

Report (VS) No. 47

6



GOVERNMENT OF KERALA

RESIDENTIAL VITAL RATES
IN
CORPORATIONS & MUNICIPALITIES
1981

POPULATION DIVISION

DEPARTMENT OF ECONOMICS AND STATISTICS

JULY 1984

PREFACE



This report presents the adjusted residential deaths in Municipalities and Corporations in the State. Rates have been estimated from the registered births and deaths to the residents, after making adjustments for under registration and for the events occurring outside the Municipal/Corporation areas, using the result of spot-check conducted in the Municipality/Corporation. Only 34 Municipalities and Corporations are covered in the report. The report has been prepared by the Vital Statistics Section of the Population Division of the Directorate of Economics and Statistics.

Trivandrum,
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RESIDENTIAL VITAL RATES IN CORPORATIONS & MUNICIPALITIES 1981

1. Introduction:

The report contains the results of the spot-check on births and deaths conducted for estimation of vital rates in Municipalities/Corporations of the State for the year 1981 under the scheme "Improvement of Vital Statistics in Municipalities".

At present birth and death registration in the State is governed by the Registration of Births and Deaths Act of 1969 and the Rules of 1970. All births and deaths are not registered due to various reasons under the system of registration, prevalent in the State. The system of spot-check was introduced in 3 Corporations, 30 Municipalities and in Guruvayoor Township to estimate the correct residential vital rates, after taking into account the extent of under registration of events to normal residents residing outside the urban area.

2. Measures for Improvement of Registration:

The following measures were also taken to improve the registration of vital events.

- (a) The Municipal authorities are exhibiting notices to educate the public, the importance of births and deaths registration.
- (b) Slides are exhibited in cinema theatres emphasising the importance of vital registration.
- (c) Show cause notices are issued to defaulters for failure to register events and action is taken to prosecute them as per provisions of Births and Deaths Act by the Municipal/Corporation Commissioner.

3. Scheme for Improvement of Vital Statistics:

During the year 1981, three Corporations, 30 Municipalities and the Guruvayoor Township were covered under the Scheme. In the Corporations of Trivandrum, Cochin and Calicut, 18 wards each and the Quilon and Alleppey Municipalities 50 per cent of the wards (18 wards) were selected as the sample for the study. All the wards in Guruvayoor Township and 15 wards each in all other Municipalities were selected for spot-check work by the Statistical staff. The Compiler and Research Assistant assigned for the work visited these selected wards periodically and collected data on vital events from each household.

4. Methodology:

The results of spot-check are used to estimate:—

- (a) the extent of under registration of vital events in the area and
- (b) residential rates of birth and death of the area.

(a) *Calculation of the extent of under Registration*

The vital events occurring to normal residents enumerated during the spot-check are divided in to 3 categories.

- (i) Events occurring inside the town and registered.
- (ii) Events occurring inside the town but not registered.
- (iii) Events occurring outside town, registered or unregistered.

For calculation of the percentage of under registration, the events occurring to persons coming into the town/city to avail themselves of better medical facilities are excluded.

(b) *Calculation of residential rates of birth and death*

Residential rates are broadly defined as the rate of occurrence of vital events to the normal residents of an area in a year. Vital events occurred to outsiders should be excluded from the total registered events of the town/city in order to find out the events occurred to the normal residents alone. The registered rate to the normal residents is weighted for under registration and further adjusted for events occurring outside the town to the normal residents.

5. General Background of the Towns/Cities:

Appendix I presents a general picture on area and population of the Corporations and Municipalities under the scheme. The data on hospitals and dispensaries available in the towns/cities for the year 1981 are given in Appendix II. Appendix III shows the number of burial grounds and cremation grounds in the Corporations/Municipalities. The details about the area and population for registration unit are given in Appendix IV. Appendix V—Town-wise details regarding the vital events registered during the year are furnished in Appendix V.

The data on distribution of deaths according to causes are given in Appendix VI.

6. Results of Spot-checks:

Appendix VII provides the details on vital events collected through spot-check during the year 1981. Appendix VIII shows the percentage of under registration and the percentage of events occurred to normal residents outside the towns. The highest percentage of under registration of birth is 31.05 at Cannanore and death 46.58 at Trichur during the year 1981 as against 36.34 and 47.40 respectively at Trichur during the year 1980. 100 per cent of births were recorded at Attingal, Kottayam, Muvattupuzha, Alwaye and Chittoor-Thathamangalam Municipalities. Similarly all deaths were registered at Attingal, Muvattupuzha and Kodungalloor. The percentage of under

registration of birth and death slightly increased in some Municipalities, viz. Neyyattinkara, Trivandrum, Kayamkulam, Mavelikkara and Cochin. But slight decrease is noticed at Palai, Alwaye, Parur, Irinjalakuda, Guruvayoor Township, Malappuram and Badagara Municipalities.

With regard to the vital events to normal residents occurred outside the town, no events is recorded in the Trivandrum Corporation during the year 1981. The highest percentage (76.15) of birth occurred outside the town to normal residents was recorded at Guruvayoor Township and the lowest (3.79) at Chittur-Thathamangalam. Similarly the highest percentage (44.74) of death occurred outside to normal residents was recorded at Alwaye and the lowest (0.79%) at Chittur-Thathamangalam. The details are given in Appendix VIII.

7. Adjusted Residential Vital Rates and Registered Vital Rates for the year 1981:

The adjusted Residential Vital Rates and the registered vital rates are given in Appendix IX

The highest registered birth rate occurred to normal residents within the Municipality was recorded at Kasargode by 30.58 and the lowest by 2.91 at Guruvayoor during the year 1981. But the above rate during the year 1980 was 26.16 at Kasargode and 2.88 at Guruvayoor.

Similarly the highest death rate (6.82) registered to normal residents was recorded at Chittoor-Thathamangalam and the lowest (1.19) at Alwaye during the year 1981 as against 8.58 at Chittur-Thathamangalam and 2.86 at Alwaye respectively during the year 1980. Slight increase is noticed in some Municipalities, while it decreased in some other Municipalities. The adjusted residential birth rate for Kerala is 23.25 and death rate is 6.02 for the year 1981 as against 23.70 and 6.13 respectively for the year 1980. The highest adjusted birth rate for the year 1981 was at Kodungalloor by 40.01 as against 43.19 during the year 1980. Similarly the lowest rate recorded at Alwaye by 7.04 during the year 1981 as against 3.03 at Tellicherry during the year 1980.

The highest adjusted death rate is 8.96 at Cannanore during the year 1981. But the highest death rate (10.76) during the year 1980 was also at Cannanore. The lowest death rate (2.39) recorded at Alwaye during the year 1981 as against 3.59, at Attingal during the year 1980.

8. Scheme for Improvement of Vital Statistics—Sample Registration Scheme:

The scheme was introduced in the State in 1965. Under the scheme a sample of 150 rural Census villages and 80 urban blocks have been randomly selected. In each of these samples a part-time Enumerator has been posted.

The Enumerator visits all households in the Samples periodically and collect data on vital events in respect of the members of the households. This scheme for rural area is operated by the Department of Economics and Statistics and that of urban areas by the Department of Census Operations, Government of India. The results of the survey for the year 1980 and 1981 are given below:

	<i>Birth Rate</i>		<i>Death Rate</i>	
	1980	1981*	1980	1981*
Rural	27.0	26.4	7.1	7.1
Urban	25.5	23.3	6.5	8.3
Combined	26.8	26.0	7.0	7.2

*Provisional

9. Conclusion:

Under the existing conditions, the coverage of civil registration is incomplete due to under registration of vital events. The spot-check in Municipalities and Corporations helps the concerned authorities to persuade the people to register the un-registered cases subsequently with fine and thereby the percentage of under registration is reduced.

Annual Residential Vital Rates 1981

Sl. No.	Name of Municipality/Corporation	(Area and Population)			Density of Population
		Area (Sq. Kms.)	Mid Year Population	(4)	
(1)	(2)	(3)	(4)	(5)	
1	Neyyattinkara	9.99	28100	2812	
2	Trivandrum	75.00	485200	6469	
3	Attingal	14.78	29700	2009	
4	Quilon	18.48	138400	7489	
5	Kayamkulam	21.78	61600	2828	
6	Mavelikara	12.65	26600	2102	
7	Alleppey	44.94	170200	3787	
8	Sherthalai	16.19	40600	2507	
9	Changanacherry	13.26	52100	3929	
10	Thiruvalla	14.48	29300	2023	
11	Kottayam	16.45	64600	3927	
12	Palai	25.90	21700	837	
13	Vaikom	8.73	21100	2416	
14	Muvattupuzha	13.18	25400	1927	
15	Cochin	87.34	515600	5903	

(1)	(2)	(3)	(4)	(5)
16	Alwaye	7.17	25300	3528
17	Parur	9.02	26300	2915
18	Perumbavoor	13.61	23200	1704
19	Irinjalakuda	11.24	26100	2322
20	Trichur	12.89	78500	6089
21	Guruvayoor Township	7.48	17900	2393
22	Kunnankulam	6.89	19500	2830
23	Palghat	26.60	111800	4203
24	Chittoor-Thathamangalam	14.71	30500	2073
25	Calicut Corporation	84.20	396700	4711
26	Badagara	21.34	64600	3027
27	Tellicherry	16.19	75800	4681
28	Kasargode	16.84	43400	2577
29	Cannanore	11.03	61100	5539
30	Chalakudy	25.23	42000	1664
31	Punalur	34.60	43200	1248
32	Tirur	16.55	41100	2483
33	Malappuram	33.69	40100	1190
34	Kodungallur	17.40	28500	1637

No. of Hospitals and other Institutions

Sl. No.	Name of Municipality	Hospitals										Dispensaries and other Institutions						Maternity and C.H. Centre			
		Public		Private		Total	Public		Private		Total	Public		Private		Total	Public		Private		Total
		No. Beds	No. Beds	No. Beds	No. Beds	No. Beds	No. Beds	No. Beds	No. Beds	No. Beds	No. Beds	No. Beds	No. Beds	No. Beds	No. Beds	No. Beds	No. Beds	No. Beds	No. Beds	No. Beds	No. Beds
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	
1.	Neyyattinkara	3	185	4	54	7	239	..	..	7	..	7	..	2	..	..	..	..	..	2
2.	Trivandrum	20	4300	14	600	34	4900	8	..	60	..	68	..	37	..	..	..	..	..	37
3.	Attingal	..	..	7	190	7	190	2	45	8	..	10	45	3	..	..	..	..	..	3
4.	Quilon	6	950	18	900	24	1850	5	..	27	..	32	..	15	..	..	..	..	..	15
5.	Kayamkulam	1	105	8	180	9	285	..	..	4	..	4	..	4	..	..	..	..	..	4
6.	Mavelikara	2	200	1	106	3	306	..	..	7	57	7	57	1	..	..	..	..	..	1
7.	Alleppey	6	1329	5	69	11	1398	2	..	103	..	105	..	6	..	..	..	..	..	6
8.	Sherthalai	1	126	2	164	3	290	2	..	..	..	2	..	4	..	..	..	..	..	4
9.	Changanacherry	2	139	9	196	11	335	..	..	9	..	9	..	4	..	..	..	..	..	4
10.	Thiruvalla	2	140	6	445	8	585	..	..	12	..	12	..	1	..	..	..	..	..	1
11.	Kottayam	2	295	14	185	16	480	3	..	53	..	56	..	3	..	..	..	..	..	3
12.	Palai	4	210	6	321	10	531	..	..	13	..	13	..	..	..	..	..	..	..	..
13.	Vaikom	2	250	2	40	4	290	..	..	32	..	32	..	2	20	..	..	..	..	2
14.	Muvattupuzha	3	144	9	260	11	404	3	20	2	..	5	20	2	..	..	..	..	..	2

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
15.	Cochin	12	1902	34	1948	46	3850	3	14	90	..	93	14	6	..	..	..	..	6
16.	Alwaye	1	148	12	320	13	468	1	..	2	..	3	..	2	..	..	..	..	2
17.	Parur	2	143	4	85	6	228	..	..	8	..	8	..	2	..	..	..	..	2
18.	Perumbavoor	2	141	9	340	11	481	1	..	5	..	6	..	4	..	..	..	..	4
19.	Irinjakuda	2	189	2	40	4	229	1	..	..	..	1	..	2	..	..	..	..	2
20.	Trichur	5	1124	10	564	15	1688	1	..	12	..	13	..	4	..	..	..	..	4
21.	Guruvayoor Township	20	1	13	2	33	..	..	..	..	..	..	..	1	..	..	..	..	1
22.	Kunnamkulam	1	94	5	93	6	187	2	..	..	..	2	..	1	..	..	..	..	1
23.	Palghat	4	508	15	169	19	677	2	..	11	..	13	..	3	..	..	..	..	3
24.	Chittoor-Thathamangalam	2	100	..	..	2	100	..	..	6	11	6	11	2	..	..	..	..	2
25.	Calicut Corporation	15	3317	24	835	39	4152	7	..	40	..	47	..	6	..	..	..	..	6
26.	Badagara	2	190	..	..	2	190	..	..	37	244	37	244	6	..	..	..	..	6
27.	Tellicherry	2	410	11	190	13	600	2	..	41	..	43	..	2	10	2	13	8	13
28.	Kasargode	1	120	1	250	2	370	..	..	13	300	13	300	1	..	..	..	..	4
29.	Cannanore	2	55	16	360	18	415	2	..	16	42	18	42	1	9	..	..	..	1
30.	Chalakudy	1	144	7	270	8	414	2	..	4	..	6	..	3	..	..	..	..	1
31.	Punalur	1	100	8	180	9	280	2	..	3	..	5	..	3	..	..	..	..	3
32.	Tirur	3	145	75	220	78	365	2	..	6	..	8	..	3	..	..	..	..	3
33.	Malappuram	4	83	1	55	5	138	1	..	3	..	4	..	2	..	..	..	..	3
34.	Kodungalloor	1	160	2	40	3	200	1	..	..	..	1	..	..	..	..	..	..	2

No. of Burial grounds, Cremation grounds, Wards and Civil Registration Units

Sl. No.	Name of Municipality/ Corporation	Burial Grounds			Cremation Grounds			V.S. Registration Unit	
		Municipality		Total	Municipality		Total	No. of wards	No. of Regis- tration Units
		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1.	Neyyattinkara	1	4	5	..	3	3	20	1
2.	Trivandrum	..	27	27	2	4	6	50	13
3.	Attungal	1	2	3	..	5	5	20	1
4.	Quilon	2	15	17	..	..	..	36	3
5.	Kayamkulam	..	14	14	..	3	3	32	1
6.	Mavelikkara	1	9	10	..	1	1	20	1
7.	Alleppey	..	10	10	2	13	15	36	6
8.	Sherthalai	1	1	2	..	2	2	24	1
9.	Changanacherry	1	6	7	..	1	1	28	1
10.	Thiruvalla	2	..	2	..	..	..	20	1
11.	Kottayam	1	15	16	..	1	1	32	4
12.	Palai	1	4	5	..	..	..	20	1
13.	Vaikom	1	1	2	1	..	1	20	1
14.	Muvattupuzha	1	4	5	..	..	..	20	1
15.	Cochin	8	40	48	5	11	16	50	2

Registration Units with Area and Population

Sl. No.	Name of Municipality/Corporation	No. of Registration Units	Area in sq. Kms.	Area/Registration Unit	Estimated population	Population/Registration Unit
1	Neyyattinkara	1	9.99	9.99	28100	28100
2	Trivandrum	13	75.00	5.76	485200	37323
3	Attingal	1	14.78	14.78	29700	29700
4	Quilon	3	18.48	6.16	138400	46133
5	Kayamkulam	1	21.78	21.78	61600	61600
6	Mavelikkara	1	12.65	12.65	26600	26600
7	Alleppey	6	44.94	7.49	170200	28366
8	Shertallai	1	16.19	16.19	40600	40600
9	Changanacherry	1	13.26	13.26	52100	52100
10	Thiruvalla	1	14.48	14.48	29300	29300
11	Kottayam	3	17.00	5.66	64600	21533
12	Palai	1	25.90	25.90	21700	21700
13	Vaikom	1	8.73	8.73	21100	21100
14	Muvattupuzha	1	13.18	13.18	25400	25400
15	Cochin	2	87.94	43.67	515600	25780
16	Alwaye	2	7.17	3.58	25300	12650

(1)	(2)	(3)	(4)	(5)	(6)	(7)
17	Parur	1	9.02	9.02	26300	26300
18	Perumbavoor	1	13.61	13.61	23200	23200
19	Irinjalakuda	1	11.24	11.24	26100	26100
20	Trichur	1	12.89	12.89	78500	78500
21	Guruvayoor	1	7.48	7.48	17900	17900
22	Kunnamkulam	1	6.89	6.89	19500	19500
23	Palghat	5	26.60	5.32	111800	22360
24	Chittoor-Thathamangalam	2	14.71	7.35	30500	15250
25	Calicut Corporation	14	84.20	6.01	396700	28335
26	Badagara	3	21.34	7.11	64600	21533
27	Tellicherry	4	16.19	4.04	75800	18950
28	Kasargode	2	16.84	8.42	43400	21700
29	Cannanore	4	11.03 *	2.75	61100	15275
30	Chalakudy	1	25.23	25.23	42000	42000
31	Punalur	1	34.60	34.60	43200	43200
32	Tirur	1	16.55	16.55	41100	41100
33	Malappuram	1	33.69	33.69	40100	40100
34	Kodungallur	1	17.40	17.40	28500	28500

Vital events registered during the year 1981

Sl. No.	Name of Municipality/ Corporation	No. of Live Births				No. of still Births							
		Total events		Events to normal residents		Total events		Events to normal residents					
		M	F	T	M	F	T	M	F	T			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	Neyyattinkara	1223	1226	2549	210	229	439	17	4	21	..	..	..
2	Trivandrum	12934	12764	25698	4300	4266	8566	156	140	296	52	47	99
3	Attingal	811	778	1589	134	135	269	11	8	19	2	3	5
4	Quilon	5677	5451	11128	1223	1194	2417	86	76	161	13	7	20
5	Kayamkulam	1601	1577	3178	600	573	1173	19	21	40	5	12	17
6	Mavelikara	1395	1355	2750	209	214	423	3	3	6	..	..	..
7	Alleppey	3586	3715	7301	1764	1644	3408	16	8	24	2	5	7
8	Shertallai	1183	1091	2274	313	307	620	11	13	24	2	1	3
9	Changanacherry	1196	1119	2315	366	345	711	5	2	7	1	1	2
10	Thiruvalla	1499	1402	2901	185	181	366	15	6	21	..	..	..
11	Kottayam	2388	2039	4427	390	370	760	30	18	48	10	8	18
12	Palai	1352	1290	2642	114	112	226	7	15	22	..	1	1
13	Vaikom	938	988	1926	111	116	227	10	12	22	1	1	2
14	Muvattupuzha	1113	1265	2378	228	213	438	12	8	20	4	5	9
15	Cochin	7662	7095	14757	4483	4123	8606	109	112	221	47	46	93
16	Alwaye	2056	1966	4022	55	50	105	20	28	48	3	4	7

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
17	Parur	1508	1448	2953	174	179	353	31	33	64	3	2	5
18	Perumbavoor	980	957	1937	148	137	285	12	10	22	4	2	6
19	Irinjalakuda	1028	997	2025	167	175	342	21	26	47	..	..	..
20	Trichur	6078	6043	12121	579	600	1179	47	44	91	4	3	7
21	Guruvayoor Township	41	36	77	29	23	52	..	..	..	..	..	..
22	Kunnamkulam	1461	1254	2715	120	98	218	22	30	52	..	1	1
23	Palghat	3226	3037	6263	1033	891	1924	99	74	173	18	16	34
24	Chittoor.	628	621	1249	302	270	572	23	18	41	7	1	8
25	Calicut Corporation	..	..	19238	..	..	8899	..	..	515	..	..	106
26	Badagara	3454	3319	6773	746	673	1419	18	16	34	6	2	8
27	Tellicherry	4014	2772	6786	263	254	517	47	42	89	1	..	1
28	Kasargode	2188	2088	4276	666	661	1327	55	66	121	6	10	16
29	Cannanore	1471	1519	2990	478	507	985	1	..	1	1	..	1
30	Chalakudy	1099	1034	2133	209	181	390	9	9	18	..	1	1
31	Punalur	1480	1440	2920	449	507	956	27	33	60	5	6	11
32	Tirur	1654	1517	3172	386	356	742	38	31	69	..	..	..
33	Malappuram	871	818	1689	375	366	741	17	17	34	..	1	1
34	Kodungalloor	1566	1378	2944	388	282	670	17	24	41	2	3	5

Vital events registered during the year

Sl. No.	Name of Municipality/Corporation	No. of Infant deaths							No. of other deaths							No. of maternal deaths									
		Total events							Total events							Total events									
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)						
1	Neyyattinkara	15	19	32	2	9	11	152	78	230	67	39	106	..	..	..	..	..	..	..	..	..	..	..
2	Trivandrum	457	322	779	146	114	260	2982	1886	4868	994	629	1623	..	38	38	..	..	..	..	..	..	..	..
3	Attingal	3	4	7	1	1	2	64	41	105	53	38	91	..	..	..	..	..	..	..	..	..	..	..
4	Quilon	140	120	260	18	18	36	801	551	1352	224	187	411	..	..	..	..	..	..	..	..	..	..	..
5	Kayamkulam	12	6	18	5	1	6	147	114	261	128	106	234	..	..	..	..	..	..	..	..	..	..	..
6	Mavelikara	17	13	30	2	2	4	180	105	285	84	55	139	..	..	..	..	..	..	..	..	..	..	..
7	Alleppey	99	81	180	20	24	44	1056	528	1584	412	313	725	..	..	..	..	..	..	..	..	..	..	..
8	Sherthalai	21	18	39	5	5	10	253	172	425	117	93	210	..	..	..	..	..	..	..	..	..	..	..
9	Changanacherry	7	16	23	3	6	9	122	98	220	89	94	183	..	2	2	..	..	..	..	..	..	..	..
10	Tiruvalla	26	20	46	2	2	4	208	144	352	76	52	128	..	..	..	..	..	..	..	..	..	..	..
11	Kottayam	16	10	26	8	4	12	282	200	482	137	114	251	..	2	2	..	..	..	..	..	..	..	..
12	Palai	26	15	41	1	1	2	141	61	202	62	29	91	..	..	..	..	..	..	..	..	..	..	..
13	Vaikom	13	11	24	2	1	3	97	106	203	26	31	57	..	..	..	..	..	..	..	..	..	..	..
14	Muvattupuzha	38	25	63	8	11	19	138	107	245	52	57	109	..	..	..	..	..	..	..	..	..	..	..

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
15	Cochin	212	159	371	104	80	184	2135	1372	3507	1312	843	2155	..	..	..	..	..	..
16	Alwaye	28	31	59	5	7	12	104	152	256	12	6	18	..	..	..	..	..	..
17	Parur	20	14	34	3	3	6	131	87	218	52	46	98	..	..	..	..	..	..
18	Perumbavoor	10	9	19	1	3	4	86	59	145	40	36	76	..	..	..	..	..	..
19	Irinjalakuda	22	9	31	..	3	3	136	74	210	72	50	122	..	..	..	..	..	..
20	Trichur	113	127	240	19	23	42	1194	715	109	164	119	283	..	..	..	..	..	..
21	Guruvayoor	3	..	3	2	..	2	65	44	109	42	40	82	..	..	..	..	..	..
22	Kunnamkulam	24	12	36	1	2	3	113	88	201	51	55	106	..	..	..	..	..	..
23	Palghat	197	172	369	54	41	95	816	458	1264	326	254	580	..	2	2	..	..	..
24	Chittoor-Thatha- mangalam	26	23	49	10	6	16	178	138	316	116	76	192	..	..	..	..	..	..
25	Calicut Corporation	..	..	962	..	..	294	..	..	5096	..	..	2057	..	4	4	..	..	..
26	Badagara	69	51	120	12	8	20	249	170	419	154	106	260	..	..	..	..	..	..
27	Tellicherry	87	47	134	6	4	10	511	372	883	139	128	267	..	..	..	..	..	..
28	Kasargode	63	32	95	12	9	21	199	144	343	76	68	144	..	..	..	..	..	..
29	Cannanore	7	8	15	4	4	8	248	239	487	161	150	311	..	..	..	..	..	..
30	Chalakudy	17	4	21	4	..	4	156	64	220	92	42	134	..	..	..	..	..	..
31	Punalur	23	19	42	11	14	25	142	97	239	88	67	155	..	..	..	..	..	..
32	Tirur	49	48	97	7	4	11	213	167	380	64	76	140	..	..	..	..	..	..
33	Malappuram	23	18	41	5	4	9	111	80	191	100	71	171	..	..	..	..	..	..
34	Kodungalloor	32	24	56	2	3	5	166	73	239	95	40	135	..	..	..	..	..	..

APPENDIX VI

Deaths according to Causes*

Sl. No.	Name of Municipality/ Corporation	Plague	Cholera	Smallpox	Diarrhoea and dysentery	Respiratory diseases	Enteric fever	Diphtheria	Hydrophobia	Gastro enteritis	Rabies	Heart failure, respiratory and other complaints	Others
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	Neyyattinkara	..	..	..	6	30	6	..	..	..	..	..	220
2	Trivandrum	..	..	..	618	169	..	22	..	335	..	1360	3181
3	Attungal	..	..	..	..	2	..	..	..	..	..	26	84
4	Quilon	..	..	..	22	..	2	5	9	..	..	190	1384
5	Kayamkulam	..	..	..	11	25	11	..	..	2	1	48	183
6	Mavelikara	..	..	..	5	..	6	7	..	..	..	..	297
7	Alleppey	..	..	..	9	..	167	..	3	..	..	..	1585
8	Shertallai	..	..	..	9	..	11	..	..	..	..	..	444
9	Changanacherry	..	..	..	6	9	14	..	..	..	..	..	216
10	Thiruvalla	..	..	..	16	10	24	..	..	..	..	..	348
11	Kottayam	..	..	..	1	..	..	..	..	..	8	..	501
12	Palai	..	..	..	14	4	22	..	..	..	..	..	203
13	Vaikom	..	3	..	1	..	6	2	..	..	3	..	212
14	Muvattupuzha	..	..	..	43	..	24	11	..	..	..	4	226

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
15	Cochin	..	..	..	5	113	..	..	..	24	11	..	3725
16	Alwaye	..	..	..	40	14	16	4	10	..	..	16	215
17	Parur	..	..	..	6	77	4	..	..	..	..	..	165
18	Perumbavoor	..	..	..	4	..	..	..	..	..	..	..	160
19	Irinjalakuda	..	..	..	..	..	..	..	..	..	..	..	241
20	Trichur	..	..	..	3	..	3	1	..	..	4	271	1867
21	Guruvayoor	..	..	..	1	9	3	..	..	..	..	..	99
22	Kunnankulam	..	..	..	4	..	..	..	..	..	..	..	233
23	Palghat	..	..	..	17	..	..	2	2	..	3	..	1621
24	Chittoor-Thatha- mangalam	..	..	..	7	..	18	..	1	..	..	..	339
25	Calicut Corporation	..	..	..	139	..	13	3	29	..	38	..	5840
26	Badagara	..	..	..	40	1	13	..	6	..	10	..	210
27	Tellicherry	..	..	..	24	..	12	..	..	..	..	..	981
28	Kasargode	..	..	..	8	..	22	..	..	..	..	..	403
29	Cannanore	..	..	..	43	..	11	..	..	..	..	..	448
30	Chalakudy	..	..	..	1	..	..	..	..	..	..	..	230
31	Punalur	..	..	..	..	..	2	..	..	..	..	16	279
32	Tirur	..	..	..	3	..	4	..	..	14	..	..	456
33	Malappuram	..	..	..	6	..	..	..	..	5	..	..	221
34	Kodungalloor	..	..	..	40	4	13	2	21	..	..	40	175

Results of Spot Check

Sl. No.	Name of Municipality Corporation	No. of wards selected for spot check	Total No. of house holds visited	No. of house holds visited	No. of events to normal residents detected					Regd. outside Municipality	Regd. outside Municipality	Regd. outside Municipality	
					Live Births		Infant deaths		Other deaths				
					Enume-rated	Regd.	Enume-rated	Regd.	Enume-rated				Regd.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	Neyyattinkara	15	5205	5205	375	149	186	8	4	2	75	45	19
2	Trivandrum	18	34914	17672	1057	985	Nil	197	197	..	451	418	..
3	Attingal	15	6451	5151	145	99	46	..	..	..	74	68	6
4	Quilon	18	11620	11620	1167	973	112	38	14	10	216	128	24
5	Kayamkulam	15	4466	4466	557	336	168	6	..	2	113	66	22
6	Mavelikara	15	3713	3713	348	219	124	1	1	..	123	103	14
7	Alleppey	18	14065	14065	1590	1285	230	4	3	..	435	354	13
8	Sherthalai	15	6588	6588	348	211	135	3	3	..	127	115	10
9	Chenganacherry	15	5757	5757	349	174	154	2	..	1	90	42	27
10	Thiruvalla	15	4772	4772	272	196	61	2	2	..	93	71	19
11	Kottayam	15	8144	8144	275	156	119	1	1	..	96	73	22
12	Palai	15	3354	3354	227	131	95	5	1	4	60	49	7
13	Vaikom	15	3931	3931	270	166	101	4	2	2	56	40	12
14	Muvattupuzha	15	2999	2999	122	84	38	..	..	..	11	7	4

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
15	Cochin	18	28727	28727	2831	1827	470	19	12	..	697	395	28
16	Alwaye	15	4647	3112	173	102	71	..	..	..	38	19	17
17	Parur	15	4959	4959	346	227	106	1	1	..	82	64	11
18	Perumbavoor	15	3261	3261	290	153	127	..	..	..	71	49	15
19	Irinjalakuda	15	3849	3849	342	173	163	3	2	1	124	101	13
20	Trichur	15	5882	5882	467	278	98	5	2	1	175	84	18
21	Guruvayoor	4	2878	2878	218	51	166	2	..	1	97	81	14
22	Kunnankulam	15	3585	3585	343	181	161	8	3	5	130	98	19
23	Palghat	15	7618	7618	679	530	144	8	8	..	191	175	12
24	Chittoor-												
	Thathamangalam	15	4142	4142	211	203	8	..	..	..	127	125	1
25	Calicut	18	18150	18150	2498	2047	212	..	..	..	567	480	27
26	Badagara	15	4144	4144	614	495	116	..	..	..	135	113	18
27	Tellicherry	15	5282	5282	665	591	49	17	16	..	211	200	5
28	Kazargode	15	6679	6679	206	176	15	7	7	..	93	89	3
29	Cannanore	15	6282	6282	490	242	139	..	..	..	144	84	39
30	Ghalakudy	15	4089	4089	390	196	181	..	..	..	105	63	17
31	Punalur	15	4719	4719	443	353	74	8	6	..	88	76	8
32	Tirur	15	3398	3398	629	527	66	7	5	..	93	84	7
33	Malappuram	15	3804	3804	580	338	171	1	1	..	98	73	11
34	Kodungalloor	15	3835	3835	247	145	89	..	..	..	75	42	33

APPENDIX VIII

Under registration and events to normal residence occurred outside the Town—1981

Sl. No.	Name of Municipality/Corporation	Percentage of under registration				Percentage of events to normal residence occurring outside the town			
		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		Births 1980-81	Deaths 1980-81	Births 1980-81	Deaths 1980-81	Births 1980-81	Deaths 1980-81	Births 1980-81	Deaths 1980-81
1	Neyyattinkara	18.75	21.16	13.56	20.97	48.03	49.50	19.73	25.30
2	Trivandrum	6.68	6.81	7.41	5.09	Nil	..	..	..
3	Attingal	5.74	Nil	Nil	Nil	36.79	31.72	31.23	8.11
4	Quilon	6.18	7.77	33.33	35.45	11.10	9.60	14.44	13.39
5	Kayamkulam	13.10	13.62	21.33	30.53	23.68	30.16	25.74	20.17
6	Mavelikara	1.97	2.23	7.83	5.45	35.76	35.63	10.85	11.29
7	Alleppey	4.91	5.51	21.41	15.20	16.66	14.47	2.70	4.10
8	Sherthallai	0.55	0.94	0.83	1.67	47.41	38.79	11.93	7.69
9	Changanacherry	10.71	10.77	22.50	34.38	43.35	44.13	23.08	30.43
10	Thiruvalla	7.65	7.11	6.45	3.95	26.04	22.43	16.22	20.00
11	Kottayam	2.46	Nil	2.99	1.33	48.09	43.27	16.25	22.68
12	Palai	1.41	0.76	12.68	7.41	37.99	41.85	21.98	16.92
13	Vaikom	1.53	1.78	7.27	8.70	33.50	37.41	9.84	23.33
14	Muvattupuzha	Nil	Nil	Nil	Nil	18.18	31.15	21.21	36.36

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
15	Cochin	16.10	22.62	37.30	40.84	19.12	16.60	2.92	3.91
16	Alwaye	Nil	Nil	19.79	9.52	48.90	41.04	40.82	44.74
17	Parur	6.11	5.42	10.23	9.72	29.19	30.64	7.37	13.25
18	Perumbavoor	3.67	6.13	16.67	12.50	55.51	43.79	27.27	21.13
19	Irinjalakuda	5.63	3.35	10.10	8.85	62.45	47.66	14.66	11.02
20	Trichur	36.34	24.66	47.40	46.58	22.90	20.98	10.47	10.55
21	Guruvayoor Township	3.92	1.92	9.09	2.38	80.75	76.15	20.72	15.15
22	Kunnamkulam	2.22	0.55	19.69	11.40	49.44	46.94	14.77	17.39
23	Palghat	0.32	0.93	1.15	2.14	19.07	21.21	12.12	6.03
24	Chittoor—Thathamangalam	1.47	Nil.	2.27	0.79	16.39	3.79	7.69	0.79
25	Calicut	9.93	10.45	10.39	11.11	6.79	8.49	5.91	4.76
26	Badagara	3.95	0.60	13.67	3.41	15.83	18.89	12.58	13.33
27	Tellicherry	3.90	4.06	3.94	3.14	5.37	7.37	0.49	2.19
28	Kasargode	3.10	7.85	1.75	1.03	7.53	7.28	8.06	3.00
29	Cannanore	25.62	31.05	18.40	20.00	19.12	28.37	18.50	27.08
30	Chalakydy	7.79	6.22	38.95	28.41	43.78	46.41	15.93	16.19
31	Punatur	5.62	4.34	3.13	6.82	11.66	16.70	1.03	8.33
32	Tirur	2.46	6.39	0.89	4.30	3.82	10.49	1.75	7.00
33	Malappuram	23.78	17.36	27.50	15.91	23.39	24.49	15.79	11.11
34	Kodungalloor	6.82	8.22	5.77	Nil	37.14	36.03	8.98	44.00

APPENDIX IX

Adjusted Residential Vital Rates and Registered Vital Rates for the year 1981

Sl. No.	Name of Municipality/ Corporation	Registered Birth rates		Registered Death rates		Adjusted Birth rates		Adjusted Death rates	
		1980	1981	1980	1981	1980	1981	1980	1981
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1.	Neyyattinkara	11.81	15.62	4.55	4.16	27.98	39.23	6.55	7.04
2.	Trivandrum	18.80	17.65	4.23	3.88	20.15	18.93	4.62	4.08
3.	Attingal	10.37	9.06	2.47	3.13	17.40	13.27	3.59	3.44
4.	Quilon	15.78	17.46	3.44	3.23	18.71	20.94	7.74	5.77
5.	Kayamkulam	21.74	19.04	3.40	3.90	32.78	31.56	5.82	7.03
6.	Mavelikara	16.26	15.90	6.19	5.38	25.85	25.24	7.54	6.41
7.	Alleppey	11.69	20.02	3.36	4.52	14.75	24.77	4.40	5.56
8.	Sheratalai	14.48	15.27	5.92	5.42	27.69	25.18	6.02	5.97
9.	Changanacherry	14.47	13.65	3.38	3.70	28.61	27.39	5.67	8.11
10.	Thiruvalla	10.66	12.49	4.62	4.51	15.60	17.34	5.90	5.88
11.	Kottayam	10.73	11.75	3.53	4.08	21.19	20.71	4.35	5.34
12.	Palai	10.28	10.41	4.65	4.29	16.54	18.04	5.95	5.57
13.	Vaikom	11.48	10.76	4.19	2.84	17.55	17.49	5.01	4.06
14.	Muvattupuzha	18.01	17.24	4.38	5.04	22.01	25.04	5.56	7.92
15.	Cochin	16.50	16.69	4.39	4.54	24.32	25.86	7.21	7.98
16.	Alwaye	7.58	4.15	2.86	1.19	14.83	7.04	5.61	2.39
17.	Parur	13.56	13.42	4.52	3.92	20.39	20.46	5.44	5.00

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
18.	Perumbavoor	9.44	12.28	3.46	3.45	22.03	23.27	5.71	5.00
19.	Irinjalakuda	14.87	13.10	4.67	4.79	41.95	25.89	6.08	5.91
20.	Trichur	14.91	15.01	3.88	4.14	30.38	25.20	8.24	8.65
21.	Guruvayoor Town ship	2.88	2.91	4.97	4.69	15.58	12.45	6.90	5.66
22.	Kunnamkulam	11.04	11.18	6.11	5.59	22.33	21.18	8.93	7.64
23.	Palghat	19.69	7.97	5.25	2.64	24.53	10.20	6.04	2.87
24.	Chittoor-Thathamangalam	22.18	18.75	8.58	6.82	26.92	19.49	9.51	6.92
25.	Calicut	25.85	22.43	5.60	5.93	30.80	27.37	6.64	7.00
26.	Badagara	22.14	21.96	4.43	4.33	27.39	27.23	5.87	5.16
27.	Tellicherry	12.37	6.82	4.46	3.65	3.03	7.68	4.66	3.85
28.	Kasargode	26.16	30.58	6.07	3.80	29.20	35.80	6.72	3.96
29.	Cannanore	25.45	16.12	7.16	5.22	42.31	32.64	10.76	8.96
30.	Chalakydy	9.98	9.29	3.05	3.40	19.25	18.49	5.95	5.67
31.	Punalur	21.31	22.13	3.93	4.17	28.96	27.77	4.10	4.89
32.	Tirur	18.28	18.05	4.33	3.67	19.48	21.54	4.45	4.12
33.	Malappuram	20.46	18.48	4.39	4.49	35.03	29.61	7.20	6.01
34.	Kodungalloor	25.30	23.50	3.89	4.91	43.19	40.01	4.54	8.76
	State	..	..	..	..	23.70	23.25	6.13	6.02

Adjusted Residential Rates from 1977-81

Sl. No.	Name of Municipality/ Corporation	Adjusted Birth rates					Adjusted Death rates				
		1977	1978	1979	1980	1981	1977	1978	1979	1980	1981
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1.	Neyyattinkara	32.89	15.38	28.62	27.98	39.23	7.20	5.65	6.22	6.55	7.04
2.	Trivandrum	24.10	20.51	23.64	20.15	18.93	4.36	5.51	4.71	4.62	4.08
3.	Attungal	21.81	20.86	14.66	17.40	13.27	5.00	4.50	5.55	3.59	3.44
4.	Quilon	27.46	18.32	30.61	18.71	20.94	6.77	5.77	5.99	7.74	5.77
5.	Kayamkulam	32.05	38.76	35.97	32.78	31.56	6.32	7.98	7.55	5.82	7.03
6.	Mavelikara	24.46	23.40	24.38	25.83	25.24	9.72	7.04	12.48	7.54	6.41
7.	Alleppey	26.87	22.69	22.33	14.75	24.77	9.05	6.27	7.24	4.40	5.56
8.	Sheratalai	27.45	28.05	26.37	27.69	25.18	7.00	6.08	6.25	6.02	5.97
9.	Changanacherry	28.95	27.90	24.78	28.61	27.30	6.12	5.53	7.44	5.67	8.11
10.	Thiruvalla	16.02	16.32	14.30	15.60	17.34	5.91	5.65	5.91	5.90	5.88
11.	Kottayam	18.09	18.56	15.34	21.19	20.71	6.50	3.42	3.92	4.35	5.34
12.	Palai	15.92	19.65	18.06	16.84	18.04	4.61	4.39	7.57	5.95	5.57
13.	Vaikom	24.21	18.90	17.33	17.53	17.49	6.50	6.08	4.59	5.01	4.06
14.	Muvattupuzha	19.70	31.67	25.38	22.01	25.04	3.15	5.02	5.79	5.56	7.92
15.	Cochin	29.25	26.02	27.04	24.32	25.86	6.89	6.19	7.40	7.21	7.98

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
16.	Alwaye	20.08	28.41	18.85	14.83	7.04	3.16	4.12	3.95	5.61	2.39
17.	Parur	28.44	28.53	21.97	20.39	20.46	6.51	6.13	6.84	6.44	5.00
18.	Perumbavoor	27.65	28.59	21.90	22.03	23.27	4.70	4.29	4.09	5.71	5.00
19.	Irinjalakuda	21.07	30.68	25.32	41.95	25.89	6.10	10.58	5.32	6.08	5.91
20.	Trichur	22.46	17.87	34.23	30.38	25.20	6.49	6.98	6.43	8.24	8.65
21.	Guruvayoor	20.97	21.97	17.78	15.58	12.45	6.46	6.00	5.83	6.90	5.66
22.	Kunnamkulam	21.18	20.31	26.98	22.33	21.18	7.72	8.01	8.91	8.93	7.64
23.	Palghat	22.27	25.48	32.38	24.53	10.20	7.08	7.92	7.53	6.04	2.87
24.	Chittoor-Thathamangalam	31.00	17.21	22.30	26.92	19.49	14.17	7.85	9.46	9.51	6.92
25.	Calicut	36.21	38.35	25.71	30.80	27.37	9.81	10.85.	7.18	6.64	7.00
26.	Badagara	30.46	18.57	29.59	27.39	27.23	7.73	5.80	6.74	5.87	5.16
27.	Tellicherry	15.03	12.67	24.26	3.03	7.68	4.61	4.14	6.15	4.66	3.85
28.	Kasargode	27.13	31.86	30.01	29.20	35.80	8.35	8.36	6.59	6.72	3.96
29.	Cannanor	36.20	30.16	40.43	42.31	32.64	7.70	6.67	8.48	10.76	8.96
30.	Chalakudy	20.33	18.66	21.56	19.25	18.49	5.58	4.40	6.81	5.95	5.67
31.	Punalur	..	26.14	23.60	28.96	27.77	..	5.81	4.27	4.10	4.89
32.	Tirur	..	30.15	24.00	19.48	21.54	..	6.45	5.46	4.45	4.12
33.	Malappuram	..	31.94	32.70	35.03	29.61	..	9.08	7.55	7.20	6.01
34.	Kodungalloor	..	30.68	42.79	43.19	40.01	..	9.39	7.24	4.54	8.76

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