population for each stratum

Stratum	Observed population in samples in each stratum				Estimated population for each stratum			
	1-7-1983	1-1-1984	1-7-1983	1-1-1984	1-7-1983	1-1-1984	1-7-1983	1-1-1984
I A	691	696	34821	35073	34821	35073	34821	35073
B	1453	1472	161889	164006	161889	164006	161889	164006
C	8232	8095	798619	785328	798619	785328	798619	785328
D	90607	91363	7707143	7771449	7707143	7771449	7707143	7771449
Northern Region	100983	101626	8702472	8755856	8702472	8755856	8702472	8755856
II A	706	702	85922	85435	85922	85435	85922	85435
B	1938	1908	329480	324380	329480	324380	329480	324380
C	14972	15043	1365462	1371938	1365462	1371938	1365462	1371938
D	122993	123369	10721475	10754252	10721475	10754252	10721475	10754252
Southern Region	140609	141022	12502339	12536005	12502339	12536005	12502339	12536005
State	241592	242648	21204811	21291861	21204811	21291861	21204811	21291861

3 Mid-year population (observed in the samples) and estimated population according to age and sex

Age	Observed Population			Estimated Population		
	Male	Female	Total	Male	Female	Total
0-1	2569	2482	5051	224412	217132	441544
1-4	10571	10501	21072	925326	919566	1844892
5-9	13899	13332	27231*	1217173	1167930	2385103
10-14	14647	14490	29137	1285658	1270175	2555832
15-19	13807	14933	28740	1213193	1310833	2524026
20-24	11764	13554	25318	1033266	1190804	2224070
25-29	9548	10801	20349	838995	947066	1786061
30-34	7458	7806	15264	6528444	684810	1337654
35-39	6473	7010	13483	567490	615968	1183458
40-44	4997	5363	10360	438894	471123	910017
45-49	5324	5671	10995	468032	498435	966467
50-54	4207	4425	8632	369446	388820	758266
55-59	3691	3652	7343	324742	322103	646845
60 & 64	3119	3320	6439	274016	292427	566443
65-69	2467	2840	5307	217489	250501	467990
70+	3078	3793	6871	271937	334206	606143
Total	117619	123973	241592	10322913	10881898	21204811

4. Live births observed in the selected samples and estimated for each stratum

Stratum	Observed in the selected samples			Estimated Births			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Male	Female	Total	Male	Female	Total	
I A	9	5	14	453	252	705	
B	22	28	50	2451	3120	5571	
C	121	91	212	11739	8828	20567	
D	1406	1273	2679	119596	108283	227879	
Northern Region	1558	1397	2955	134239	120483	254722	
II A	5	9	14	609	1095	1704	
B	15	19	34	2550	3230	5780	
C	144	129	273	13133	11765	24898	
D	1240	1180	2420	108093	102862	210955	
Southern Region	1404	1337	2741	124385	118952	243337	
State	2962	2734	5696	258624	239435	498059	

The figures in this table are based on the 1950 Census of the United States and are subject to the usual errors of sampling and non-response.

5. Age specific fertility rate, G. F. R., T. F. R. and G. R. R.—1983

No. of Women (Estimated)

Region	Age group of women								
	15—19	20—24	25—29	30—34	35—39	40—44	45—49	All	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
Northern Region	527966	461004	369796	270261	258746	191469	189818	2269060	
Southern Region	782867	729800	577270	414549	357222	279654	308617	3449979	
State	1310833	1190804	947066	684810	615968	471123	498435	5719039	
									No. of Births (Estimated)
Northern Region	32381	96456	68596	33239	17765	4898	1387	254722	
Southern Region	13429	109244	83909	26703	3388	1490	174	243337	
State (All births)	45810	205700	152505	59942	26153	6388	1561	498059	
State (Female births)	22478	97869	73472	28834	12811	3264	707	239435	
									Age Specific Fertility Rate
Northern Region	61.33	209.23	185.50	122.98	68.66	25.58	7.31	112.26	G.F.R.T.F.R.
Southern Region	17.15	149.69	145.35	64.41	23.48	5.33	0.56	70.53	3.04
State (All births)	34.95	172.74	161.03	87.53	42.46	13.56	3.13	87.09	2.03
State (Female births)	17.15	82.19	77.58	42.10	20.80	6.93	1.42	41.87	GRR.1.24

6. Live births observed in samples classified by month of occurrence—1983

Stratum	Number of live births reported from samples													
	Total for the year	January	February	March	April	May	June	July	August	September	October	November	December	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
I														
A	14		1	2	2	2	1	1	2	2	..	1	..	..
B	50		3	3	5	4	3	5	3	6	3	4	3	8
C	212		13	17	21	10	22	25	18	19	18	19	18	12
D	2679		245	231	244	226	230	245	258	181	203	209	203	204
Northern Region	2955		262	253	272	242	256	276	281	208	224	233	224	224
II														
A	14		1	..	3	1	2	..	..	3	..	2	2	..
B	34		4	1	2	2	4	2	1	5	1	5	6	1
C	273		22	31	21	18	20	16	25	25	21	27	28	19
D	2420		212	175	227	195	211	194	200	195	206	172	224	209
Southern Region	2741		239	207	253	216	237	212	226	228	228	206	260	229
State	5696		501	460	525	458	493	488	507	436	452	439	484	453

7. Live births by type of attention at delivery—1983

Stratum	Type of attention					Total
	Institutional	Trained Professional	Untrained professional	Non-Professional	Not stated	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
I						
A	10	2	2	..	..	14
B	27	18	5	..	..	50
C	105	68	39	..	..	212
D	1425	606	581	67	..	2679
Northern Region	1567	694	627	67	..	2935
II						
A	12	1	1	..	..	14
B	26	7	1	..	..	34
C	237	32	4	..	..	273
D	2080	185	116	39	..	2420
Southern Region	2355	225	122	39	..	2741
State	3922	919	749	106	..	5696

8. Deaths observed and estimated by sex—1983

Stratum	Observed deaths			Estimated deaths		
	Male	Female	Total	Male	Female	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
I						
A	4	2	6	201	101	302
B	2	7	9	223	780	1003
C	33	27	60	3202	2619	5821
D	366	286	652	31132	24328	55460
Northern Region	405	322	727	34758	27828	62586
II.						
A	..	..	..	..	..	..
B	7	5	12	1190	850	2040
C	56	27	83	5107	2462	7569
D	454	322	776	39576	28069	67645
Southern Region	517	354	871	45873	31381	77254
State	922	676	1598	80631	59209	139840

9. Number of deaths by age and sex—1983

Region	Sex	All Ages	Age in Years															
			Below One	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70+
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
Northern region	All	727	136	60	19	11	15	13	12	10	7	23	27	30	36	66	62	200
Southern region	All	871	87	37	13	9	14	24	24	16	22	21	32	26	49	60	66	381
State	Male	922	121	43	22	12	14	11	21	17	21	26	42	35	57	83	82	315
	Female	676	102	54	10	8	15	16	15	9	8	18	17	21	28	43	46	266
	All	1598	223	97	32	20	29	27	36	26	29	44	59	56	85	126	128	581

10. Age Specific death rate based on estimated values—1983

Region	Sex	All ages	Age Groups																
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
Northern Region	Both	7.19	52.41	5.90	1.45	0.86	1.30	1.30	1.30	1.49	1.67	1.25	5.41	6.28	8.93	13.62	26.48	32.08	83.03
Southern Region	Both	6.18	35.02	3.20	0.89	0.53	0.81	0.90	1.90	1.73	2.76	3.39	4.83	4.84	10.22	15.04	19.69	85.26	
State	Both	6.59	43.86	4.53	1.17	0.67	1.01	1.05	1.74	1.70	2.15	4.20	5.39	6.40	11.41	19.42	24.08	84.50	
"	Male	7.81	46.57	3.99	1.56	0.80	0.99	0.92	2.17	2.30	3.21	5.16	7.94	8.24	15.21	26.52	33.13	102.29	
"	Female	5.44	41.05	5.07	0.78	0.54	1.02	1.17	1.37	1.14	1.16	3.31	2.99	4.65	7.59	12.77	16.22	70.03	

11. Deaths observed in Samples classified by month of occurrence—1983

Stratum	Months,												
	year	January	February	March	April	May	June	July	August	September	October	November	December
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
I A	6	1	1	1	1	1	3	2	1	2	2	1	..
B	9	1	1	1	1	1	3	..	1	2	..	..	..
C	60	5	4	5	6	6	2	9	9	5	2	4	3
D	652	40	50	51	46	51	52	79	58	57	66	53	49
Northern region	727	47	55	56	52	58	57	90	68	66	68	58	52
II A	..	..	..	..	..	..	..	..	..	..	..	..	..
B	12	1	1	1	1	1	2	2	1	1	2	1	2
C	83	4	3	4	6	7	7	12	11	5	15	3	6
D	776	76	56	68	41	48	63	77	86	62	80	67	52
Southern region	871	81	60	72	47	56	72	91	98	68	97	71	58
<i>State</i>	1598	128	115	128	99	114	129	181	166	134	165	129	110

12. Deaths classified by type of medical attention 1983

Stratum	Type of Medical attention				
	Total deaths	Institutional	Recognised Practitioner	unrecognised practitioner	None
(1)	(2)	(3)	(4)	(5)	(6)
I A	6	4	1	..	1
B	9	6	..	..	3
C	60	31	17	4	8
D	652	268	173	53	158
Northern region	727	309	191	57	170
II A B	12	2	9	..	1
C	83	39	21	1	22
D	776	388	196	54	138
Southern region	871	429	226	55	161
State:	1598	738	417	112	331

13(a) Infant deaths observed, estimated and infant death rates for each stratum—1983

Stratum	Infant deaths observed			Infant deaths Estimated			Estimated live birth rate	Infant death rate
	Male	Female	Total	Male	Female	Total		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(9)	(9)
I								
A	2	..	2	101	..	101	705	143.26
B	1	6	7	111	669	780	5571	140.01
C	7	..	7	679	..	679	20367	33.01
D	60	60	120	5104	5104	10208	227879	44.79
Northern Region	70	66	136	5995	5773	11768	254722	46.19
II								
A	..	..	..	..	..	..	1704	..
B	..	..	..	..	..	..	5780	..
C	3	1	4	274	91	365	24898	14.66
D	48	35	83	4184	3051	7235	210955	34.30
Southern Region	51	36	87	4458	3142	7600	243337	31.23
State	121	102	223	10453	8915	19368	498039	38.89

13.(b) Infant deaths observed in selected samples—1983

Stratum	Born in 1982												Born in 1983														
	7 days		28 days or less		29 days or less than 1 year		Total		7 days		28 days or less		29 days or less than 1 year		Total												
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F									
(1)	(2)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)												
I																											
A	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..
B	..	1	..	..	..	..	..	1	..	2	1	1	..	2	1	..	2	1	5			
C	..	..	..	..	..	..	..	..	5	..	..	..	2	..	7	..	..	..	..				
D	..	2	..	..	6	3	6	5	40	34	5	5	9	16	54	55	..	..	..					
Northern Region	..	3	..	..	6	3	6	6	45	36	6	6	13	18	64	60	..	..	..					
II																											
A	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
B	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
C	..	..	..	..	..	..	..	..	1	1	..	..	2	..	3	1	..	..	..					
D	1	1	1	2	4	4	6	7	27	21	7	3	8	4	42	28	..	..	..					
Southern Region	1	1	1	2	4	4	6	7	28	22	7	3	10	4	45	29	..	..	..					
State	1	4	1	2	10	7	12	13	73	58	13	9	23	22	109	89	..	..	..					

14. Still births observed, estimated and still birth rate for each stratum—1983

Stratum	Still birth observed		Still birth Estimated		Live births & Still birth rate			
	Male	Female	Male	Female	Total	estimated		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
I								
A	..	..	..	..	..	..	705	..
B	1	..	1	111	..	111	5682	19.53
C	2	1	3	194	97	291	20858	13.95
D	34	24	58	2892	2041	4933	23,412	21.19
Northern Region	37	25	62	3198	2138	5335	260057	20.51
II								
A	..	..	..	..	..	..	1704	..
B	..	..	..	..	..	..	5780	..
C	1	1	2	91	91	182	25080	7.26
D	11	4	15	959	349	1308	212263	6.16
Southern Region	12	5	17	1050	440	1490	244827	6.08
State	49	40	79	4247	2578	6825	504884	13.52

15. Estimated population Births, deaths, infant deaths, still births and vital rates for each stratum-1983

S r a t u m	E s i m a e d					V i t a l R a t e s				
	(1)	(2)	(3)	(4)	(5)	(6)	(6)	(8)	(8)	(10)
	Population	Live births	Deaths	Infant deaths	Still births	Birth rate	Death rate	Infant death rate	Still birth rate	&
A	34821	705	302	101	..	20.24	8.67	143.26	..	..
B	161889	5571	1003	780	111	34.41	6.19	140.01	19.53	..
C	798619	20567	5821	679	291	25.75	7.29	33.01	13.95	..
D	7707143	227879	55460	10208	4933	29.57	7.19	44.79	21.19	..
Northern Region	8702472	254722	62586	11768	5335	29.27	7.19	46.19	20.51	..
A	85922	1704	..	..	..	19.83	..	..	..	..
B	329480	5780	2040	..	..	17.54	6.19	..	..	..
C	1365462	24898	7569	365	182	18.23	5.54	14.66	7.26	..
D	10721475	210955	67645	7235	1308	19.68	6.31	34.30	6.16	..
Southern region	12502339	243337	77254	7600	1490	19.46	6.18	31.23	6.08	..
State	21204811	498059	139840	19368	6825	23.49	6.59	38.89	13.52	..

16. Extra events detected through overlapping and Intensive survey classified according to place & kind 1983

Stratum	Births						Deaths				
	Total	Place		kind	Total	Place	Kind		Other death day		
	(2)	In	Ou	LB	SB	In	Ou	Jyfan		1 death	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
I											
A	..	..	..	..	..	..	..	..	..	..
B	2	1	1	2	..	..	..	..	..	..
C	1	1	..	1	..	..	..	..	..	..
D	100	50	50	99	1	11	8	3	5	6	
Northern region	103	52	51	102	1	11	8	3	5	6	
II											
A	..	..	..	..	..	..	..	..	..	..
B	..	..	..	..	..	..	..	..	..	..
C	2	..	2	2	..	..	..	..	..	..
D	59	11	48	58	1	19	10	9	5	5	
Southern Region	61	11	50	60	1	19	10	9	5	5	
State	164	63	101	162	2	30	18	12	10	10	

17. Births and deaths recorded by enumerators and supervisors and detected through overlapping and intensive survey—1983

Births—1983												
(1)	(2)	(3)	Common to Enumerator & Supervisor		Enumerator		Supervisor		Others	Overlapping survey	Intensive survey	Total
			No.	%	No.	%	No.	%				
I. Northern region	2838	1898	2047	69.27	2689	91.00	14	80	23	2955		
II. Southern region	2666	2043	2162	78.88	2547	92.92	14	26	35	2741		
State	5504	3941	4209	73.90	5236	91.92	28	106	58	5696		

Deaths—1983												
Region	(12)	(11U)	Common to Enumerator & supervisor		Enumerator		Supervisor		Others	Overlapping survey	Intensive survey	Total
			No.	%	No.	%	No.	%				
I. Northern region	714	549	588	80.88	675	92.85	2	10	1	727		
II. Southern region	845	703	742	85.19	806	92.54	7	10	9	871		
State	1559	1252	1330	83.23	1481	92.68	9	20	10	1598		

18. Abridged life table based on mean age specific death rate for 1981, 1982 & 1983 (Males and Females)

Age X to $x+n$	Age specific death rate		Mean age specific death rate (m_x)	Probability of a person aged x dying before age $x+n$ (q_x)	No. of deaths (x)	No. surviving to age x out of 100000 born alive and $x+n$ alive (l_x)	Years of life lived between x and $x+n$ (l_x)	Years of life lived at x and above x (L_x)	Expecta- tion of life in years (E_x)	Beginning age (x)	
	1981	1982									1983	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	38.40	35.81	43.86	0.03936	0.03891	3891	1,00,000	96,545	6876,607	68.77	0
1-4	5.14	3.40	4.53	0.00436	0.01729	1662	96,109	381,112	6780,062	70.54	1
5-9	1.15	1.27	1.17	0.00120	0.00598	565	94,447	470,822	6398,950	67.75	5
10-14	0.53	0.60	0.67	0.00060	0.00299	281	93,882	468,707	5928,128	63.14	10
15-19	1.43	0.96	1.01	0.00113	0.00563	527	93,601	466,687	5459,421	58.33	15
20-24	1.55	0.91	1.05	0.00117	0.00583	543	93,074	464,012	4992,731	53.61	20
25-29	1.71	1.83	1.74	0.00176	0.00876	811	92,531	460,627	4528,722	48.91	25
30-34	1.89	1.56	1.70	0.00172	0.00836	785	91,720	456,637	4068,095	44.35	30
35-39	2.01	2.61	2.15	0.00226	0.01124	1022	90,935	452,120	3611,458	39.71	35
40-44	3.70	3.14	4.20	0.00368	0.01823	1639	89,913	445,467	3159,338	35.14	40
45-49	4.76	4.70	5.39	0.00495	0.02445	2158	88,274	435,975	2713,871	30.74	45
50-54	8.29	9.17	6.40	0.00795	0.03897	3356	86,116	422,190	2277,896	26.45	50
55-59	12.70	11.75	11.41	0.01195	0.05802	4802	82,760	401,795	1855,706	22.42	55
60-64	18.81	19.16	19.42	0.01913	0.09128	7116	77,958	372,000	1453,911	18.65	60
65-69	29.41	27.81	24.08	0.02710	0.12690	8990	70,842	331,735	1081,911	15.27	65
70+	87.24	75.61	84.50	0.08245	1.00000	61852	61,852	750,176	750,176	12.13	70

19. Abridged life table based on mean age specific death rate for 1981, 1982 & 1983 (Males)

Age x to $x+n$	Age specific death rate		Mean age specific death rate (m_x)	Probability of n person aged x dying before age $x+n$ (q_x)	No. of deaths (d_x)	No. surviving to age x out of 100000 born alive (l_x)	Years of life lived between x and $x+n$ (L_x)	Years of life lived at x and above x (T_x)	Expectation of life in years (E_x)	Beginning age (x)	
	1981	1982									1983
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
V1	44.92	37.14	46.57	0.04288	0.04065	4065	100,000	96,338	6,602,462	66.02	0
1-4	4.76	4.00	3.99	0.00425	0.01686	1617	95,935	380,506	6,506,124	67.82	1
5-9	1.66	1.47	1.56	0.00156	0.00777	733	94,318	469,757	6,125,618	64.95	5
10-14	0.40	0.69	0.80	0.00063	0.00314	294	93,585	467,190	5,655,861	60.43	10
15-19	1.40	0.86	0.99	0.00108	0.00538	502	93,291	465,200	5,188,671	55.62	15
20-24	1.68	0.75	0.92	0.00112	0.00558	518	92,789	462,650	4,723,471	50.91	20
25-29	1.90	1.70	2.17	0.00192	0.00955	881	92,271	459,152	4,260,821	46.18	25
30-34	2.44	2.15	2.30	0.00230	0.01143	1045	91,390	454,337	3,801,669	41.60	30
5-39	1.59	2.95	3.21	0.00258	0.01282	1158	90,345	448,850	3,347,332	37.05	35
40-44	5.52	4.64	5.16	0.00511	0.02523	2250	89,187	440,310	2,898,502	32.50	40
45-49	7.57	6.65	7.94	0.00739	0.03628	3154	86,957	426,800	2,458,192	28.27	45
50-54	10.04	12.90	8.24	0.01039	0.05063	4242	83,783	408,310	2,031,392	24.25	50
55-59	18.48	15.58	15.21	0.01642	0.07886	6273	79,541	382,022	1,623,082	20.41	55
60-64	24.49	24.26	26.52	0.02509	0.11804	8649	73,268	344,717	1,241,060	16.94	60
65-69	36.29	32.97	33.13	0.03413	0.15723	10160	64,619	29,7695	896,343	13.87	65
70+	89.68	80.94	102.29	0.09097	1.00000	54459	54,459	598,648	598,648	10.99	70

20. Abridged life table based on mean age specific death rate for 1981, 1982 & 1983 (Female)

Age x to $x+n$	Age specific death rate			Mean age specific death rate (m_{mx})	Probability of a person aged x dying before age $X+n$	No. of deaths (d_x)	No. surviving to age x out of 100000 born alive (L_x)	Years of life lived between x and $x+n$ (L_x)	Years of life lived at x and above x (T_x)	Expectation of life in years (E_x)	Beginning age (x)
	1981	1982	1983								
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	31.51	34.43	41.05	0.03566	0.03702	3702	100000	96770	7178220	71.78	0
1-4	5.53	2.78	5.07	0.00446	0.01768	1702	96298	381788	7081450	73.54	1
5-9	0.62	1.07	0.78	0.00082	0.00409	387	94596	472012	6699660	70.82	5
10-14	0.66	0.52	0.54	0.00057	0.00284	268	94209	470375	6227650	66.10	10
15-19	1.46	1.06	1.02	0.00118	0.00588	552	93941	468325	5752775	61.29	15
20-24	1.43	1.05	1.17	0.00122	0.00608	568	93889	465525	5288950	56.63	20
25-29	1.54	1.95	1.37	0.00162	0.00807	749	92821	462232	4823425	51.96	25
30-34	1.39	0.99	1.14	0.00117	0.00583	537	92072	459017	4361193	47.37	30
35-39	2.38	2.31	1.16	0.00195	0.00970	888	91335	455455	3902176	42.63	35
40-44	2.07	1.76	3.31	0.00238	0.01183	1072	90647	450555	3446721	38.02	40
45-49	2.34	2.94	2.99	0.00276	0.01370	1227	89575	444807	2996166	33.45	45
50-54	6.62	5.68	4.65	0.00565	0.02786	2461	88348	435587	2551359	28.88	50
55-59	6.81	7.86	7.59	0.00742	0.03642	3128	85887	421615	2115772	24.63	55
64-60	13.32	14.32	12.77	3.01347	0.06515	5392	82759	400315	1694160	20.47	57
65-69	22.72	22.87	16.22	0.02060	0.09795	7578	77367	367890	1293842	16.72	65
70+	85.04	71.04	70.03	0.07537	1.00000	69789	69789	925952	925952	13.27	70



964

