

Appendix 1

Statement showing Sex-Wise Breakup of Cases and Death due to Communicable Diseases in Alappuzha District (2004 – 2009)

Year – 2004

Sl No.	Name of Diseases	Patients Treated				Death	
		OP		IP		Male	Female
		Male	Female	Male	Female		
1	Acute Diarhoel Diseases						
	a) Acute watery Diarhoea	8653	9620	1255	1340	0	0
	b) Persistent Diarhoea	27	18	7	0	0	0
	c) Cholera	0	0	0	1	0	0
	d) Dysentry	481	459	26	27	0	0
2	Acute Respiratory Infection	368903	463406	6078	6208	1	5
3	Enteric Fever (Typhoid)	26	15	42	13	1	1
4	Dengue Fever	6	4	38	39	1	0
5	Weils Disease (Leptospirosis)	0	0	110	45	17	8
6	Japanese Encephalitia	0	0	0	0	0	0
7	Chikunguniya	-	-	-	-	-	-

Source: District Medical Office, Alappuzha.

Year – 2005

SI No.	Name of Diseases	Patients Treated				Death	
		OP		IP		Male	Female
		Male	Female	Male	Female		
1	Acute Diarhoel Diseases						
	a) Acute watery Diarhoea	9155	10250	1246	1484	1	0
	b) Persistent Diarhoea	16	15	0	0	0	0
	c) Cholera	0	0	5	1	0	0
	d) Dysentry	400	449	36	44	0	0
2	Acute Respiratory Infection	335633	404475	5030	4895	12	4
3	Enteric Fever (Typhoid)	23	25	26	18	0	0
4	Dengue Fever	10	10	33	25	0	1
5	Weils Disease (Leptospirosis)	12	6	273	194	10	8
6	Japanese Encephalitia	0	0	0	0	0	0
7	Chikunguniya	-	-	-	-	-	-

Source: District Medical Office, Alappuzha.

Year – 2006

SI No.	Name of Diseases	Patients Treated				Death	
		OP		IP		Male	Female
		Male	Female	Male	Female		
1	Acute Diarhoel Diseases						
	a) Acute watery Diarhoea	9961	10460	1381	1440	0	0
	b) Persistent Diarhoea	10	14	0	0	0	0
	c) Cholera	0	0	1	0	0	0
	d) Dysentery	298	311	15	19	0	0
2	Acute Respiratory Infection	270463	334102	3246	3265	3	1
3	Enteric Fever (Typhoid)	37	38	14	7	0	0
4	Dengue Fever	1	0	16	11	0	0
5	Weils Disease (Leptospirosis)	5	2	217	116	13	7
6	Japanese Encephalitia	0	0	0	0	0	0
7	Chikunguniya	-	-	-	-	-	-

Source: District Medical Office, Alappuzha.

Year – 2007

SI No.	Name of Diseases	Patients Treated				Death	
		OP		IP		Male	Female
		Male	Female	Male	Female		
1	Acute Diarhoel Diseases						
	a) Acute watery Diarhoea	10494	11226	1048	1270	0	0
	b) Persistent Diarhoea	0	0	0	0	0	0
	c) Cholera	0	0	0	0	0	0
	d) Dysentry	201	174	17	11	0	0
2	Acute Respiratory Infection	230291	282242	3928	4123	5	5
3	Enteric Fever (Typhoid)	7	4	4	10	0	0
4	Dengue Fever	0	0	8	5	1	0
5	Weils Disease (Leptospirosis)	0	0	74	36	18	3
6	Japanese Encephalitia	0	0	0	0	0	0
7	Chikunguniya	-	-	-	-	-	-

Source: District Medical Office, Alappuzha.

Year – 2008

SI No.	Name of Diseases	Patients Treated				Death	
		OP		IP		Male	Female
		Male	Female	Male	Female		
1	Acute Diarhoel Diseases						
	a) Acute watery Diarhoea	12524	13521	1320	1606	0	0
	b) Persistent Diarhoea	0	0	0	0	0	0
	c) Cholera	0	0	0	0	0	0
	d) Dysentry	198	207	19	28	0	0
2	Acute Respiratory Infection	187970	249634	4617	5279	3	1
3	Enteric Fever (Typhoid)	6	9	19	15	0	0
4	Dengue Fever	0	5	2	2	0	0
5	Weils Disease (Leptospirosis)	3	21	113	130	18	6
6	Japanese Encephalitia	0	0	0	0	0	0
7	Chikunguniya	-	-	-	-	-	-

Source: District Medical Office, Alappuzha.

Year – 2009 (Till March 2009)

SI No.	Name of Diseases	Patients Treated				Death	
		OP		IP		Male	Female
		Male	Female	Male	Female		
1	Acute Diarhoel Diseases						
	a) Acute watery Diarhoea	1392	1432	121	135	0	0
	b) Persistent Diarhoea	0	0	0	0	0	0
	c) Cholera	0	0	0	0	0	0
	d) Dysentry	17	16	1	0	0	0
2	Acute Respiratory Infection	21031	25985	622	574	0	0
3	Enteric Fever (Typhoid)	1	1	1	2	0	0
4	Dengue Fever	0	0	0	0	0	0
5	Weils Disease (Leptospirosis)	0	0	7	12	2	0
6	Japanese Encephalitia	0	0	0	0	0	0
7	Chikunguniya	-	-	-	-	-	-

Source: District Medical Office, Alappuzha.

Appendix 2

Administrative set-up

	Alappuzha	State
1. Number. of Revenue Divisions	2	21
2. Number of Taluks	6	63
3. Number of Revenue Villages	91	1452
4. Number of Municipalities	5	54
5. Number of Municipality Wards	172	1756
6. Number of Block Panchayat	12	152
7. Number of Block Panchayat Wards	147	2004
8. Number of Grama Panchayat	73	999
9. Number of Grama Panchayat Wards	1113	16139
10. Number of Assembly Constituencies	11	140
11. Number of Parliament constituencies	2	20
12. Number of District Panchayat Wards	23	339

*Source: Panchayat level statistics 2006. (Dept. of Economics and Statistics,
Govt. of Kerala*

Appendix 3

Geographical features

1. Total Area (Sq.Km)	1414	38863
Wet Area (In Hect)	63391	462797
Dry Area (In Hect)	78362	2273603
2. Important Back waters (area in Hect)	15223	65212.96

*Source: Panchayat level statistics 2006. (Dept. of Economics and Statistics,
Govt. of Kerala*

Appendix 4

Demographic Particulars

	District	State
1. Total Population (2001 Census)	2109160	31841374
Male	1014529	15468614
Female	1094631	16372760
2. Total rural population	1487703	23574449
Male	712867	11451282
Female	774836	12123167
3. Total Urban Population	621457	8266925
Male	301662	4017332
Female	319795	4249593
4. Total SC Population	199231	3123941
Male	96900	1525114
Female	102331	1598827
5. Total SC Rural population	165936	2553725
Male	80696	1247537
Female	85240	1306188
6. Total SC Urban population	33295	570216
Male	16204	277577
Female	17091	292639
7. Total ST Population	3131	364189
Male	1565	180169
Female	1566	184020
8. Total ST Rural Population	1877	350019
Male	912	173267
Female	965	176752

8. Total ST Urban Population	1254	14170
Male	653	6902
Female	601	7268
9. Total Number of Households	483960	6726356
Rural Households	345928	5010259
Urban Households	138032	1716097
10. Religion wise population		
Hindu	1457188	17883449
Muslims	208042	7863842
Christians	441643	6057427
Others	2287	36656
Density of Population (Per Sq.Km)	1492	819
Growth Rate (1991 to 2001)		9.43
Sex Ratio (General /Child sex ratio)	1079	1058/963

*Source: Panchayat level statistics 2006. (Dept. of Economics and Statistics,
Govt. of Kerala*

Appendix 5

Ward wise population and households (as per 2001 census)

Ward no:	Ward name	Households	Population
1	Thumpoli	998	4620
2	Kommady	833	3693
3	Kalappura	682	3171
4	Arattuvazhi	757	3474
5	Punthoppu	874	3914
6	Cherthala canal	743	3426
7	Chathanadu	737	3400
8	Thondankulangara	867	3863
9	Ashramam	797	3764
10	Kalathu	766	3532
11	Kottamkulangara	778	3587
12	Karukayil	797	3700
13	Avalkunnu	689	3341
14	Cheramankulangara	747	3279
15	Karalacom	736	3309
16	Punnamada	751	3468
17	Nehru trophy	581	2766
18	Thathampally	719	3259
19	Zilla court	459	2085
20	Mullakal	723	3199
21	Thirumala	814	3832
22	Pallathurathi	637	3171
23	Chunkam	765	3618
24	Palace	691	2965

25	A.N.Puram	895	4007
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26	Thiruvampady	779	3323
27	Pazhaveedu	699	3050
28	Kaithavana	644	2813
29	Kalarkodu	717	3152
30	Sanathanapuram	583	2676
31	Eravukadu	751	3554
32	Kuthirapanthi	753	3571
33	Vadakkal	841	3944
34	Beach	835	3920
35	Vattayal	808	4160
36	Mullath valappu	764	4039
37	Valiyamaram	743	3834
38	Municipal stadium	803	3811
39	Alissery	763	3812
40	Lajanathu	676	3712
41	Valiyakulam	680	3574
42	Zakiria bazaar	592	3216
43	E.S.I	711	3256
44	Civil station	826	4228
45	Vazhicherry	760	3765
46	Sea view	734	3295
47	Power house	758	3843
48	Vadacanal	936	4754
48	Kanjiramchira	916	4190
50	Mangalam	687	3094
	Total	37595	177029

Source: Panchayat Level Statistics 2006, Department of Economics and Statistics, Government of Kerala.

Appendix 6

Typical Leachate Quality of Municipal Waste

(Excludes volatile and semi-volatile organic compounds)

Parameter	Typical Range (milligrams per liter, unless otherwise noted)	Upper Limit (milligrams per liter, unless otherwise noted)
Total Alkalinity (as CaCO ₃)	730-15050	20850
Calcium	240-2,330	4,080
Chloride	47-2,400	11,375
Magnesium	4-780	1,400
Sodium	85-3,800	7,700
Sulfate	20-730	1,826
Specific Conductance	2,000-8,000 µmhos/cm	9,000 µmhos/cm
Total Dissolved Solids	1,000-20,000	55,000
Chemical Oxygen Demand	100-51,000	99,000
Biological Oxygen Demand	1,000-30,300	195,000
Iron	0.1-1,700	5,500
Total Nitrogen	2.6-945	1,416
Potassium	28-1,700	3,770
Chromium	0.5-1.0	5.6
Manganese	Not detected - 400	1,400
Copper	0.1-9.0	9.9
Lead	Not detected - 1.0	14.2

Parameter	Typical Range (milligrams per liter, unless otherwise noted)	Upper Limit (milligrams per liter, unless otherwise noted)
Nickel	0.1–1.0	7.5

Source: Based on Canter et al (1998), McGinley and Kmet (1984) and Lee and Jones (1991)

Appendix 7

Chemical composition

Carbon	17.98%	Potassium	0.44%
Nitrogen	0.53%	Iron	1.52%
Phosphorus	0.72%	Magnesium	247ppm
Nickel	21ppm	Chromium	56ppm
Cadmium	2.08ppm	Copper	68ppm
Lead	308ppm	Zinc	224ppm

Source: Socio Economic Unit Foundation, 2006

Appendix 8

Chemical characteristics

Sl No	Location	Density (kg/m ³)	Moisture Content (%)	Calorific Value (K.Cal/Kg)	pH	Organic Matter (%)	C (%)	N (%)	C/N	P as P ₂ O ₅ (%)	K K ₂ O (%)
1	Changanassery	613	51.04	1331	8.3	31.95	18.53	0.55	33.51	0.49	0.54
2	Chengannur	688	60.58	1670	7.7	26.57	15.41	0.5	30.58	0.2	0.61
3	Muvattupuzha	538	45.08	923	8.1	30.67	17.79	0.37	47.95	0.37	0.54
4	Pala	420	56.76	1198	6.6	23.73	13.76	0.5	27.69	0.3	0.37
5	Kottayam	510	58.98	1408	7.4	32.27	18.72	0.33	56.89	0.52	0.46
6	Kothamangalam	472	58.12	2664	6.8	52.43	30.41	0.76	39.86	0.47	0.54
7	Aluva	522	53.74	1523	6.6	41.76	24.22	0.53	46.13	0.24	0.51
8	Kannur	472	46.42	-	7.11	-	13.91	1.16	11.99	0.41	0.45
	Average	529.37	53.84	1316.28	7.32	34.19	19.09	0.58	36.85	0.37	0.50

Source: Socio Economic Unit Foundation (2006)