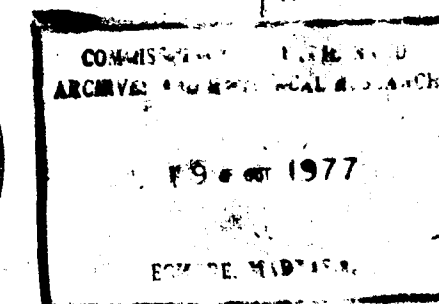
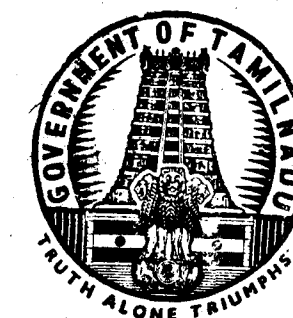




REPORT ON THE HEALTH CONDITIONS IN MADRAS STATE



FOR THE YEAR

1972

(Including the reports of the Government Analyst and
the Chief Water Analyst for 1972)

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GOVERNMENT OF TAMIL NADU
1976

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1976

CONTENTS.

521

VITAL STATISTICS

	PAGES
Vital Statistics Rates	1
Births, Deaths and Still Births	1
Deaths due to certain leading causes	1
Number of deaths in the different age group	2
Infant death and their rates	2
Maternal death and their rates	2
Birth and Death rates under Sample Registration Scheme	3
Model Registration Scheme	3
Primary Health Centres	3
Maternity and Child Health Services	4
Control of communicable diseases	5
National Malaria Eradication Programme	6
National Filaria Control Programme	7
Yaws Eradication Programme	7
Guinea worm Eradication Programme	7
Kala Azar Control Programme	7
Prevention of Food Adulteration	7
Health Education	8
Media	8
Institute of Public Health, Poonamallee	9
Orientation Training Centre and Research-cum-Action Project	10
General	11
Salient features of Public Health Administration Report for the year 1972	12

APPENDIX

I Area and Population for 1972	14
II Recorded vital rates for 1971 and 1972	15
II (a) Births, Deaths, Still Births, Infant Deaths and Maternal Deaths in Municipalities	16
III Position of arrears return	22
IV Births, Deaths, Infant Deaths and Maternal Deaths in Municipalities for 1972	23

APPENDIX—cont.

	PAGES
V Births by Religion (State)	24
V (a) Births by Religion (Rural and Urban)	25
V (b) Births by Religion Month (Rural)	26
V (b) Births by Religion (Urban)	28
V(c) Births by Religion (State)	30
V(d) Births by Religion, sex and type of attendance at Confinement (State) 1972 ..	32
V(e) Statement showing the order of Live Births—1972	33
VI Still birth by communities	34
VI(a) Still birth communitywise	34
VI(b) Still birth by months (Rural)	35
VI(c) Still birth by months (State)	39
VII Statement showing number of Still Births of Mother 1972.. .. .	41
VIII Statement showing Death by Communitywise	41
III(a) Communitywise statement of deaths in 1972	42
II (b) Death by months (Rural) 1972	43
II (b) Deaths by months (Urban) 1972	45
II (c) Deaths by months (State) 1972	47
II (d) Death due to Cholera by month 1972	49
II (d) Death due to Small pox by month 1972	49
Death due to Measles 1972	50
Death due to Hydrophobia	50
Death due to Fever	51
Death due to Dysentery	51
Death due to Diarrhoea	52
Death due to Respiratory Diseases	52
Death due to Suicides	53
Death due to Wounds and Accidents	53
Death due to Snake bite	54
Death due to Maternal death	54
Death due to Diptheria	55
Death due to killed by Wild beasts	55
Death due to All other causes	56
X Maternal by Communitywise 1972	56
X (a) Maternal death State Total for 1972	57
X (b) Maternal death (Rural)	57
X (b) Maternal death (Urban)	58
X (c) Maternal death (Communitywise 1972).. .. .	58
X Infant death by Communitywise 1972	59
X (a) Infant death by Communitywise (Rural)	59
X (b) Infant death by Communitywise (Urban)	59

APPENDIX—cont.

	PAGES
XI Deaths by Age group 1972 (Rural)	60
XI (a) Deaths by Age group (Urban)	62
XI (b) Deaths by Age group (State)	64
XI (c) Infant deaths by month (Rural)	65
XI (d) Infant death by month (Urban) 1972	66
XII Statement showing the Primary Vaccination and Re-vaccination	68
XIII Annual Report of the Government Analyst Laboratory	71-76
XIV Annual Report of the Department of Water and Sewage Examination, King Institute, Guindy, Madras.	77-98
XV Review of the Public Health Administration Report for 1972	i

(1)	Number of deaths.	Death rate.
(2)	(3)	
Suicides	1,874	0.04
Wounds and accidents	4,359	0.10
Snakebites	1,160	0.03
Killed by wild beasts	9	.
Deaths due to child birth	2428	2.3
Diphtheria	121	.
All other causes	2,14,604	5.09
Total ..	3,56,280	8.4

* Less than 0.01.

The above reports are as per V. S. returns and not as reported by Health Officers.

The following table gives the number of deaths in the different age groups:—

Age group.	Number of deaths.	Percentage to total deaths.	Cumulative percentage.
(1)	(2)	(3)	(4)
Under one year	57,116	16.0	16.0
1 to 5 years	45,174	12.7	28.7
5 to 10 years	11,568	3.3	32.0
10 to 15 years	8,278	2.3	34.3
15 to 25 years	17,195	4.8	39.1
25 to 35 years	20,053	5.6	44.7
35 to 45 years	23,794	6.7	51.4
45 to 55 years	27,726	7.8	59.2
55 to 65 years	43,299	12.1	71.3
65 to 75 years	51,175	14.4	85.7
75 +	50,902	14.3	100.0
Total ..	3,56,280		

It can be seen from the above table that nearly 35 per cent of the deaths fall in age group "Below 15 years".

(d) *Infant Deaths.*—The number of infant deaths during the year 1972 was 57,116 of which 30,356 are males and 26,760 are females. The table given below gives further details of Infant deaths:—

Age group.	Rural.		Urban.		Total.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Under one week	9,850	17.5	9,056	19.4	18,906	18.3
One week to one month	8,127	14.4	3,317	7.1	11,444	11.0
One month to six months	8,683	15.4	5,446	11.7	14,129	13.7
Six months to one year	7,693	13.6	4,944	10.9	12,637	12.3
Total ..	34,353	60.9	22,763	49.1	57,116	55.3

The Neo-natal mortality rate works out to 29.3.

(e) *Maternal Deaths.*—The number of maternal deaths registered during the year 1972 was 2,428.

	Number of maternal deaths.	Maternal mortality rate.
(1)	(2)	(3)
Rural	1,322	2.3
Urban	1,106	2.3
Total	2,428	2.3

The maternal mortality rate in the rural as well as urban areas are equal.

(f) *Sample Registration Scheme.*—Sample Registration Scheme which aims at getting reliable estimates of vital rates and growth rate of population was continued during the year 1972 in 150 rural units selected under the principle of stratified random sampling. The following were the vital rates recorded during 1972 under "Sample Registration Scheme":—

Birth Rate	33.5
Death Rate	17.4
Infant mortality Rate	131.4

The vital rates recorded are far higher than that under the civil registration scheme because here there is the advantage of a combination of registration and survey. There is intensive checks in the sample areas by the special staff appointed under the scheme.

(g) *Model Registration Scheme.*—"Model Registration Scheme" which aims at getting reliable data on cause of death was continued to be implemented in 34 Primary Health Centres. The following were the particulars of vital events recorded under the above scheme during 1972.

The following table gives the death, according to leading causes of deaths and percentage to total deaths:—

Cause.	Number of deaths.	Percentage to total deaths.
(1)	(2)	(3)
Violence and injury	69	3.09
Child birth and Pregnancy	22	1.00
Diarhoea	177	7.93
Cough	345	15.46
Swellings	317	14.21
Fever	324	14.52
Other Infant Deaths	241	10.80
Other clear symptoms	101	4.52
Extreme old age	399	17.84
All other causes	236	10.53
Total ..	2,231	

It can be seen that only about 29 per cent of the total deaths are grouped under other causes and even here 18 per cent of them are due to old age, where as under normal registration system nearly 60 per cent of the total deaths are grouped under all other causes.

II. PRIMARY HEALTH CENTRES

The Primary Health Centre is an institution which offers a package of services to the people living in its jurisdiction which is usually the area covered by a block (now Panchayat Union). There are 374 blocks in our State. Primary Health Centres have been established in all the blocks except two blocks in Salem District.

At the beginning of the year 1972, 131 Primary Health Centres were functioning in Government Buildings with staff quarters. Government have accorded sanction for the construction of buildings for 47 Primary Health Centres during 1970-71. In addition to this, sanction has been accorded for the construction of buildings with staff quarters for 3 Primary Health Centres and 21 staff quarters to the Primary Health Centres, the dispensary portion of which are functioning in Panchayat Unions/Government buildings under Part-II scheme for 1972-73. During the period under report, 17 buildings have been completed and occupied by the respective Primary Health Centres. As on 31st December 1972, 149 Primary Health Centres have been functioning in Government buildings with staff quarters. Construction work for the remaining 22 Primary Health Centres and 21 staff quarters are under progress.

Out of 379 Primary Health Centres functioning, full UNICEF assistance like Microscopes, Refrigerators, D.D.S., P.H.N., Kits, Primary Health Centre equipments, Midwifery kits and vehicles, etc., have been received for 214 Primary Health Centres. Another 146 Primary Health Centres have received part of these assistance. Besides

the above, for 9 Primary Health Centres UNICEF questionnaires have been sent to the Director-General of Health Services, New Delhi. Questionnaires have to be sent for the remaining 10 Primary Health Centres, which were not qualified for UNICEF assistance as on 31st December 1972.

III. Maternity and Child Health Services.

Maternity and Child Health Services form the basic foundation of healthy living for the greatest need of the women in the rural areas is skilled attention before and after confinement.

For the improvement of the Maternity and Child Health Services in rural areas, various programmes were launched during the first, second and third Five-Year Plans.

There are 3,840 Maternity and Child Welfare Centres including Maternity Homes functioning at the end of 1972 as against 3801 at the end of 1971.

The following is the distribution of Maternity and Child Welfare Centres:—

Name of the Institution.	Maternity Homes.		Maternity Centres.		Maternity Centres without beds.	Total.
	No.	Beds.	No.	Beds.		
Institute of Public Health, Poonamallee..	7	34	..	..	1	8
Backward Area Scheme	..	..	..	..	95	95
Primary Health Centres	..	..	379	2,274	..	379
<i>Local Bodies:</i>						
Panchayat Union Councils	..	..	..	..	2,880	2,880
Municipalities	78	603	163	403	165	406
Corporation of Madras	31	379	..	..	20	51
Corporation of Madurai	12	253	2	13	..	14
Voluntary Organisation	7	..	7	..	..	7

Maternity and Child Welfare Services under backward area scheme.—There are 19 Maternity and Child Welfare Centres with 4 sub-centres attached to each under this Scheme. Each main centre consists of one Health Visitor and one Ayah and each sub-centre one Maternity Assistant and one Ayah. The entire expenditure under this scheme is borne by State Government.

Maternity and Child Welfare Services by Panchayat Unions.—Under section 65 (c) of the Madras Panchayat Act, 1958, it is the responsibility of the Panchayat Union Council to open and maintain Maternity and Child Welfare Centres at the rate of one for every 10,000 population subject to a maximum of 10 centres per block.

Maternity and Child Welfare Services by Municipalities.—The Municipalities continued to render skilled maternity services in their respective areas through the Maternity Homes and Maternity and Child Welfare Centres, the municipalities are given a Government grant equivalent to 1/4th of the recurring expenditure incurred by them towards the maintenance of Maternity and Child Welfare Centres.

Maternity and Child Welfare Services by Voluntary Organisations.—The total number of Maternity and Child Welfare Centres run by Red Cross Society is 7.

The Maternity and Child Welfare work in rural areas is mainly carried out by Auxiliary Nurse, Midwives, Maternity Assistants. During the year under report, 1,026,879 mothers, 558,721 pre-natal, 3,72,769 labour, 5,07,023 infants and 4,62,346 pre-school children were brought under care of the Maternity and Child Health staff.

The number of home visits made by the Maternity Assistants in rural areas in connection with pre-natal, post-natal infant and pre-school are 2,287,873, 1,653,668, 1,484,399 and 680,870 respectively.

Maternity Assistants.—There were 4,275 posts of Maternity Assistants in all under Government, local bodies and Corporations of Madras and Madurai during the year under report as against 4,247 during 1971.

Health Visitors.—There were 574 posts of Health Visitors in all under Government, Local bodies and Corporations of Madras and Madurai during the year under report as against 541 posts during 1971.

Ayals.—There were 2,694 posts of Ayals in all under Government, Local bodies and Corporation of Madras as against 2,681 posts during 1971.

Resident Matrons and Public Health Nurses.—Five posts of Public Health Nurses were there. There were 12 posts of Resident Matrons in all under Municipalities.

Women Medical Officer.—There were 45 posts of Women Medical Officers in all the Municipalities during the year under report. The total number of Women Medical Officers in the Corporations of Madras and Madurai during the year under report is 41 and 12 respectively.

Health Visitors Training.—During the year, 25 candidates under Regular course and 55 candidates under Integrated course have completed the Health Visitors training. 13 Health Visitors employed in various Primary Health Centres were given refresher course during July, 1972.

Supplementary Feeding Programme.—The Supplementary Feeding Programme was continued during the year 1972 with the assistance of Care Organisation. Care organisation donates as gift the required quantity of food commodities, Corn soy milk and Salad oil. Under the programme the gift food commodities are distributed at present through about 1,216 Feeding Centres including the Primary Health Centres run by Government. About 45,060 daily beneficiaries are there. A total quantity of about 25 lakhs of Kilograms of gift food commodities was received and distributed during the year.

Immunisation Programme.—At present the scheme is being implemented in all the 379 Primary Health Centres. The object of the programme is to immunise 900 children annually. During 1972, a total of 96,882 children were immunised.

School Health Programme.—The programme is carried out effectively in 18 Primary Health Centres and in the two Municipalities of Tiruchirappalli and Coimbatore. Each Medical Officer of the Primary Health Centre examine 2,000 school children in the age group 6-11 years, he being paid an honorarium of Rs. 50 per month for this work. The target fixed in the case of Municipality is 10,000 school-children per year. During the year 1972, 51,991 school going children were examined and out of these 28,614 were found to be suffering from one disease or other. Cases requiring specialised treatment are referred to nearby hospitals.

IV. Control of Communicable Diseases.

Cholera.—Cholera was prevalent in Madras City and in all other districts except the districts of Ramanathapuram and the Nilgiris. There were 3,670 attacks and 205 deaths. The affected places in the order of severity are as follows:—

	Attacks.	Deaths.
Madras City	1,913	56
Chingleput	1,077	52
Madurai	304	7
North Arcot	84	25
Thanjavur	47	9
Tiruchirappalli	43	12
Coimbatore	43	10
Tirunelveli	39	1
Salem	36	10
Dharmapuri	36	9
Kanyakumari	32	9
South Arcot	16	5

Plague.—The state was free from plague during the year under report. However routine plague control measures such as Cyanogas fumigation, spraying with B.H.C., Rat flea survey were carried out by the plague staff in the plague endemic areas.

SMALL POX

National Smallpox Eradication programme.—The state of Tamil Nadu was free from smallpox during the year under review. However intensive vaccination drive was continued. The National Smallpox Eradication Programme was continued to be implemented during the year 1972. The staff have performed 15,02,118 primary

vaccinations and 38,27,548 Re-vaccinations during the year. The National Smallpox Eradication Programme fortnight was celebrated throughout the State in a befitting manner from 14th to 28th November 1972. Eight first prizes and 9 second prizes of Rs. 50 and Rs. 30 respectively were distributed to the Health Inspectors, Sanitary Inspectors and vaccinators for their best performance under National Smallpox Eradication Programme during this fortnight.

Mobile Epidemic Units.—Seven Mobile Epidemic units continued to function during the year under report. The vehicles attached to the mobile Epidemic Units were utilised for the quick transportation of staff and drugs to the infected places and to transport the cases to the I.D. sheds and hospitals for isolation and treatment. The staff of these units carried out anticipatory anti-cholera measures in the vulnerable groups.

Cholera Combat Team.—One Cholera Combat Team is functioning at Thanjavur District. The team is provided with an ambulance van with sufficient drugs and disinfectants for carrying out on the spot preventive and control measures in respect of communicable diseases, specially cholera. The team carried out anticipatory anti-cholera inoculation in the district.

Epidemic Control Unit.—The three epidemic control units continued to function in the state during the year. These units are stationed at Chingleput, Thirunelveli and Health unit, Poonamallee. The services of these units are utilised for the transportation of men and materials to the infected areas and also for the transportation of infectious diseases cases to the infectious diseases sheds or hospitals for isolation and treatment.

Cholera Control Programme.—This is a centrally sponsored scheme with 100 per cent control subsidy. The programme consists of the following:—

- (1) A Cell at Headquarters.
- (2) One Mobile medical Unit at Tiruchirappalli with staff.
- (3) 162 special cholera workers.
- (4) Six supervisors (in Malaria Non-maintenance phase areas in Coimbatore district).

The programme is functioning in 75 blocks of the four endemic districts of North Arcot, South Arcot, Tiruchirappalli and Coimbatore.

Epidemiological Unit At Madras Medical College.—The unit continued to function during the year under review. It conducted investigations of Typhoid, Infective hepatitis and other infectious diseases which occurred in Madras City and was also training the students of Madras Medical College in epidemiology.

National Malaria Eradication Programme.—At present 28.75 units are in maintenance phase while 3.05 unit areas are still in consolidation phase. Under maintenance phase, Malaria vigilance activities were carried out as per schedule under thoroughly planned supervision while surveillance operations were continued under consolidation phase.

As a result of the successful implementation of the National Malaria Eradication Programme, the number of Malaria cases were reduced but the urban Malaria problem required different approach for controlling other than the one adopted for eliminating rural malaria. This was due to early development of resistance to D.D.T. and other synthetic insecticides by the urban vector, *A. stephensi* and the difficulty in achieving cost per cent coverage for adulticidal spraying. Since the urban areas were excluded in the National Malaria Eradication Programme and the problem was found wide spread in many States, the Government of India have made in the IVth Five-Year Plan provision for inclusion of 22 cities and towns in our country, for Centrally sponsored urban Malaria Scheme. Five such schemes were included in our State viz. Madras City Salem, Rasipuram, Elampillai and Tuticorin during 1972-73 and three more towns (viz) Tiruchirappalli, Vellore and Erode have been selected for inclusion for implementation of urban Malaria scheme during 1973-74. Again due to large scale importation of malaria cases from other States, the maintenance areas are subjected to the constant threat of focal epidemics. Due to this certain vulnerable and receptive sectors in Dharmapuri and Ramanathapuram Districts experienced wide spread epidemics from 1970, thus resulting in the increase of incidence. However extensive focal measures have been undertaken in these areas to arrest the infection.

The central Malaria Laboratory and museum imported necessary training in Entomology, Epidemiology, Parasitology and Haematology for the benefit of students from various medical institutions in the State as well as private organisations like voluntary health organisation. The State level cross checking of blood smears preparation and supply of J.S.B. stain required for all the National Malaria Eradication Programme Units were maintained.

The Regional organisation at Thanjavur and Coimbatore carried out the following activities:—

1. Organisation of field and laboratory studies.
2. Conduct of Health Education, Publicity on Malaria and Mosquito borne diseases.
3. Conduct of training for personnel under NMEP and NFCEP.
4. Formulation of anti-mosquito and anti-filariasis scheme of local bodies with grant-in-aid from State Government.
5. Carrying out routine inspection and checkup surveys of anti-filariasis schemes and anti-mosquito schemes of local bodies.

National Filaria Control Programme.—The four National Filaria Control Units in the districts of Chingleput, North Arcot, South Arcot and Thanjavur continued to function. But the control programme has been re-organised with the establishment of 8 new units under the re-organised National Filaria Control Programme. The eight new units are at (1) Kancheepuram (2) Villupuram (3) Cuddalore (4) Thanjavur (5) Nagapattinam (6) Srirangam (7) Pudukottai and (8) Madras. Thus altogether 12 Units are now functioning in our State and the total population benefitted is estimated to be 45 lakhs. Under the above programme, the anti-larval work is intensified to bring down the density of vector mosquito in Urban areas.

During the year 1972, a quantity of about 2,23,662 litres of M.L.O. was spent for anti-larval operation. Night blood smears were taken to detect positive cases of microfilaria and the cases detected were directed to nearby hospitals for treatment. Vertical surveys among school going children of 5-15 years were conducted. Minor engineering measures such as canalisation of drains were carried out. Health education activities were attended to.

Yaws Eradication Programme.—Four units were functioning during 1972 at Palani, Periakulam, Karur and Dharmapuri. These units carried out intensive survey and treatment in their respective jurisdiction for Yaws cases. The villagers were given health education through talks. Contacts of the active infectious Yaws cases were also treated. Minor ailments such as Scabies, Diarrhoea, Fever, Dysentery were treated.

During the year 1972, 1,206 villages were surveyed of which 1,89,598 persons were examined. Two hundred twenty one villages were taken up for treatment. Three hundred and fifty two Yaws cases were treated. Five hundred and fifty seven minor ailments were treated. In all 1,568 CC of P.A.M. was spent.

Guineaworm Eradication Programme.—During the year 1972, 14,048 villages and hamlets were surveyed for Guineaworm infection and 47 villages were found to be endemic for Guineaworm diseases. A total of 285 cases were recorded and treated.

The staff of the Guineaworm Eradication Programme carried out regular and periodical chemical treatment of drinking water sources, treatment for all the guineaworm affected patients and health education.

Kala Azar Control Programme.—The Kala Azar Control Programme is functioning at Ramanathapuram District with headquarters at Ramanathapuram. Detailed sandfly survey and Kala Azar case survey were done by the staff. During the year under review, 2,060 villages surveyed 4 cases were recorded. Four thousand eight hundred and ninety-eight sand-flies were collected.

V. Prevention of Food Adulteration.

The provision of the prevention of Food Adulteration Act was continued to be implemented with the help of three Food Analysis Laboratories (viz): (1) Government Analysts Laboratory at King Institute, Guindy, (2) The Food Analysts Laboratory attached to the Corporation of Madras and (3) The Public Analysts Laboratory at Coimbatore.

In the Government Analysts Laboratory at King Institute, Guindy, 19,083 samples were analysed. Four thousand nine hundred and ninety six samples representing 26.2 per cent were found adulterated. Out of 4,231 prosecutions launched under the Prevention of Food Adulteration Act, 3,288 cases ended in conviction 52 were imprisoned. The fines realised amounted to Rs. 4,85,976.

In the Food Analysts Laboratory attached to the Corporation of Madras about 6,000 samples were analysed per year. The Public Analysts Laboratory started analysing samples only from 1st August 1972.

VI. Health Education.

The State Health Education Bureau has grown up steadily during the last 13 years and present the bureau has got all the five units recommended by the Government of India.

(a) *Administrative and Study Unit.*—The study on Immunisation Programme started during the last year was completed. The Unit prepared evaluation reports for the 25th and 26th batches of In-service training, besides taking part in the training programme. The team members helped the staff of the institute of Venereology in developing a field study demonstration unit for V.D. Education Programme in a slum area in Madras City. The study unit participated in all the other regular and special activities of the Health Education Bureau.

(b) *Field study and Demonstration Centre.*—The field study and Demonstration Centre team guided the staff of the Primary Health Centre, Velachery in the conduct of O.P. and Ante-natal Education session. An information session for the leaders of Chembakkam and Jaladampet were conducted based on the findings of the Family Health survey. The team participated in the conduct of 25th, 26th and 27th batch of In-service training and conducted the field training. The team was a regular participant in the monthly information sessions to the Maternity Assistants of St. Thomas Mount Block conducted by the Primary Health Centre, Velacherry. The team members assisted the Medical Officers of Primary Health Centre, Velacherry during the medical inspection of school children by involving the parents and school teachers. Anaemia follow up programme was continued in Ward Nos. I and II of Indira Nagar of Tiruvanmiyur Panchayat. At Palavakkam and Medavakkam Villages, the team conducted the D.P.T. immunisation programme by involving youth corps field workers, local leaders and the staff of the Primary Health Centre. Besides the above, the team participated in all the regular as well as special activities of the Health Education Bureau.

(c) *Health Education Teacher Training Unit.*—Health Education Teacher Training Unit conducted four batches of Health Education training covering 66 teachers.

A village survey was taken up in Porur village. As a part of the School Health programme, as a first step, medical inspection was carried out in Porur school with the help of the Primary Health Centre Staff. Cumulative Health record is being maintained for every child. 40 per cent of the children seem to have dental diseases and defects. Arrangements were made for dental service in co-ordination with the Dental wing of the Madras Medical College. Educational programme on Tuberculosis control programme, Tetanus Toxoid and Environmental sanitation to the teachers of the school, school children and some of the local leaders were conducted. Mantoux test was given to all the school children. B.C.G. immunisation programme was carried out. The teacher training unit conducted a State level workshop on Health and population education.

(d) *Student health Education Unit.*—The Student Health Education Unit in collaboration with the State Institute of Education, Tamil Nadu analysed the Health content of the existing syllabus in Elementary schools and prepared a guide book in Tamil for teachers for the first five standards which helps to teach health with the existing syllabus approved by Education Department. The work of preparing a teachers guide for VI to VIII standards was continued. The first draft of content analysis of existing syllabus has already been completed. The unit had a project on "School and Community Health Education" in the village Medavakkam.

(e) *Media Unit.*—The Public Health Press which is functioning from 1971 as produced more than 19,000 copies of posters, 1,15,000 copies of folders, 7,000 copies of booklets form, etc., both in English and Tamil on various Health subjects.

The Mobile Exhibition Unit participated in many major and minor exhibitions. Exhibitions were conducted at a total number of 30 places in the State. Puppet shows were conducted during Fairs and Festivals to educate the general public on Family Planning, nutrition, etc. Eighty puppet shows were conducted in all.

Various films on Health were screened in 146 different places in the State. A total number of 452 films on various Health subjects were loaned to the various local bodies, private voluntary organisations, Primary Health Centres, Hospitals etc.

The Art section has prepared the cover design for various booklets and folders on various health matters, while the editorial section was busy in editing and translating the scripts.

VII. Institute of public Health, Poonamallee.

The Institute of Public Health, Poonamallee comprises of the following three wings :—

- (a) Health Unit, Poonamallee
- (b) Orientation Training Centre
- (c) Research-cum-Action project

(a) *Health unit, Poonamallee.*—The Health unit area covers 39 Revenue Villages spread over 39 Sq. Miles and the 1971 census population of the Health Unit area is 95,940. The following are the vital rates recorded in the Health Unit area during 1972:—

				Number.	Rate.
Births	..	..	..	3,166	32.07
Deaths	..	..	..	1,087	11.01
Infant Deaths	..	..	..	184	58.11
Still Births	..	..	..	73	22.54
Maternal Deaths	..	..	..	3	0.92

The Statistical Assistant Director of this office during his inspection has found out that the infant mortality coverage is poor and there are omissions to register infant deaths. Action is being taken to improve the coverage. Steps are also taken to conduct house hold sample surveys to detect the omission in the registration of Vital events.

During the year 1972, there were only six suspected Cholera attacks in the Health Unit area. All the cases were referred to the infectious diseases hospital for diagnosis and treatment. All preventive measures were taken. A total of 12,775 anti-cholera inoculations were done.

The Health Unit area was free from Smallpox. Three thousand four hundred and thirty-five Primary Vaccinations and 11,875 Re-vaccinations were done. The activities of the National Malaria Eradication Programme was extended to Health Unit area as in other parts of the State. The villages in the Health Unit area are under surveillance.

The National Filaria Control Programme is also operating in this area. The entire health unit area free was from Kala Azar as well as Guinea-worm infection. Maternity and Child Health Service is a branch of Health Unit which plays an important role in the welfare of mothers and children.

There are 4 Health visitors and 18 Maternity Assistants supervised by the Resident and Women Medical Officer. There are 8 Maternity Centres, 4 Main and 40 Sub-centres in the Health Unit. Almost all the expectant mothers in the Health Unit area are registered for pre-natal advice and education for ensuring proper skilled care during and after delivery. Health Visitors do house visits and advise nursing mothers regarding infant and child care. Abnormal cases of pregnancy are referred to women and child Hospital, Egmore.

On the regular activities of the Health Unit, Poonamallee is family Planning. Toward achieving the targets set in Family Planning, the following activities were carried out:

- (a) Family Planning Clinics are conducted along with regular maternity and child health clinics.

- (b) Mothers are contacted both individually and in groups.
- (c) Group talks and mother classes are held.
- (d) Contraceptives are supplied free of cost to the post-natal mothers who are prepared to use them.
- (e) House visits are done by the Family Planning staff to motivate and persuade the mothers to accept Family Planning methods.
- (f) I.U.C.D. Clinics are run. The Clinics have become popular.

During the year 1972 158 tubectomy, 31 Vasectomy were done. 8,736 mothers were educated in Family Planning in the clinics while 13,380 mothers were educated during home visits.

Improvement of Rural sanitation is one of the major service programmes of this unit. During the year 1972, five borehole latrines were constructed. one hundred and thirty-four bore hole latrines were re-constructed. One hundred and twenty-eight soak-pits were made. One hundred and forty one soak pits were reconstructed. Sixty nine manure pits were made. One hundred and thirty seven manure pits were reconstructed. Thirty six villages out of thirty nine villages in the Health Unit area have protected water-supply.

There was no unusual prevalence of diseases due to scarcity of food stuffs. Provision of food control under MPH Act were enforced. Effective sanitary arrangements were done by the Health Unit staff, for all the festival that were held in the area.

Health Education is one of the important activities of the Health Unit, Poonamallee. The following were the various types of Health Education activities performed by the Health Unit staff.

- (a) Formation of village Health Committees.
- (b) Individual Contacts.
- (c) Group talks.
- (d) Mass Education Programme.
- (e) Distribution of Health Education aids.
- (f) Health Education in school health.

During the year 1972, a total number of one hundred ninty five Surgeons from Madras Medical College, one hundred and twenty Sanitary Inspector Course students, fifty five pupil Health Visitors, 3 Hospital Administrative Course students from Voluntary Health Service, 2 Diploma in Health Education Trainees from Gandhigram and 5 B. Sc., course Medical Officer Trainees from Madra Medical College were given training in Public Health Education and Preventive medicine.

(b) *Orientation Training Centre, Poonamallee.*—During the year 1972, Five batches have completed training. Commencing with 93rd batch ending with 97th batch.

(c) *Research-cum-action project.*—The idea is to launch research programmes to improve the techniques of work and the methodology of approach in bettering rural sanitation programme all over the State. Education to people is being given by way of individual contacts, group meetings screening of film shows, etc. A study has been under taken to find out ways and means for improving the water-supply and sanitation facilities.

The manufacture of latrine parts at the RCAP worksheds at Sriperumbudur, Tiruvallur, Kadambathur, Ellapuram and Alwarthirunagari is done under the periodical supervision of the public Health Engineers. Construction of latrines are carried out by the Health Inspectors of the RCAP Blocks. They educate the public on the importance of latrines. The public were also explained about the installation of tube wells and its advantages.

The Diploma in Health Education Trainees from Gandhigram were given supervised field training for two months. Apart from this trainees from various inst. of pub. are deputed for training in Environmental Hygiene, Rural water-supply, etc.

Proposals are ahead to intensify the programmes of RCAP. During the year 1972, a total of 1 189 latrines were constructed in all the four Research-cum-Action Project districts.

VII. General.—The following table gives particulars of expenditure:—

A. Amount spent by Public Health Department (under the control of Additional Director of Health Services and Family Planning during 1971-72):—

	RS.
Salaries	2,65,84,253
Travelling Allowance	11,68,860
Dearness Allowance	30,30,229
Other Allowances	28,40,944
Other charges	1,40,26,921

Gross total .. 4,76,51,207

Deduct—Amount recovered from Pondicherry Administration towards the implementation of National Malaria Eradication programme in Pondicherry and Karaikal areas. 86,107

Net expenditure on Public Health for 1971-72. 4,75,65,100

B. Amount spent by and for other departments under Public Health Budget during 1971-72. Grants released by Public Health Department for—

	RS.
Panchayat Union Councils	39,74,766
Municipalities	21,27,433
Mini Primary Health Centres	50,000
P. H. Engineering Department	1,40,10,960
Town Planning Department	31,43,618
Family Planning	3,41,71,369
Corporation grants	6,13,904
Medical Department	5,41,522
Director of Medical Education	81,98,516
Grants to Public Health Purposes	1,26,200

Gross total .. 6,69,56,288

DEDUCTIONS:

Chief Engineer, Public Health Engineering Department. 17,830	
Director of Town Planning 34,762	
Net expenditure 6,69,03,695	

Total Public Health Budget (Actuals) for 1971-72—

Public Health Department (A) 4,75,65,100	
Other Departments (B) 6,69,63,695	

Total expenditure .. 11,44,68,795

The Administration of the department continued to be satisfactory.

SALIENT FEATURES OF THE PUBLIC HEALTH ADMINISTRATION REPORT FOR THE YEAR 1972.

The Vital Statistical indices for the year under report reveal the following salient features:—

- (a) A decrease in the birth rate from 25.2 in 1971 to 24.4 in 1972.
- (b) A decrease in the death rate from 8.6 in 1971 to 8.4 in 1972.
- (c) An increase in the infant mortality rate from 54.9 in 1971 to 55.3 in 1972.
- (d) An increase in the still birth rate from 17.9 in 1971 to 19.6 in 1972.
- (e) An increase in the maternal mortality rate from 2.1 in 1971 to 2.3 in 1972.

Control of communicable diseases:

Cholera.—There were 3,670 attacks and 205 deaths during 1972 as against 2,518 attacks and 179 deaths during 1971. The total number of anti-cholera inoculations done during the year was 14,69,731.

Smallpox.—The State was free from indigenous smallpox. Fifteen lakhs two thousand one hundred and eighteen primary vaccinations and 38,21,548 re-vaccinations were done.

Plague.—The State was free from plague during the year under report.

Dysentery and Diarrhoea.—There were 20,490 deaths due to Dysentery and Diarrhoea during 1972 as against 20,097 deaths in 1971.

Malaria.—The National Malaria Eradication Programme was continued to be implemented successfully in the State. In the Central Malaria Laboratory, necessary training courses including lectures on entomology, epidemiology, parasitology and haematology were conducted.

Filaria.—The Four National Filaria Control Units in the districts of Chingleput, North Arcot, South Arcot and Thanjavur continued their anti-larval measures. But the programme has been re-organised with the establishment of 8 new units:—

1. Kancheepuram.
2. Villupuram.
3. Cuddalore.
4. Thanjavur.
5. Nagapattinam.
6. Srirangam.
7. Pudukkottai.
8. Madras.

Thus totally 12 units are functioning in the State.

Respiratory diseases.—There were 31,021 deaths due to respiratory diseases as against 32,080 deaths in 1971.

Yaws.—During the year under report, 1,206 villages were surveyed. One lakhs, eighty-nine thousand five hundred and ninety-eight persons were examined. Three hundred and fifty-two Yaws cases were treated.

Guinea worm.—During the year 1972, 14,048 villages and hamlets were surveyed for Guinea worm infection and 47 villages were found to be endemic for guinea worm diseases. A total of 285 cases were detected and treated.

Health services:

(i) **Maternity and child health.**—There were 3,840 maternity and child health centres at the end of 1972 as against 3,801 at the end of 1971.

(ii) **Health visitors.**—There were 574 health visitors during 1972 as against 547 during 1971.

(iii) **School medical inspection.**—The programme is effectively implemented in 18 primary health centres and in the two municipalities of Tiruchirappalli and Coimbatore. During the year under report, 81,991 school going children were examined and out of these 28,614 were found to be suffering from one disease or other.

(iv) **Immunisation Programme.**—During the year under report, 96,882 children were immunised.

(v) **Primary Health Centres.**—The total number of Primary Health Centres in the State was 379.

(vi) **CARE assisted Maternity and Child Health Programme.**—The supplementary feeding programme was assisted by CARE during 1972. Under the programme the gift food commodities are distributed at present through about 1,216 feeding centres including Primary Health Centres. About 45,060 daily beneficiaries are there. A total quantity of about 25 lakhs of kilograms of gift food commodities was received and distributed during the year.

Food adulteration.—The prevention of Food Adulteration Act was in force in 306 local bodies during the year 1972. Samples from Southern Railway were also taken up for analysis under the Act. The samples were analysed with the help of the three Food Analysis Laboratories.

1. Government Analysis Laboratory at King Institute, Guindy (2) the Food Analysis Laboratory attached to the Corporation of Madras and (3) Public Analysis Laboratory attached to the Principal Public Health Laboratory, Coimbatore.

In all 19,083 samples were analysed of which 4,996 samples, representing 26.2 percent were found adulterated.

Institute of Public Health.—

(i) **Health Unit, Poonamallee.**—The Unit continued to render all services in connection with public health problems for the people residing within the Health Unit area.

(ii) **Orientation Training Centre.**—During the year under report, five batches have completed training, commencing from 93rd batch to 97th batch.

(iii) **Research-cum-Auction Project.**—The Research-cum-Action Projects continued their activities in the field of sanitation.

R. NARAYANAN,
Additional Director of Health
Services and Family Planning.

STATEMENT I.

Area and Population 1972.

District.	Area.	Population 1971.			Mid-year Estimated population, 1972.		
		Males.	Females.	Total.	Males.	Females.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1 Madras ..	128-0	1,297,195	1,172,254	2,469,449	1,348,000	1,219,000	2,567,000
2 Chingleput ..	7,920-0	1,492,978	1,414,621	2,907,599	1,542,000	1,459,000	3,002,000
3 North Arcot ..	12,265-0	1,905,390	1,850,437	3,755,797	1,948,000	1,888,000	3,836,000
4 South Arcot ..	10,898-0	1,836,950	1,780,773	3,617,723	1,877,000	1,816,000	3,693,000
5 Thanjavur ..	9,735-0	1,926,043	1,914,689	3,840,732	1,968,000	1,952,000	3,919,000
6 Tiruchirappalli ..	14,291-0	1,932,551	1,916,265	3,848,816	1,978,000	1,958,000	3,936,000
7 Madurai ..	12,629-0	1,982,805	1,955,292	3,938,197	2,032,000	2,002,000	4,034,000
8 Ramanathapuram ..	12,578-0	1,400,835	1,459,372	2,860,207	1,431,000	1,488,000	2,918,000
9 Tirunelveli ..	11,438-0	1,567,558	1,632,957	3,200,515	1,599,000	1,664,000	3,263,000
10 Salem ..	8,643-0	1,524,329	1,468,267	2,992,616	1,561,000	1,500,000	3,061,000
11 Dharmapuri ..	9,643-0	852,274	825,601	1,677,775	875,000	848,000	1,723,000
12 Coimbatore ..	15,673-0	2,235,039	2,138,139	4,373,178	2,291,000	2,191,000	4,481,000
13 The Nilgiris ..	2,549-0	254,120	239,895	494,015	259,000	246,000	505,000
14 Kanyakumari ..	1,684-0	619,884	602,665	1,222,549	635,000	617,000	1,252,000
Total ..	1,30,069-0	20,828,021	20,371,147	41,199,168	21,346,000	20,847,000	42,193,000

Birth rate.

Death rate.

Infant mortality rate.

District.	1971.			1972.			1971.			1972.		
	Number.	Rate.	(3)	Number.	Rate.	(4)	Number.	Rate.	(5)	Number.	Rate.	(6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1 Madras ..	96,322	28-58	97,166	37-36	30,875	13-38	33,044	12-72	7,852	76-41	7,852	76-41
2 Chingleput ..	56,304	19-18	64,809	21-59	19,368	6-61	22,352	7-45	3,102	55-19	3,102	55-19
3 North Arcot ..	1,05,445	27-93	1,05,494	27-50	34,070	9-02	36,444	9-50	5,959	58-11	5,959	58-11
4 South Arcot ..	78,938	21-70	75,711	20-60	25,652	7-06	25,626	6-94	3,484	44-14	3,484	44-14
5 Thanjavur ..	83,956	21-75	80,874	20-64	34,479	8-93	29,842	7-61	4,246	50-57	4,246	50-57
6 Tiruchirappalli ..	95,933	24-78	92,861	23-59	36,300	9-38	36,972	9-39	4,785	49-88	4,785	49-88
7 Madurai ..	1,15,222	29-08	1,09,815	27-22	37,114	9-37	35,739	8-86	6,867	59-60	6,867	59-60
8 Ramanathapuram ..	72,186	25-11	67,570	23-16	23,847	8-29	23,143	7-93	3,549	49-16	3,549	49-16
9 Tirunelveli ..	86,970	26-73	81,552	24-99	31,733	9-87	30,548	9-36	5,048	58-72	5,048	58-72
10 Salem ..	71,187	23-65	72,528	23-69	24,419	8-15	24,267	7-93	3,542	49-76	3,542	49-76
11 Dharmapuri ..	37,013	21-91	36,857	21-39	12,326	7-30	12,204	7-08	1,571	42-44	1,571	42-44
12 Coimbatore ..	99,181	22-54	96,336	21-28	33,168	7-54	31,863	7-18	4,962	50-03	4,962	50-03
13 The Nilgiris ..	11,404	22-95	11,293	22-36	3,015	6-07	2,790	5-52	672	58-93	672	58-93
14 Kanyakumari ..	35,946	29-22	38,891	31-06	11,443	9-30	11,845	9-46	2,190	60-92	2,190	60-92
State ..	1,044,807	25-21	1,030,757	24-43	357,909	8-64	3,56,280	8-44	57,329	54-87	57,329	54-87

Infant mortality rate—cont.

Still birth rate.

Maternal mortality rate.

District.	1971.			1972.			1971.			1972.		
	Number.	Rate.	(12)	Number.	Rate.	(13)	Number.	Rate.	(14)	Number.	Rate.	(15)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1 Madras ..	9,282	85-24	9,282	18-93	2,585	25-91	115	1-17	138	1-28	138	1-28
2 Chingleput ..	3,495	53-93	3,495	15-02	960	14-60	100	1-75	178	1-79	178	1-79
3 North Arcot ..	6,396	60-63	6,396	15-13	1,729	16-13	253	2-36	296	2-76	296	2-76
4 South Arcot ..	3,588	47-39	3,588	12-13	898	11-72	139	1-74	183	2-39	183	2-39
5 Thanjavur ..	3,760	46-49	3,760	24-44	2,113	25-46	289	3-56	380	3-37	380	3-37
6 Tiruchirappalli ..	4,644	50-01	4,644	17-83	1,743	18-42	274	2-81	297	3-14	297	3-14
7 Madurai ..	6,538	59-54	6,538	18-25	2,673	23-76	140	1-19	187	1-66	187	1-66
8 Ramanathapuram ..	3,324	47-71	3,324	13-61	966	14-09	140	1-91	125	1-83	125	1-83
9 Tirunelveli ..	4,567	56-00	4,567	16-64	1,543	18-57	259	2-96	278	3-31	278	3-31
10 Salem ..	3,566	49-17	3,566	20-23	1,453	22-16	148	1-97	166	2-10	166	2-10
11 Dharmapuri ..	1,492	40-31	1,492	8-25	342	6-52	69	1-86	78	2-10	78	2-10
12 Coimbatore ..	4,653	48-86	4,653	26-04	2,536	25-91	228	2-24	212	2-17	212	2-17
13 The Nilgiris ..	8,056	55-43	8,056	24-93	356	31-66	17	1-44	7	0-61	7	0-61
14 Kanyakumari ..	3,390	69-68	3,390	17-62	736	20-10	62	1-69	73	1-99	73	1-99
State ..	57,116	56-41	57,116	17-91	20,624	19-62	2,228	2-09	2,425	2-31	2,425	2-31

STATEMENT II-A 1972.

Births, Deaths, Still Births, Infant Deaths, Maternal Deaths in Municipalities, 1972.

16

Name of the District.	Births.			Deaths.			Still Births.			Cholera.	Typhoid.	Paratyphoid.
	Male.		Total.	Male.		Total.	Male.		Total.			
	(2)	(3)		(5)	(6)		(8)	(9)				
Madras—												
Madras	49,305	47,861	97,166	17,682	14,962	32,644	1,298	1,287	2,585	27	3,211	2,265
Chingleput district—												
Kancheepuram	3,075	2,774	5,849	629	565	1,194	169	134	303	3	104	108
Tiruvallur	648	572	1,220	109	80	189	19	13	32	..	4	..
Tiruvotiyur	268	228	496	223	175	398	4	4	8	..	93	..
Chingleput	1,076	1,022	2,098	511	324	835	114	98	212	1	1	7
Alandur	439	352	791	90	69	159	5	1	6	..	23	..
Tambaram	610	537	1,147	179	112	291	13	5	18	..	40	..
Pallavaram	1,050	986	2,036	163	109	272	33	27	60	..	28	2
Total	7,766	7,071	14,837	1,904	1,434	3,338	357	282	639	4	293	118
North Arcot district—												
Vellore	4,479	4,371	8,850	1,763	1,195	2,958	288	257	545	1	33	378
Tiruvannamalai	1,382	1,243	2,625	234	218	452	86	79	165	..	79	2
Vaniyambadi	987	850	1,837	282	226	508	34	43	77	..	158	14
Gudiyatham	1,281	1,217	2,498	410	435	845	76	46	122	..	87	12
Tirupattur	1,099	949	2,048	210	142	352	81	71	152	..	60	..
Walajpet	493	455	948	72	71	143	16	14	30	..	21	5
Arni	1,034	950	1,984	246	197	443	63	54	117	..	94	7
Arkonam	980	909	1,889	130	106	236	38	25	63	..	65	3
Ambur	1,254	1,104	2,358	336	243	579	57	45	102	..	85	13
Arrot	377	340	717	64	70	134	10	5	15	..	21	..
Ranipet	790	687	1,477	165	148	313	30	26	56	..	18	..
Total	14,174	13,984	27,258	3,921	3,051	6,972	779	665	1,444	1	721	434
South Arcot district—												
Juddalore	2,651	2,545	5,196	543	417	960	48	51	99	..	57	21
Chidambaram	979	917	1,896	241	164	405	42	34	76	..	44	..
Villupuram	1,406	1,239	2,645	228	179	407	39	38	77	..	..	9
Tindivanam	1,161	1,017	2,178	151	117	268	49	30	79	..	..	8
Perur	797	696	1,493	115	78	193	30	23	53	..	50	..
Nellikuppam	519	518	1,037	100	71	171	18	20	38	..	47	..
Virudhachalam	678	601	1,279	134	142	276	38	32	70	..	51	2
Total	7,991	7,533	15,524	1,512	1,108	2,620	264	228	492	5	274	35
Tanjavur district—												
Sirkali	590	530	1,120	88	106	194	14	8	22	..	4	1
Tanjavur	4,049	3,769	7,818	1,039	700	1,739	347	290	637	..	57	1
Kumbakonam	3,285	3,149	6,434	683	665	1,348	204	176	380	..	25	15
Mayuram	1,690	1,505	3,195	347	283	630	66	56	122	..	5	8
Manargudi	1,567	1,422	2,989	320	245	565	81	58	139	..	36	3
Nagesatnam	1,727	1,593	3,320	477	377	854	129	100	229	..	113	4
Tiruvavur	1,035	890	1,925	177	156	333	42	32	74	..	5	1
Patankottai	1,143	979	2,122	217	140	357	76	54	130	..	44	2
Total	15,066	13,827	28,893	3,338	2,672	6,010	959	774	1,733	2	332	35
Tiruchirappalli district—												
Tiruchirappalli	6,934	6,996	13,930	2,018	1,311	3,329	373	373	746	..	227	39
Karur	1,180	1,066	2,246	337	234	571	71	71	142	..	15	6
Srirangam	1,158	1,172	2,330	246	179	425	68	68	133	..	48	3
Padukottai	1,898	1,761	3,659	486	375	861	139	139	273	..	59	37
Manaparr	700	660	1,360	175	186	361	36	36	61	..	..	1
Turaiyur	397	343	740	120	88	208	10	10	17	..	5	2
Goldenrock	150	152	302	56	32	88	4	4	9	..	1	..
Total	12,417	12,150	24,567	3,438	2,445	5,883	701	701	1,324	..	355	88
Madurai district—												
Madurai	14,110	13,394	27,504	3,325	2,391	5,716	734	734	1,365	3	854	176
Dindigul	3,412	3,127	6,539	812	595	1,407	185	17	38	..	433	13
Bodinayakanur	850	823	1,673	216	212	428	17	17	34	..	18	..
Periyakulam	1,012	931	1,943	307	312	619	48	48	100	..	29	23
Palani	700	615	1,315	127	109	236	14	16	30	..	14	2
Cumbum	1,009	868	1,877	144	155	300	25	25	50	..	60	1
Alinagar	22,010	2,049	24,059	5,153	4,439	9,592	48	48	96	..	87	1
Total	22,010	20,499	42,509	5,153	4,439	9,592	1,073	1,073	2,018	3	1,495	215
Ramanathapuram district—												
Ramanathapuram	1,293	1,269	2,562	416	398	814	40	40	814	..	125	..
Virudhunagar	1,497	1,324	2,821	226	199	425	48	48	913	..	89	..
Karaikudi	1,042	1,001	2,043	273	219	492	32	32	78	..	27	7
Devakottai	553	559	1,112	209	181	390	24	24	43	..	78	4
Sivakasi	1,095	961	2,056	187	170	357	24	24	45	..	41	2
Aruppukottai	979	845	1,824	258	202	460	30	30	80	..	72	2
Ramanathapuram	1,543	1,480	3,023	329	290	619	103	103	210	..	65	4
Paramakudi	935	817	1,752	122	144	266	16	16	32	..	38	3
Sivaganga	629	594	1,223	168	181	349	34	35	69	..	54	2
Sattur	419	362	781	79	84	163	23	23	33	..	11	2
Total	10,913	10,106	21,019	2,558	2,445	4,855	408	408	945	..	614	48
Tirunelveli district—												
Tuticorin	3,246	2,999	6,245	868	705	1,573	134	134	286	..	237	54
Tirunelveli	2,050	1,938	3,988	502	456	958	63	63	122	..	70	31
Palayamkottai	1,767	1,677	3,444	496	271	767	223	223	388	..	9	10
Malapalayam	687	621	1,308	165	146	311	17	17	34	..	44	..
Shencottah	452	398	850	107	120	227	43	43	45	..	27	..
Tenkasi	884	811	1,695	209	187	396	42	42	84	..	90	..
Kadayanallur	676	678	1,354	182	202	384	23	23	45	..	74	2
Sankarankoil	452	395	847	130	125	255	31	31	58	..	51	..
Kolpatti	1,033	897	1,930	249	168	417	36	36	65	..	53	19
Puliankudi	219	253	472	83	65	148	1	..	1	..	47	..
Total	11,400	10,667	22,067	2,991	2,445	5,436	389	389	733	..	702	116
Salem district—												
Salem	7,515	7,162	14,677	1,997	1,702	3,699	395	395	764	..	20	368
Respuram	920	787	1,707	140	122	262	44	44	88	..	26	..
Attur	1,094	1,053	2,147	145	122	267	11	11	22	..	19	3
Edappadi	466	378	844	80	64	144	3	3	6	..	46	1
Tiruchengode	748	610	1,358	138	78	216	47	47	95	..	19	2
Namakkal	603	510	1									

STATEMENT II(a)—Cont.

Name of the districts.	Tuber- culosis.	Other respiratory disease.	Dysen- tery.	Diar- rhea.	Maternal Deaths.	Wou- nds and accidents.	Snake bites.	Measles.	Infant deaths.			Dip- theria.			
									Male.	Female.	Total.				
(1)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
Madras—															
Madras	1,236	3,523	1,190	2,305	138	177	1,042	2	66	16	17,422	4,400	3,882	8,282	24
Chingleput district—															
Kancheepuram ..	125	..	15	105	23	6	15	..	..	..	690	108	88	196	..
Tiruvallur	9	2	15	15	1	15	12	..	..	..	116	13	15	28	..
Tiruvottiyur ..	26	11	35	41	..	1	13	..	1	..	17	41	39	80	..
Chingleput	53	11	4	10	2	2	47	3	4	..	692	139	73	212	..
Alandur	5	..	8	..	..	..	..	..	..	..	119	14	11	25	..
Cambaram	45	56	1	17	1	..	1	..	..	..	130	14	18	32	..
Palla varana ..	..	8	7	9	..	..	7	..	..	..	211	19	227	46	..
Total	263	88	85	198	27	24	85	3	5	..	2,145	348	271	619	..
North Arcot district—															
Vellore	146	172	24	133	62	4	126	2	2	..	1,869	333	254	587	6
Tiruvannamalai ..	20	13	26	19	9	1	18	..	..	..	264	40	38	78	1
Vaniyambadi	13	18	8	48	4	..	..	..	..	..	245	86	70	156	2
Gudiyattam	26	4	30	18	1	..	1	..	..	..	672	100	95	195	2
Tirupathur	16	..	2	14	7	1	1	..	..	..	244	41	21	62	2
Walajapet	..	4	1	1	3	1	..	..	..	..	112	11	12	23	..
Arni	35	74	7	38	5	..	4	..	..	..	179	59	53	112	..
Arkonam	17	..	11	..	1	..	6	1	..	..	143	19	17	36	1
Ambur	30	17	11	23	5	..	5	1	2	..	386	83	47	130	1
Arcot	6	2	8	12	3	..	1	..	..	..	82	6	10	16	..
Ranipet	27	4	1	7	4	..	2	..	..	..	249	27	28	55	..
Total	335	308	118	313	104	6	164	7	4	4	4,445	805	645	1,450	12
South Arcot district—															
Cuddalore	61	..	22	14	20	3	78	3	1	..	674	82	91	173	6
Chidambaram	16	6	2	8	7	1	8	1	..	..	316	34	17	51	..
Villupuram	4	..	11	1	4	6	14	1	..	..	357	37	14	61	..
Tindivanam	10	41	1	4	6	..	15	1	..	..	162	36	31	67	..
Panruti	16	1	7	8	1	2	4	1	..	..	100	32	29	61	..
Nellikuppam	7	6	8	17	1	..	..	5	..	..	80	14	16	30	..
Virudachalam ..	..	7	30	8	2	..	6	2	..	..	168	6	40	46	..
Total	108	61	81	60	41	12	125	14	1	..	1,857	241	248	489	6
Thanjavur district—															
Sirkali	..	6	1	2	..	18	..	5	..	..	132	13	18	31	..
Thanjavur	8	73	4	3	12	..	76	..	2	..	1,475	151	98	249	..
Kumbakonam	74	27	6	38	37	1	25	4	1	..	1,093	117	112	229	3
Mayuram	9	9	1	6	13	..	6	..	..	..	571	63	64	127	1
Mannargudi	9	5	5	2	..	..	7	1	..	..	417	43	35	78	..
Ragupattinam	1	16	24	71	18	7	5	..	1	..	554	94	69	163	..
Tiruvannamalai ..	..	21	2	6	1	1	3	1	..	..	292	41	34	75	..
Tiruvannamalai ..	..	19	2	19	..	..	2	..	..	..	254	53	35	88	..
Pattukottai	15	..	2	..	..	..	..	..	..	..	..	..	..	..	..
Total	156	176	45	147	89	27	124	11	4	..	4,858	575	465	1,040	4
Tiruchirappalli district—															
Tiruchirappalli ..	161	46	57	27	10	107	3	6	..	2,587	199	186	385	4	..
Karur	31	..	1	8	1	36	2	1	..	482	35	36	71	1	..
Srirangam	23	33	5	5	..	43	..	3	..	347	47	32	79	..	..
Pudukottai	42	64	7	24	..	10	2	..	..	525	71	73	144	..	..
Manapparai	15	17	38	2	..	2	..	..	..	200	39	41	80	..	..
Turaiyur	18	5	10	2	..	2	..	..	..	161	27	16	43	..	..
Goldenrock	..	6	5	1	..	..	..	..	..	73	1	1	2	..	..
Total	290	171	92	69	13	201	10	10	..	4,375	385	419	804	5	..
Madurai district—															
Madurai	286	197	24	88	18	72	..	9	..	4,421	732	660	1,392	4	..
Dindigul	45	34	6	17	..	33	..	..	..	821	172	136	308	..	..
Botinayakanur ..	24	..	12	3	..	2	..	..	..	369	48	44	92	..	..
Periyakulam	40	3	19	10	4	4	1	..	..	413	48	51	99	..	..
Palani	26	6	..	3	7	14	..	1	..	288	16	24	40	..	..
Cumbum	4	13	4	1	..	..	..	..	..	149	45	32	77	..	..
Allinagaram	13	4	18	8	1	1	..	..	..	154	37	39	76	..	..
Total	438	257	93	118	30	126	1	12	..	6,615	1,098	986	2,084	4	..
Ramanathapuram district—															
Rajapalayam	52	2	52	7	8	7	..	..	..	503	73	73	146	1	..
Srivilliputhur	33	23	25	6	..	4	..	..	..	353	56	40	96	..	..
Virudhunagar	23	18	4	3	..	8	..	..	..	318	54	40	94	6	..
Karaikudi	25	21	26	2	..	2	..	1	..	333	59	33	22	..	..
Devakottai	15	24	9	2	..	1	..	..	..	301	48	27	75	1	..
Sivakasi	..	2	25	6	1	4	..	..	..	255	43	31	74	..	..
Aruppukottai	41	11	11	5	3	6	2	..	..	302	36	24	60	..	..
Ramanathapuram ..	23	51	4	29	..	20	..	..	..	418	62	65	127	1	..
Paramakudi	15	..	5	1	8	1	..	..	..	192	6	13	19	1	..
Sivaganga	9	..	8	4	12	4	1	1	..	266	31	48	72	..	..
Sattur	6	18	8	1	4	3	..	..	..	102	24	26	50	..	..
Total	242	175	169	66	33	61	3	2	..	3,833	492	413	965	10	..
Tirunelveli district—															
Tuticorin	81	97	41	41	4	38	..	2	..	952	143	123	266	..	..
Tirunelveli	94	..	6	6	2	4	2	..	..	710	90	77	167	..	..
Palayamcottai	51	..	33	31	37	69	..	2	..	553	48	37	85	3	..
Melepalayam	28	20	9	2	..	..	..	..	..	170	48	40	88	1	..
Shencottah	2	21	1	2	..	2	..	..	..	172	14	17	31	..	..
Tenkasi	9	4	4	4	1	..	..	..	..	233	33	36	69	2	..
Kadayanallur	19	30	..	2	8	..	..								

STATEMENT II (a)—Cont.

Name of the District.	Births.			Deaths.			Still Births.			Cholera.	Fever.	Fnet month.
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Dharmapuri district—												
Dharmapuri	976	893	1,874	93	62	1,55	56	38	94	..	16	2
Krishnagiri	909	866	1,875	176	124	300	43	36	79	..	..	18
Total..	1,885	1,764	3,649	269	186	455	99	74	173	..	16	20
Coimbatore district—												
Coimbatore	9,518	9,137	18,655	2,316	1,852	4,168	401	292	693	..	45	112
Erode	3,960	3,709	7,669	831	627	1,458	248	201	449	..	57	31
Tiruppur	2,536	2,364	4,890	497	390	887	112	77	189	..	77	31
Pollachi	2,022	1,931	3,953	492	434	926	125	112	237	..	28	5
Dharmapuri	1,262	1,095	2,357	214	157	371	72	60	132	..	13	13
Odumalpet	883	794	1,677	193	187	380	52	39	91	..	29	1
Mettpalayam	1,133	1,091	2,224	179	189	368	61	53	114	..	6	7
Gobichettipalayam	977	925	1,902	245	188	433	60	62	128	..	3	10
Singanailur	1,316	1,181	2,497	439	332	771	32	27	59	..	40	7
Satyamangalam	323	289	622	80	64	144	8	8	16	..	44	..
Total..	23,930	22,516	46,446	5,486	4,420	9,908	1,177	931	2,108	..	332	217
The Nilgiris district—												
Ootacamund	1,369	1,338	2,707	281	235	666	34	39	73	..	1	130
Coonoor	863	792	1,655	234	176	410	28	20	48	..	4	54
Total ..	2,232	2,130	4,362	615	461	1,076	62	59	121	..	5	184
Kanyakumari district—												
Nagercoil	3,937	3,725	7,662	891	613	1,504	165	148	313	..	13	88
Colachel	276	301	577	55	48	103	4	5	9	..	23	26
Kuzhithurai	527	431	958	66	48	114	17	11	28	..	9	..
Pedmanabhapuram	396	381	777	60	59	119	15	10	25	..	27	..
Total ..	5,136	4,838	9,974	1,072	768	1,840	201	174	375	..	72	111

* Less than .001.

STATEMENT II (a).

Name of the districts.	Infant deaths.										All other causes.	Males.	Females.	Diphtheria.
	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)				
Arumapuri district—														
Dharmapuri	8	4	4	..	4	..	17	..	..	..	100	6	24	28
Krishnagiri	11	6	39	6	4	..	9	..	..	..	207	33	36	69
Total ..	19	10	43	6	8	..	26	..	..	..	307	39	68	97
Coimbatore district—														
Coimbatore	194	313	138	102	36	5	202	8	9	..	2,991	431	377	808
Erode	53	3	4	6	59	30	67	5	..	..	1,137	162	138	300
Tiruppur	47	..	15	39	..	12	6	..	1	..	668	119	84	203
Pollachi	26	45	46	4	4	2	1	3	3	..	758	94	83	177
Dharmapuri	17	11	..	..	5	2	3	2	..	..	304	50	36	86
Odumalpet	31	..	..	3	11	1	8	1	..	..	292	63	55	108
Metupalayam	21	6	1	21	7	1	..	6	1	..	290	35	49	84
Gobichettipalayam	25	30	..	3	18	11	25	3	1	..	302	48	32	80
Singanailur	49	45	13	1	..	5	1	..	..	..	610	54	55	109
Satyamangalam	1	..	2	..	..	1	4	..	..	..	92	8	4	12
Total ..	424	453	219	180	140	70	317	28	14	..	7,444	1,054	913	1,967
The Nilgiris district—														
Ootacamund	23	70	9	10	3	13	27	..	..	..	380	85	92	177
Coonoor	3	34	14	7	3	..	5	..	..	..	281	43	34	77
Total ..	26	104	23	17	6	13	32	..	..	..	661	128	126	254
Kanyakumari district—														
Nagercoil	38	368	8	11	18	58	26	..	..	..	880	179	134	313
Colachel	..	..	..	9	..	..	1	..	..	..	70	6	9	15
Huzhithurai	4	3	2	..	..	..	1	..	..	..	69	7	5	12
Pedmanabhapuram	..	..	..	1	..	3	1	..	..	..	87	5	3	8
Total ..	42	361	10	21	18	61	29	..	..	..	1,106	197	151	348

* Less than .010.

1972

STATEMENT III (ANNEXURE A).

Position of Arrear Returns.

Serial number and districts.	m/h returns due.	Number of returns received.	Percentage of returns not received to total number due.
(1)	(2)	(3)	(4)
1 Chingleput	14,784	13,047	11.75
2 North Arcot	19,080	18,386	3.64
3 South Arcot	20,208	17,600	12.91
4 Thanjavur	19,572	16,881	13.75
5 Tiruchirappalli	15,012	14,193	5.46
6 Madurai	10,524	10,050	4.50
7 Ramanathapuram	15,516	13,884	10.52
8 Tirunelveli	10,344	10,237	1.03
9 Salem	9,612	9,453	1.65
10 Dharmapuri	7,284	7,052	3.19
11 Coimbatore	10,308	9,695	5.95
12 The Nilgiris	1,812	1,584	12.58
13 Kanyakumari	3,456	3,456	..
Total	1,57,512	11,994	7.61

STATEMENT IV.

Births, Deaths, Infant deaths, Maternal Deaths, Still Births in Municipalities, 1972.

Districts.	Births.			Deaths.			Still Births.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1 Madras	49,305	47,861	97,166	17,682	14,862	32,544	3,644	1,398	5,042
2 Chingleput	7,766	7,071	14,837	1,904	1,434	3,338	338	357	695
3 North Arcot	14,174	13,084	27,258	3,921	3,051	6,972	779	665	1,444
4 South Arcot	7,991	7,533	15,524	1,512	1,168	2,680	264	228	492
5 Thanjavur	15,966	13,827	29,793	3,338	2,672	6,010	969	774	1,743
6 Tiruchirappalli	12,417	12,150	24,567	3,438	2,445	5,883	701	623	1,324
7 Madurai	22,010	20,619	42,629	5,133	4,439	9,572	1,073	312	1,385
8 Ramanathapuram	10,913	10,106	21,019	2,558	2,337	4,895	408	344	752
9 Tirunelveli	11,466	10,667	22,133	2,991	2,445	5,436	389	344	733
10 Salem	11,346	10,338	21,684	2,652	2,196	4,848	657	555	1,212
11 Dharmapuri	1,885	1,764	3,649	269	186	455	99	74	173
12 Coimbatore	23,930	22,516	46,446	5,486	4,420	9,906	1,177	931	2,108
13 The Nilgiris	2,332	2,130	4,462	615	461	1,076	99	74	173
14 Kanyakumari	5,136	4,838	9,974	1,072	768	1,840	201	174	375
Total	195,667	184,804	380,471	52,191	42,984	95,175	8,461	7,268	15,729

Deaths.

Deaths.

Still Births.

Districts.	Other respiratory diseases.			Dysentery.			Diarrhoea.			Maternal death.			Suicides.			Wounds accidents.			Snake bites.			Rabies.			Measles.			All other causes.			Males.			Females.			Total		
	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)					
1 Madras	3,523	1,190	2,305	138	177	1,042	2	66	16	17,422	4,400	3,882	8,282	24	24	1,030	1,098	986	2,084	1,098	986	2,084	1,098	986	2,084	1,098	986	2,084	1,098	986	2,084	1,098	986	2,084	1,098	986			
2 Chingleput	88	85	198	27	24	85	3	5	..	2,145	348	271	619	12	12	1,450	805	645	1,450	805	645	1,450	805	645	1,450	805	645	1,450	805	645	1,450	805	645	1,450	805	645			
3 North Arcot	308	118	313	104	6	164	7	4	..	4,445	241	248	489	6	6	1,857	575	465	1,040	575	465	1,040	575	465	1,040	575	465	1,040	575	465	1,040	575	465	1,040	575	465			
4 South Arcot	61	81	60	41	12	125	14	1	..	1,857	241	248	489	6	6	1,857	575	465	1,040	575	465	1,040	575	465	1,040	575	465	1,040	575	465	1,040	575	465	1,040	575	465			
5 Thanjavur	176	45	204	89	27	124	11	4	..	4,858	419	385	804	4	4	4,858	419	385	804	419	385	804	419	385	804	419	385	804	419	385	804	419	385	804	419	385			
6 Tiruchirappalli	169	92	247	69	14	201	10	10	..	4,376	1,098	986	2,084	5	5	6,615	3,598	429	3,927	3,598	429	3,927	3,598	429	3,927	3,598	429	3,927	3,598	429	3,927	3,598	429	3,927	3,598	429			
7 Madurai	257	93	185	118	30	126	1	12	..	6,615	1,098	986	2,084	4	4	6,615	1,098	986	2,084	1,098	986	2,084	1,098	986	2,084	1,098	986	2,084	1,098	986	2,084	1,098	986	2,084	1,098	986			
8 Ramanathapuram	175	169	139	66	33	61	3	2	..	3,333	492	413	905	10	10	3,333	492	413	905	3,333	492	413	905	3,333	492	413	905	3,333	492	413	905	3,333	492	413	905	3,333	492		
9 Tirunelveli	190	72	115	101	57	125	5	5	..	3,598	504	429	938	10	10	3,598	504	429	938	3,598	504	429	938	3,598	504	429	938	3,598	504	429	938	3,598	504	429	938	3,598	504		
10 Salem	197	52	41	80	21	189	12	2	..	3,424	509	429	938	10	10	3,424	509	429	938	3,424	509	429	938	3,424	509	429	938	3,424	509	429	938	3,424	509	429	938	3,424	509		
11 Dharmapuri	10	43	6	8	..	26	..	..	..	307	39	58	97	..	..	307	39	58	97	307	39	58	97	307	39	58	97	307	39	58	97	307	39	58	97	307	39		
12 Coimbatore	453	219	180	140	70	317	28	14	..	7,444	1,054	913	1,967	28	28	7,444	1,054	913	1,967	7,444	1,054	913	1,967	7,444	1,054	913	1,967	7,444	1,054	913	1,967	7,444	1,054	913	1,967	7,444	1,054		
13 The Nilgiris	104	23	17	6	13	32	..	..	..	661	128	126	254	5	5	661	128	126	254	661	128	126	254	661	128	126	254	661	128	126	254	661	128	126	254	661	128		
14 Kanyakumari	361	10	21	18	61	29	..	..	..	1,106	197	151	348	6	6	1,106	197	151	348	1,106	197	151	348	1,106	197	151	348	1,106	197	151	348	1,106	197	151	348	1,106	197		
Total	6,072	2,292	3,931	1,005	545	2,646	96	125	16	61,591	10,809	9,410	20,219	110	110	61,591	10,809	9,410	20,219	61,591	10,809	9,410	20,219	61,591	10,809	9,410	20,219	61,591	10,809	9,410	20,219	61,591	10,809	9,410	20,219	61,591	10,809		

Deaths.

STATEMENT V.

Births by Religion (State).

Serial number and name of districts.	Hindus.		Muslims.		Christians.		Others.		Total.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
1 Madras ..	43,114	41,920	3,668	3,720	2,326	2,046	196	175	49,304	47,862	97,166
2 Chingleput ..	31,993	29,534	895	834	781	767	2	3	33,671	31,138	64,809
3 North Arcot ..	50,146	48,639	3,739	3,415	789	759	3	4	54,677	50,817	105,494
4 South Arcot ..	37,238	34,143	1,415	1,325	821	765	1	3	39,473	36,236	75,711
5 Thanjavur ..	37,647	35,034	3,122	2,705	1,242	1,121	1	2	42,012	38,862	80,874
6 Tiruchirappalli ..	42,686	40,735	2,334	2,097	2,589	2,419	1	..	47,610	45,251	92,861
7 Madurai ..	51,886	48,253	2,640	2,240	2,469	2,323	2	2	56,997	52,818	109,815
8 Ramanathapuram ..	31,019	29,305	2,459	2,194	1,307	1,286	..	..	34,785	32,785	67,570
9 Tirunelveli ..	33,846	31,561	3,511	3,113	4,929	4,592	..	..	42,286	39,266	81,552
0 Salem ..	36,357	33,637	891	897	380	366	..	..	37,628	34,900	72,528
1 Dharmapuri ..	18,270	16,770	781	760	139	137	..	..	19,190	17,667	36,857
2 Coimbatore ..	46,138	42,799	2,169	2,057	1,143	1,026	2	2	49,452	45,884	95,336
13 The Nilgiris ..	4,281	4,120	686	688	737	770	8	3	5,712	5,581	11,293
14 Kanyakumari ..	11,105	10,835	837	865	7,772	7,476	1	..	19,715	19,176	38,891
Total ..	475,726	445,285	29,147	26,910	27,424	25,853	217	195	532,614	498,243	1,030,757
Rural ..	269,933	251,712	7,709	6,947	14,042	13,453	..	..	291,684	272,112	563,796
Urban ..	205,793	193,573	21,438	19,963	13,382	12,400	217	195	240,930	226,131	466,961

STATEMENT V [a]

Births by Religions (Rural) 1972

[illegible]

Births by Religion (Urban) 1972

	Urban.												Total							
	Hindus.				Muslims.		Christians.		Others.		Total.									
	Male.	Female.	(13)	(14)	Male.	Female.	(15)	Male.	(16)	Female.	(17)	Male.		(18)	Female.	(19)	Male.	(20)	Female.	(21)
1 Madras ..	..	..	43,114	41,920	3,668	3,720	2,326	2,046	196	176	49,304	47,862	97,166							
2 Chingleput ..	..	..	12,984	11,986	605	567	484	491	2	3	14,075	13,047	27,123							
3 North Arcot ..	..	..	13,755	12,659	3,021	2,779	445	441	3	4	17,224	15,853	33,107							
4 South Arcot ..	..	..	9,949	9,326	887	800	372	303	1	3	11,209	10,432	21,641							
5 Tiruchirappalli ..	..	..	13,641	13,164	1,624	1,448	1,359	1,294	1	..	16,525	15,906	32,431							
6 Thanjavur ..	..	..	17,471	15,870	1,811	1,641	641	579	1	2	20,065	18,262	38,327							
7 Madurai ..	..	..	23,534	22,003	1,890	1,625	1,872	1,746	2	2	27,298	25,374	52,674							
8 Ramanathapuram ..	..	..	12,012	11,093	1,280	1,164	455	457	..	..	13,747	12,719	26,466							
9 Tirunelveli ..	..	..	12,897	12,053	2,497	2,204	2,061	1,916	..	..	17,445	16,173	33,618							
10 Salem ..	..	..	14,488	13,418	746	733	227	220	..	..	16,461	14,371	29,832							
11 Dharmapuri ..	..	..	2,297	2,113	382	373	41	35	..	..	2,720	2,521	5,241							
12 Coimbatore ..	..	..	24,443	22,959	1,964	1,856	972	867	2	2	27,381	25,684	53,064							
13 The Nilgiris ..	..	..	2,250	2,069	451	435	531	550	8	3	3,240	3,057	6,297							
14 Kanyakumari ..	..	..	3,058	2,936	471	448	1,606	1,455	1	..	5,136	4,838	9,974							
Total	..	..	205,793	193,573	21,438	19,963	13,382	12,400	217	195	240,830	226,131	466,961							

Births by months (Rural) 1972

(1)	January			February			March		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1 Chingleput	1,587	1,465	3,052	1,533	1,374	2,907	1,677	1,439	3,116
2 North Arcot	2,992	2,821	5,813	2,881	2,723	5,604	3,177	2,893	6,070
3 South Arcot	2,263	2,078	4,341	2,297	2,116	4,413	2,545	2,331	4,876
4 Thanjavur	1,841	1,713	3,554	2,172	1,976	4,148	2,213	2,006	4,219
5 Tiruchirappalli	2,085	1,923	4,008	2,185	1,963	4,148	2,439	2,203	4,642
6 Madurai	2,337	2,086	4,423	2,297	2,125	4,422	2,252	2,070	4,322
7 Ramanathapuram	1,448	1,368	2,816	1,635	1,449	3,084	1,658	1,644	3,302
8 Tirunelveli	1,984	1,735	3,719	2,032	1,850	3,882	2,484	2,318	4,802
9 Salem	1,429	1,345	2,774	1,475	1,323	2,800	1,833	1,746	3,579
10 Dharmapuri	1,698	1,606	3,304	1,773	1,631	3,404	1,776	1,662	3,438
11 Coimbatore	1,644	1,515	3,159	1,543	1,362	2,905	1,764	1,671	3,435
12 The Nilgiris	186	186	372	191	201	392	233	22	255
13 Kanyakumari	1,147	1,141	2,288	1,199	1,209	2,408	1,377	1,351	2,728
Total	22,041	20,332	42,373	22,453	20,804	43,257	25,148	23,296	48,444

26

(1)	April			May			June		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1 Chingleput	1,598	1,468	3,066	1,596	1,444	3,040	1,639	1,539	3,178
2 North Arcot	3,170	2,920	6,090	3,352	3,091	6,443	3,152	2,904	6,056
3 South Arcot	2,473	2,433	4,906	2,437	2,003	4,440	2,625	2,360	4,985
4 Thanjavur	2,317	2,187	4,504	2,604	1,947	4,551	1,634	1,616	3,250
5 Tiruchirappalli	2,556	2,336	4,892	2,587	2,344	4,931	2,671	2,739	5,410
6 Madurai	2,722	2,434	5,156	2,523	2,625	5,148	2,571	2,639	5,210
7 Ramanathapuram	1,687	1,631	3,318	1,687	1,500	3,187	1,804	1,781	3,585
8 Tirunelveli	2,211	1,976	4,187	1,982	1,791	3,773	2,091	1,913	4,004
9 Salem	1,443	1,363	2,806	1,475	1,326	2,801	1,803	1,631	3,434
10 Dharmapuri	1,420	1,371	2,791	1,459	1,319	2,778	1,497	1,332	2,829
11 Coimbatore	1,956	1,773	3,729	1,957	1,825	3,782	2,022	1,736	3,758
12 The Nilgiris	238	243	481	292	223	515	202	223	425
13 Kanyakumari	1,330	1,293	2,623	1,345	1,253	2,598	1,139	1,172	2,311
Total	25,521	23,608	49,129	25,358	23,386	48,744	25,281	23,880	49,161

(1)	July			August			September			October		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1 Chingleput	1,927	1,840	3,767	2,011	1,903	3,914	1,702	1,618	3,320	1,303	1,224	2,527
2 North Arcot	3,303	3,337	6,640	3,723	2,535	6,258	3,348	3,033	6,381	2,663	2,600	5,263
3 South Arcot	2,911	2,697	5,608	2,658	2,376	5,034	2,518	2,384	4,902	2,072	1,965	4,037
4 Thanjavur	1,710	1,639	3,349	1,805	1,675	3,480	1,710	1,621	3,331	1,468	1,411	2,879
5 Tiruchirappalli	2,844	2,853	5,697	3,232	3,178	6,410	2,804	2,692	5,496	2,257	2,164	4,421
6 Madurai	2,718	2,513	5,231	2,434	2,422	4,856	2,307	2,133	4,440	2,168	2,005	4,173
7 Ramanathapuram	2,275	2,174	4,449	2,202	2,089	4,291	1,841	1,837	3,678	1,318	1,309	2,627
8 Tirunelveli	1,469	1,328	2,797	1,864	1,849	3,713	1,881	1,854	3,735	1,994	1,821	3,815
9 Salem	1,976	1,817	3,793	2,388	2,053	4,441	2,106	1,916	4,022	1,847	1,788	3,635
10 Dharmapuri	1,453	1,496	2,949	1,450	1,450	2,900	1,437	1,403	2,840	1,565	1,499	3,064
11 Coimbatore	1,331	1,644	2,975	1,710	1,710	3,420	1,841	1,730	3,571	1,884	1,702	3,586
12 The Nilgiris	186	187	373	203	221	424	212	227	439	206	184	390
13 Kanyakumari	1,162	1,197	2,359	1,182	1,183	2,365	1,119	1,024	2,143	1,143	1,115	2,258
Total	26,705	25,342	52,047	27,401	25,544	52,945	24,826	23,462	48,288	21,888	20,787	42,675

27

(1)	November			December			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1 Chingleput	1,404	1,273	2,677	1,619	1,614	3,233	19,596	18,091	37,687
2 North Arcot	2,842	2,525	5,367	2,650	2,472	5,122	37,453	34,934	72,387
3 South Arcot	1,873	1,742	3,615	1,564	1,414	2,978	28,266	25,804	54,070
4 Thanjavur	1,509	1,369	2,878	1,464	1,340	2,804	21,947	20,600	42,547
5 Tiruchirappalli	2,595	2,401	4,996	2,379	2,369	4,748	31,085	29,345	60,430
6 Madurai	2,318	2,038	4,356	2,700	2,402	5,102	29,699	27,443	57,141
7 Ramanathapuram	1,828	1,693	3,521	1,755	1,601	3,356	21,038	20,066	41,104
8 Tirunelveli	2,013	1,949	3,962	2,366	2,109	4,475	22,167	20,629	42,796
9 Salem	1,847	1,748	3,595	1,370	1,271	2,641	16,470	15,146	31,616
10 Dharmapuri	1,388	1,224	2,612	1,096	1,063	2,159	22,071	20,200	42,271
11 Coimbatore	1,801	1,670	3,471	1,662	1,582	3,244	2,472	2,524	4,996
12 The Nilgiris	231	230	461	182	182	364	14,579	14,338	28,917
13 Kanyakumari	1,221	1,111	2,332	1,315	1,299	2,614	2,916	2,721	5,637
Total	22,929	20,973	43,902	22,133	20,698	42,831	2,916	2,721	5,637

STATEMENT V (b)—BIRTHS BY MONTHS (URBAN) 1972.

	January			February			March		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1 Madras ..	2,655	2,684	5,339	4,006	3,796	7,802	3,852	3,494	7,346
2 Chingleput ..	996	912	1,908	1,009	947	1,956	1,173	1,030	2,203
3 North Arcot ..	1,351	1,230	2,581	1,383	1,237	2,620	1,392	1,225	2,617
4 South Arcot ..	831	716	1,547	997	960	1,957	991	926	1,917
5 Thanjavur ..	1,533	1,427	2,960	1,534	1,314	2,848	1,725	1,557	3,282
6 Tiruchirappalli ..	1,299	1,297	2,596	1,351	1,353	2,704	1,315	1,339	2,654
7 Madurai ..	2,247	1,948	4,195	2,038	1,881	3,919	2,284	2,152	4,436
8 Ramanathapuram ..	860	840	1,700	996	819	1,815	1,181	1,034	2,215
9 Tirunelveli ..	1,417	1,373	2,790	1,379	1,269	2,648	1,394	1,277	2,671
10 Salem ..	1,052	962	2,014	1,114	1,001	2,115	1,497	1,453	2,950
11 Dharmapuri ..	220	183	403	186	202	388	195	152	347
12 Coimbatore ..	2,151	2,021	4,172	2,120	1,980	4,100	2,391	2,147	4,538
13 The Nilgiris ..	257	227	484	237	210	447	293	308	601
14 Kanyakumari ..	339	305	644	374	360	734	480	429	909
Total	17,308	16,125	33,433	18,724	17,329	36,053	20,113	18,533	38,646

	April.			May.			June.		
	Male. (11)	Female. (12)	Total. (13)	Male. (14)	Female. (15)	Total. (16)	Male. (17)	Female. (18)	Total. (19)
1 Madras ..	3,609	3,586	7,195	3,695	3,562	7,257	3,790	3,779	7,569
2 Chingleput ..	1,114	1,037	2,151	1,066	996	2,062	1,119	1,079	2,198
3 North Arcot ..	1,347	1,249	2,596	1,525	1,439	2,964	1,401	1,403	2,804
4 South Arcot ..	872	859	1,731	876	781	1,657	933	887	1,820
5 Thanjavur ..	1,667	1,511	3,178	1,822	1,690	3,512	1,661	1,531	3,192
6 Tiruchirappalli ..	1,378	1,278	2,656	1,416	1,326	2,742	1,406	1,386	2,792
7 Madurai ..	3,263	2,208	4,471	2,523	2,381	4,904	2,303	2,193	4,496
8 Ramanathapuram ..	1,101	1,013	2,114	1,162	1,075	2,237	1,195	1,112	2,307
9 Tirunelveli ..	1,580	1,387	2,967	1,484	1,349	2,833	1,335	1,326	2,661
10 Salem ..	1,214	1,139	2,353	1,273	1,161	2,434	1,237	1,210	2,447
11 Dharmapuri ..	254	219	473	264	191	455	198	232	430
12 Coimbatore ..	2,214	2,084	4,298	2,370	2,200	4,570	2,180	2,033	4,213
13 The Nilgiris ..	270	232	502	297	298	595	235	241	476
14 Kanyakumari ..	471	442	913	562	513	1,075	396	307	703
Total	19,354	18,264	37,618	20,335	18,962	39,297	19,389	18,739	38,128

STATEMENT-V (b)

Births by months (Urban)

	July.			August.			September.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1 Madras ..	(20) 5,118	(21) 4,929	(22) 1,0047	(23) 4,932	(24) 4,769	(25) 9,731	(26) 4,230	(27) 4,249	(28) 8,479
2 Chingleput ..	1,449	1,238	2,687	1,402	1,327	2,729	1,164	1,091	2,255
3 North Arcot ..	1,458	1,288	2,746	1,410	1,305	2,715	1,432	1,337	2,769
4 South Arcot ..	875	803	1,678	927	854	1,781	900	882	1,782
5 Thanjavur ..	1,664	1,591	3,255	1,736	1,404	3,200	1,610	1,440	3,050
6 Tiruchirappalli ..	1,385	1,291	2,676	1,381	1,379	2,760	1,396	1,341	2,737
7 Madurai ..	2,177	1,955	4,132	2,109	1,968	4,077	2,084	1,862	3,946
8 Ramanathapuram ..	1,306	1,154	2,460	1,092	1,042	2,134	1,117	1,001	2,118
9 Tirunelveli ..	1,314	1,201	2,515	1,477	1,356	2,833	1,290	1,208	2,498
10 Salem ..	1,347	1,206	2,553	1,328	1,225	2,553	1,309	1,202	2,511
11 Dharmapuri ..	251	226	477	217	217	444	233	196	429
12 Coimbatore ..	2,174	2,078	4,252	2,290	2,150	4,440	2,341	2,009	4,350
13 The Nilgiris ..	271	254	525	268	217	485	256	197	453
14 Kanyakumari ..	375	349	724	392	408	800	429	404	833
Total	2,1164	19,563	40,727	2,1001	19,681	40,682	19,791	18,419	38,210

	October			November			December		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)
1 Madras ..	4,243	4,101	8,344	4,242	4,171	4,902	4,742	9,644	97,166
2 Chingleput ..	1,172	1,080	2,252	1,160	1,130	1,251	1,220	2,471	27,122
3 North Arcot ..	1,395	1,244	2,639	1,432	1,352	1,678	1,574	3,252	33,107
4 South Arcot ..	860	794	1,654	964	1,062	1,008	1,008	2,016	21,641
5 Thanjavur ..	2,090	1,948	4,038	1,801	1,600	1,478	1,478	3,078	38,327
6 Tiruchirappalli ..	1,363	1,249	2,612	1,392	1,443	1,443	1,351	2,794	32,431
7 Madurai ..	2,360	2,225	4,585	2,311	2,408	2,408	2,262	4,700	52,674
8 Ramanathapuram ..	1,222	1,086	2,308	1,044	1,479	1,379	1,379	2,758	26,466
9 Tirunelveli ..	1,582	1,439	3,021	1,396	1,762	1,692	1,692	3,384	33,618
10 Salem ..	1,259	1,203	2,462	1,415	1,416	1,288	1,288	2,704	29,832
11 Dharmapuri ..	268	257	525	246	476	194	200	394	5,241
12 Coimbatore ..	2,353	2,291	4,644	2,398	4,822	2,373	2,299	4,672	53,065
13 The Nilgiris ..	332	316	648	278	543	259	259	518	6,297
14 Kanyakumari ..	454	449	903	389	791	475	410	885	9,974
Total	20,953	19,802	40,755	20,496	19,530	22,302	21,184	43,486	4,66,961

STATEMENT V (c)

Births by months (State), 1972

	January			February			March		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1 Madras ..	2,675	2,684	5,359	4,006	3,796	7,802	3,852	3,491	7,346
2 Chingleput ..	2,783	2,377	5,160	2,542	2,321	4,863	2,850	2,469	5,319
3 North Arcot ..	4,343	4,051	8,394	4,234	3,963	8,197	4,569	4,118	8,687
4 South Arcot ..	3,694	2,794	6,488	3,297	3,076	6,370	3,536	3,157	6,693
5 Thanjavur ..	3,374	3,140	6,514	3,705	3,299	6,996	4,038	3,773	7,811
6 Tiruchirappalli ..	3,381	3,229	6,610	3,536	3,316	6,852	3,874	3,702	7,576
7 Madurai ..	4,584	3,984	8,568	4,277	4,006	8,281	4,536	4,222	8,758
8 Ramanathapuram ..	2,398	2,208	4,606	2,631	2,368	4,999	2,789	2,578	5,467
9 Tirunelveli ..	3,461	3,103	6,564	3,411	3,119	6,530	3,878	3,595	7,473
10 Salem ..	2,481	2,397	4,878	2,589	2,326	4,915	3,330	3,199	6,529
11 Dharmapuri ..	1,318	1,189	2,507	1,133	1,033	2,166	1,471	1,314	2,785
12 Coimbatore ..	3,795	3,336	7,131	3,763	3,542	7,305	4,155	3,818	7,973
13 The Nilgiris ..	443	413	856	428	411	839	526	520	1,046
14 Kanyakumari ..	1,486	1,445	2,932	1,573	1,569	3,142	1,857	1,770	3,627
Total ..	39,249	36,457	75,706	41,177	38,133	79,310	45,261	41,829	87,090

80

	April			May			June		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1 Madras ..	3,609	3,586	7,195	3,695	3,562	7,257	3,790	3,779	7,569
2 Chingleput ..	2,712	2,495	5,207	2,662	2,440	5,102	2,758	2,578	5,336
3 North Arcot ..	4,517	4,169	8,686	4,877	4,530	9,407	4,553	4,367	8,920
4 South Arcot ..	3,345	3,292	6,637	3,313	2,789	6,102	3,247	3,247	6,805
5 Thanjavur ..	3,984	3,698	7,682	3,826	3,537	7,463	3,295	3,147	6,442
6 Tiruchirappalli ..	3,934	3,614	7,548	4,003	3,670	7,673	4,405	4,145	8,553
7 Madurai ..	4,983	4,632	9,615	5,346	5,006	10,352	4,874	4,852	9,726
8 Ramanathapuram ..	2,683	2,544	5,227	2,849	2,665	5,514	2,999	2,893	5,892
9 Tirunelveli ..	3,791	3,393	7,184	3,446	3,140	6,586	3,426	3,239	6,665
10 Salem ..	3,157	2,902	6,059	3,323	3,087	6,410	3,140	3,041	6,181
11 Dharmapuri ..	1,674	1,490	3,164	1,720	1,510	3,230	1,695	1,554	3,249
12 Coimbatore ..	4,170	3,837	8,007	4,327	4,025	8,352	4,202	3,769	7,971
13 The Nilgiris ..	508	495	1,003	499	521	1,020	437	469	906
14 Kanyakumari ..	1,801	1,735	3,536	1,807	1,766	3,573	1,535	1,539	3,074
Total ..	44,875	41,872	86,747	45,693	42,948	88,641	44,670	42,619	87,289

State figures—cont.

STATEMENT V (c)—cont.

Births, 1972—cont.

	July			August			September		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1 Madras ..	5,118	4,929	10,047	4,942	4,769	9,711	4,230	4,249	8,479
2 Chingleput ..	3,376	3,078	6,454	3,413	3,230	6,643	2,866	2,709	5,575
3 North Arcot ..	4,941	4,545	9,486	5,133	4,840	9,973	4,780	4,370	9,150
4 South Arcot ..	3,816	3,500	7,316	3,535	3,230	6,765	3,418	3,246	6,664
5 Thanjavur ..	3,374	3,230	6,604	3,541	3,039	6,580	3,320	3,041	6,361
6 Tiruchirappalli ..	4,229	4,144	8,373	4,613	4,557	9,170	4,200	4,033	8,233
7 Madurai ..	4,895	4,463	9,358	4,593	4,390	8,983	4,391	3,985	8,376
8 Ramanathapuram ..	3,581	3,328	6,909	3,294	3,131	6,425	2,958	2,838	5,796
9 Tirunelveli ..	3,233	3,129	6,362	3,441	3,205	6,646	3,171	3,062	6,233
10 Salem ..	3,323	3,023	6,346	3,716	3,278	6,994	3,415	3,118	6,533
11 Dharmapuri ..	1,904	1,722	3,626	1,841	1,667	3,508	1,670	1,599	3,269
12 Coimbatore ..	4,025	3,722	7,747	4,225	3,860	8,085	4,182	3,739	7,921
13 The Nilgiris ..	457	441	898	425	438	863	408	424	832
14 Kanyakumari ..	1,537	1,546	3,083	1,574	1,591	3,165	1,548	1,428	2,976
Total ..	47,869	44,905	92,774	48,402	45,225	93,627	44,617	41,881	86,498

31

	October			November			December			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1 Madras ..	4,243	4,101	8,344	4,242	4,171	8,413	4,902	4,742	9,644	49,304	47,862	97,166
2 Chingleput ..	2,475	2,304	4,779	2,564	2,403	4,967	2,870	2,734	5,604	23,671	21,138	44,809
3 North Arcot ..	4,058	3,844	7,902	4,294	3,877	8,171	4,328	4,046	8,374	54,677	50,817	1,05,494
4 South Arcot ..	2,932	2,759	5,691	2,958	2,706	5,664	2,626	2,420	5,046	39,475	36,239	75,714
5 Thanjavur ..	3,558	3,359	6,917	2,932	2,670	5,602	3,064	2,818	5,882	42,012	38,862	80,874
6 Tiruchirappalli ..	3,620	3,413	7,033	3,987	3,717	7,704	3,822	3,720	7,542	47,610	45,251	92,861
7 Madurai ..	4,628	4,250	8,878	4,882	4,349	9,231	5,108	4,694	9,802	56,997	52,818	1,09,815
8 Ramanathapuram ..	2,540	2,360	4,900	2,914	2,737	5,651	3,254	2,980	6,234	34,785	32,785	67,570
9 Tirunelveli ..	3,576	3,260	6,836	3,444	3,245	6,689	4,028	3,801	7,829	42,286	39,266	81,552
10 Salem ..	3,106	2,991	6,097	3,262	3,069	6,331	2,786	2,559	5,345	37,628	34,900	72,528
11 Dharmapuri ..	1,833	1,756	3,589	1,615	1,470	3,085	1,290	1,263	2,553	19,190	17,667	36,857
12 Coimbatore ..	4,237	3,993	8,230	4,225	4,063	8,288	4,146	3,955	8,101	49,452	45,884	95,336
13 The Nilgiris ..	588	500	1,088	496	508	1,004	441	441	882	5,712	5,581	11,293
14 Kanyakumari ..	1,597	1,564	3,161	1,610	1,513	3,123	1,790	1,709	3,499	19,715	19,176	38,891
Total ..	42,841	40,589	83,430	43,425	40,503	83,928	44,435	41,882	86,317	5,32,514	4,98,243	10,30,757

STATEMENT V (d)—1972.

Births by religion, sex and type of attendance at confinement, State figure—1972.

Name of districts.	Institutions.									
	Hindus.		Muslims.		Christians.		Others.		Total.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Madras ..	40,147	38,223	2,764	2,908	2,019	1,811	174	148	45,104	43,900
Chingleput ..	12,647	9,703	397	390	289	294	1	1	13,334	10,388
North Arcot ..	11,148	10,093	1,073	1,004	343	341	3	4	12,567	11,442
South Arcot ..	8,523	7,892	548	467	330	273	..	3	9,401	8,635
Thanjavur ..	15,132	13,933	1,330	1,182	543	497	1	2	17,006	15,664
Tiruchirappalli ..	14,035	13,607	1,281	1,111	1,504	1,353	..	..	16,820	16,071
Madurai ..	21,896	20,347	1,354	1,190	1,441	1,381	2	2	24,693	22,920
Ramanathapuram ..	8,737	8,124	703	634	352	345	..	..	9,792	9,103
Tirunelveli ..	9,649	8,615	1,158	998	1,392	1,409	..	..	12,199	11,022
Salem ..	14,276	13,284	688	675	225	230	..	..	15,189	14,189
Dharmapuri ..	2,212	1,916	134	170	41	34	..	..	2,297	2,120
Coimbatore ..	24,975	23,391	1,357	1,311	918	796	2	2	27,252	25,410
The Nilgiris ..	2,050	1,935	290	263	522	530	7	3	2,869	2,731
Kanyakumari ..	2,482	2,402	327	285	1,470	1,316	1	..	4,280	4,003
Total ..	1,87,819	1,73,425	13,404	12,588	11,389	10,610	191	165	2,12,803	1,96,788

Name of districts.	Domestic.									
	Hindus.		Muslims.		Christians.		Others.		Total.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Madras ..	2,967	3,697	904	812	307	235	22	28	4,200	4,722
Chingleput ..	19,346	19,831	498	444	492	473	1	2	20,337	20,750
North Arcot ..	38,998	33,543	2,666	2,411	446	418	..	..	42,110	39,375
South Arcot ..	28,715	26,251	867	858	491	492	1	..	30,074	27,601
Thanjavur ..	22,515	21,051	1,792	1,523	699	624	..	..	25,006	23,198
Tiruchirappalli ..	28,651	27,123	1,053	986	1,085	1,066	1	..	30,790	29,180
Madurai ..	29,990	27,906	1,286	1,050	1,028	942	..	..	32,304	29,898
Ramanathapuram ..	22,282	21,181	1,756	1,560	955	941	..	..	24,993	23,682
Tirunelveli ..	24,197	22,916	2,353	2,115	3,537	3,183	..	..	30,087	28,244
Salem ..	22,081	20,353	203	222	155	136	..	..	22,439	20,711
Dharmapuri ..	16,148	14,854	647	590	98	103	..	..	16,893	15,547
Coimbatore ..	21,163	19,498	812	746	225	230	..	..	22,290	20,474
The Nilgiris ..	2,231	2,185	396	425	215	240	1	..	2,843	2,850
Kanyakumari ..	8,623	8,433	510	580	6,302	6,160	..	..	15,435	15,173
Total ..	2,87,907	2,71,350	15,743	14,322	16,035	15,243	26	30	3,19,711	3,01,455

STATEMENT V (d) 1972—cont.

Births by religion sex and type of attendance at confinement, State figure 1972—cont.

Name of districts.	Total.									
	Hindus.		Muslims.		Christians.		Others.		Total.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Madras ..	43,114	41,920	3,688	3,720	2,326	2,046	196	176	49,304	47,862
Chingleput ..	31,993	29,534	895	834	781	767	2	3	33,671	31,138
North Arcot ..	50,146	46,639	3,739	3,415	789	759	3	4	54,677	50,817
South Arcot ..	37,238	34,143	1,415	1,325	821	765	1	3	39,475	36,236
Thanjavur ..	37,647	35,034	3,122	2,705	1,242	1,121	1	2	42,912	38,862
Tiruchirappalli ..	42,686	40,735	2,334	2,097	2,589	2,419	1	..	47,610	45,261
Madurai ..	51,886	48,253	2,640	2,240	2,469	2,323	2	2	56,997	52,818
Ramanathapuram ..	31,019	29,305	2,459	2,194	1,307	1,286	..	..	34,785	32,785
Tirunelveli ..	33,846	31,561	3,511	3,113	4,929	4,592	..	..	42,286	39,266
Salem ..	36,357	33,637	891	897	380	366	..	..	37,628	34,900
Dharmapuri ..	18,270	16,770	781	760	139	137	..	..	19,199	17,667
Coimbatore ..	46,138	42,799	2,169	2,057	1,143	1,026	2	2	49,452	45,884
The Nilgiris ..	4,281	4,120	686	688	737	770	8	3	5,712	5,581
Kanyakumari ..	11,105	10,835	837	865	7,772	7,476	1	..	19,715	19,176
Total ..	4,75,726	4,452,85	29,147	26,910	27,424	25,853	217	195	5,32,514	49,824

STATEMENT V (e).

Statement showing the order of live births 1972.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1 Below 15 years.	479	11	1	1	..	..	..	..	..
2 16—19 years ..	93,900	16,182	2,725	538	38	12	3	..	..
3 20—24 years ..	1,19,107	1,18,745	59,891	20,001	5,590	1,508	447	82	25
4 25—29 years ..	25,856	60,961	88,702	66,934	37,649	15,760	6,143	1,775	660
5 30—34 years ..	5,696	12,555	26,108	36,885	40,906	29,763	17,937	7,588	3,562
6 35—39 years ..	1,378	2,715	6,052	9,833	14,460	15,976	15,245	9,183	6,498
7 40—44 years ..	156	312	712	1,085	1,729	2,179	2,560	2,095	1,904
8 45 and above ..	19	21	79	96	185	229	299	250	265
9 Age not stated.	44	17	23	19	11	6	7	..	6
Total ..	2,46,635	2,11,519	1,84,293	1,35,392	1,00,568	65,433	42,641	20,973	12,920

	(11)	(12)	(13)	(14)	(15)	(16)	(17)	Not defined. (18)	Total. (19)
1 Below 15 years	..	..	..	..	..	..	..	1	493
2 16—19 years ..	..	..	..	..	..	..	..	95	1,13,493
3 20—24 years ..	17	4	..	2	..	..	..	162	3,25,581
4 25—29 years ..	103	21	9	3	..	..	..	170	3,04,746
5 30—34 years ..	1,237	323	84	24	2	1	..	74	1,82,745
6 35—39 years ..	3,324	1,115	409	99	13	2	1	33	86,386
7 40—44 years ..	1,322	717	355	141	19	7	1	4	15,295
8 45 and above ..	216	129	83	26	6	3	..	1	1,907
9 Age not stated:	1	..	3	..	..	1	..	20	158
Total ..	6,220	2,309	943	295	40	14	2	560	10,30,757

STATEMENT VI.
Still births.
Community - wise—1972.

		Hindus.		Muslims.		Christians.		Others.		Total		
Name of districts.		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Total.
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Madras	1,127	1,132	113	120	55	35	3	..	1,298	1,287	2,585
2	Chingleput	500	405	24	19	5	7	..	..	529	431	960
3	North Arcot	804	674	118	98	15	20	..	..	937	792	1,729
4	South Arcot	473	349	41	22	7	6	..	..	521	377	898
5	Thanjavur	1,029	872	112	84	6	10	..	..	1,147	966	2,113
6	Tiruchirappalli. ..	793	710	67	51	67	55	..	..	927	816	1,743
7	Madurai	1,329	1,102	89	61	42	50	..	..	1,460	1,213	2,673
8	Ramanathapuram ..	477	373	35	43	26	12	..	..	538	428	966
9	Tirunelveli	678	600	82	54	79	50	..	..	839	704	1,543
10	Salem	832	698	49	47	9	9	..	..	890	754	1,644
11	Dharmapuri	128	94	11	6	1	2	..	..	140	102	242
12	Coimbatore	1,322	1,023	81	71	20	19	..	..	1,423	1,113	2,536
13	The Nilgiris	89	97	17	14	23	16	..	..	129	127	256
14	Kanyakumari	220	204	24	10	143	135	..	..	387	349	736
Total ..		9,801	8,333	863	700	498	426	3	..	11,165	9,459	20,624
Rural ..		1,154	952	48	34	135	116	..	..	1,337	1,102	2,439
Urban ..		8,647	7,381	815	666	363	310	3	..	9,828	8,357	18,185

STATEMENT VI (A).
Still Birth—Community Wise.
Rural.

Name of District.		Hindus.		Muslims.		Christians.		Others.		Total.		
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total.
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Madras ..	..	..	..	..	..	..	..	..	..	..	..
2	Chingleput ..	53	60	..	2	..	..	..	..	53	62	115
3	North Arcot ..	70	37	1	1	1	1	..	..	72	39	111
4	South Arcot ..	36	..	3	..	1	..	..	..	40	..	40
5	Thanjavur ..	98	93	2	2	2	..	..	..	102	95	197
6	Tiruchirappalli ..	84	83	3	4	7	6	..	..	94	93	187
7	Madurai ..	195	124	3	..	2	4	..	..	200	128	328
8	Ramanathapuram ..	65	69	2	7	10	6	..	..	77	82	159
9	Tirunelveli ..	88	92	13	5	19	11	..	..	120	108	228
10	Salem ..	157	132	3	3	3	4	..	..	163	139	302
11	Dharmapuri ..	32	23	4	..	..	..	..	..	36	23	59
12	Coimbatore ..	158	104	2	4	..	..	..	..	160	109	269
13	The Nilgiris ..	21	40	5	3	8	6	..	..	34	49	83
14	Kanyakumari ..	97	95	7	3	82	77	..	..	186	175	361
Total ..		1,154	952	48	34	135	116	..	..	1,337	1,102	2,439

Urban.

Name of District.	Hindus.		Muslims.		Christians.		Others.		Total.		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total.
	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
1 Madras ..	1,127	1,132	113	120	55	35	3	..	1,298	1,287	2,585
2 Chingleput ..	447	345	24	17	5	7	..	..	476	369	845
3 North Arcot ..	734	637	117	97	14	19	..	..	865	753	1,618
4 South Arcot ..	437	349	38	22	6	6	..	..	481	377	858
5 Thanjavur ..	931	779	110	82	4	10	..	..	1,045	871	1,916
6 Tiruchirappalli ..	709	627	64	47	60	49	..	..	833	723	1,556
7 Madurai ..	1,134	978	86	61	40	46	..	..	1,260	1,085	2,345
8 Ramanathapuram ..	412	304	33	36	16	6	..	..	461	346	807
9 Tirunelveli ..	590	508	69	49	60	39	..	..	719	596	1,315
10 Salem ..	675	566	46	44	6	5	..	..	727	615	1,342
11 Dharmapuri ..	96	71	7	6	1	2	..	..	104	79	183
12 Coimbatore ..	1,164	919	79	67	20	18	..	..	1,263	1,004	2,267
13 The Nilgiris ..	68	57	12	11	15	10	..	..	95	78	173
14 Kanyakumari ..	123	109	17	7	61	58	..	..	201	174	375
Total ..	8,647	7,381	815	666	363	310	3	..	9,828	8,357	18,185

STATEMENT VI (b)
Still Birth by months (Rural)

	January.		February.		March.		April.		May.		June.		July.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1 Chingleput ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2 North Arcot ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3 South Arcot ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4 Thanjavur ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5 Tiruchirappalli ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6 Madurai ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7 Ramanathapuram ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8 Tirunelveli ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9 Salem ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10 Dharmapuri ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11 Coimbatore ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
12 The Nilgiris ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13 Kanyakumari ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	89	84	173	177	95	82	177	129	94	223	108	119	106	235

STATEMENT VI (b)—cont.

	August.			September.			October.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1 Chingleput	7	6	13	..	6	6	6	..	6
2 North Arcot	2	2	4	..	10	10	7	2	9
3 South Arcot	6	..	6	7	..	7	..	..	..
4 Thanjavur	11	2	13	7	19	26	17	4	21
5 Tiruchirappalli	10	8	18	9	2	11	4	9	13
6 Madurai	10	5	15	17	6	23	23	16	39
7 Ramanathapuram	12	8	20	8	8	16	6	5	11
8 Tirunelveli	10	6	16	14	4	18	4	7	11
9 Salem	14	10	24	16	9	25	13	16	29
10 Dharmapuri	1	1	2	3	4	7	..	..	..
11 Coimbatore	16	19	34	12	7	19	18	15	33
12 The Nilgiris	6	5	11	2	7	9	3	..	3
13 Kanyakumari	21	12	33	21	12	33	9	12	21
Total	125	84	209	126	84	210	110	86	196

36

	November.			December.			Total.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1 Chingleput	5	4	9	2	12	14	53	62	115
2 North Arcot	3	5	8	4	3	7	72	39	111
3 South Arcot	8	..	8	4	..	4	40	..	40
4 Thanjavur	7	6	13	..	..	6	102	95	197
5 Tiruchirappalli	4	7	11	5	5	10	94	93	187
6 Madurai	8	6	14	8	5	13	200	128	328
7 Ramanathapuram	5	6	11	15	19	34	77	82	159
8 Tirunelveli	12	1	13	4	6	10	120	108	228
9 Salem	8	12	20	5	7	12	163	139	302
10 Dharmapuri	1	1	2	2	..	2	36	23	59
11 Coimbatore	10	9	19	17	8	25	160	109	269
12 The Nilgiris	6	4	10	2	3	5	34	49	83
13 Kanyakumari	14	10	24	20	31	51	186	175	361
Total	91	70	161	94	99	193	1,337	1,102	2,439

STATEMENT VI (b)—cont.
Still births by months (Urban) 1972.

Name of districts.	January			February			March			April		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
(1) Chingleput.	40	23	63	34	29	63	47	28	75	35	39	74
2 North Arcot.	67	56	123	44	44	88	73	59	132	68	48	116
3 South Arcot.	35	29	64	31	80	111	54	36	90	41	38	79
4 Thanjavur.	64	66	130	72	162	234	116	103	219	89	78	167
5 Tiruchirappalli.	59	53	112	61	115	176	71	71	142	77	63	140
6 Madurai.	75	62	137	69	154	223	77	73	150	92	74	166
7 Ramanathapuram.	40	27	67	25	45	70	36	23	59	34	32	66
8 Tirunelveli.	50	51	101	57	127	184	55	62	117	57	52	109
9 Salem.	39	47	86	46	100	146	85	56	141	55	47	102
10 Dharmapuri.	1	5	6	2	5	7	10	3	13	15	11	26
11 Coimbatore.	87	75	162	79	175	254	95	83	178	120	90	210
12 The Nilgiris.	9	11	20	6	8	14	8	3	11	9	7	16
13 Kanyakumari.	14	9	23	15	36	51	18	16	34	9	12	21
Total	580	514	1,094	526	1,166	1,692	745	616	1,361	701	591	1,292
Madras	61	70	131	44	100	144	165	156	321	116	143	259
Total	641	584	1,225	570	1,266	1,836	910	772	1,682	817	734	1,551

37

Name of districts.	May			June			July		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1 Chingleput.	39	26	65	34	29	63	55	46	101
2 North Arcot.	78	72	150	69	61	130	79	55	134
3 South Arcot.	37	25	62	39	34	73	40	23	63
4 Thanjavur.	79	69	148	80	77	157	78	54	132
5 Tiruchirappalli.	71	66	137	68	48	116	74	59	133
6 Madurai.	137	99	236	83	84	167	86	69	155
7 Ramanathapuram.	30	27	57	35	36	71	61	38	99
8 Tirunelveli.	52	44	96	67	46	113	32	41	73
9 Salem.	67	56	123	67	48	115	71	61	132
10 Dharmapuri.	7	9	16	7	7	14	21	7	28
11 Coimbatore.	108	89	197	110	76	186	116	93	209
12 The Nilgiris.	9	6	15	6	5	11	4	3	7
13 Kanyakumari.	23	18	41	15	14	29	21	19	40
Total	737	606	1,343	680	565	1,245	738	578	1,316
Madras	72	85	157	80	75	155	155	161	316
Total	809	691	1,500	760	640	1,400	893	739	1,632

Name of districts.	August.			September.			October.		
	Male.	Female.	Total.	Males.	Female.	Total.	Male.	Female.	Total.
1 Chingleput ..	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)
2 North Arcot ..	38	24	62	37	28	65	40	35	75
3 South Arcot ..	81	56	137	68	69	137	82	67	149
4 Thanjavur ..	34	27	61	23	28	51	39	30	69
5 Tiruchirappalli ..	67	67	134	91	62	153	118	89	207
6 Madurai ..	73	64	137	60	50	110	68	57	125
7 Ramanathapuram ..	108	81	189	100	79	179	150	135	285
8 Tirunelveli ..	34	28	62	40	31	71	34	18	52
9 Salem ..	63	46	109	62	35	97	62	41	103
10 Dharmapuri ..	59	53	112	47	67	114	52	40	92
11 Dharmapuri ..	9	7	16	3	7	10	13	11	24
12 Coimbatore ..	97	73	170	88	76	164	104	85	189
13 The Nilgiris ..	8	5	13	12	4	16	18	13	31
14 Kanyakumari ..	18	10	28	16	19	35	19	15	34
Total ..	689	541	1,230	647	555	1,202	779	636	1,435
Madras ..	91	76	167	111	111	222	78	60	138
Total ..	780	617	1,397	758	666	1,424	877	696	1,573

Name of districts.	November.			December.			Total.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1 Chingleput ..	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)
2 North Arcot ..	45	35	80	32	27	59	476	369	845
3 South Arcot ..	58	69	127	90	97	187	865	753	1,618
4 Thanjavur ..	51	46	97	39	30	69	481	377	858
5 Tiruchirappalli ..	63	61	124	92	72	164	1,045	871	1,916
6 Madurai ..	103	103	206	85	70	155	833	723	1,556
7 Ramanathapuram ..	40	22	62	164	157	321	1,260	1,085	2,345
8 Tirunelveli ..	59	49	108	57	39	96	461	346	807
9 Salem ..	67	49	116	90	72	162	719	596	1,315
10 Dharmapuri ..	6	5	11	64	45	109	727	615	1,342
11 Dharmapuri ..	123	93	216	9	5	14	104	79	183
12 The Nilgiris ..	5	8	13	119	92	211	1,263	1,004	2,267
13 Kanyakumari ..	13	17	30	5	7	12	95	78	173
Total ..	714	609	1,323	723	723	1,446	201	174	375
Madras ..	213	207	420	99	99	198	1,298	1,287	2,585
Total ..	927	816	1,743	822	822	1,644	9,828	8,357	18,185

STATEMENT VI (c)—cont.
Still Births by months (State) 1972.

Name of Districts.	January.			February.			March.			April.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1 Madras ..	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2 Chingleput ..	61	70	131	56	44	100	165	156	321	116	143	259
3 North Arcot ..	40	24	64	36	30	66	54	30	84	43	47	90
4 South Arcot ..	74	60	134	59	50	109	81	63	144	71	49	120
5 Thanjavur ..	35	29	64	55	31	86	59	36	95	41	38	79
6 Tiruchirappalli ..	74	69	143	102	81	183	125	112	237	98	92	190
7 Madurai ..	70	60	130	70	53	123	79	83	162	84	76	160
8 Ramanathapuram ..	85	71	156	94	76	170	86	80	166	109	88	197
9 Tirunelveli ..	45	32	77	30	30	60	45	32	77	34	39	73
10 Salem ..	61	58	119	68	68	136	69	72	141	68	72	140
11 Dharmapuri ..	49	62	111	59	44	103	95	70	165	74	64	138
12 Coimbatore ..	3	8	11	7	4	11	18	7	25	20	12	32
13 The Nilgiris ..	100	87	187	88	191	279	112	89	201	135	97	232
14 Kanyakumari ..	9	14	23	103	14	117	112	5	19	9	10	19
Total ..	730	668	1,398	791	652	1,443	1,039	866	1,905	925	853	1,778

Name of Districts.	May.			June.			July.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1 Madras ..	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
2 Chingleput ..	72	85	157	60	75	135	156	161	316
3 North Arcot ..	46	39	85	35	33	68	62	51	113
4 South Arcot ..	83	77	160	85	65	150	79	58	137
5 Thanjavur ..	37	25	62	42	34	76	41	23	64
6 Tiruchirappalli ..	82	78	160	84	83	167	86	68	153
7 Madurai ..	75	71	146	75	57	132	93	85	178
8 Ramanathapuram ..	173	124	297	106	96	202	116	85	201
9 Tirunelveli ..	31	30	61	43	40	83	64	41	105
10 Salem ..	58	56	114	75	57	132	51	54	105
11 Dharmapuri ..	83	62	145	90	56	146	51	73	124
12 Coimbatore ..	125	13	138	9	8	17	24	10	34
13 The Nilgiris ..	10	9	19	124	81	205	121	99	220
14 Kanyakumari ..	38	35	73	29	11	40	37	8	45
Total ..	925	799	1,724	865	726	1,591	1,022	845	1,867

STATEMENT VI (c)—cont.
Still Bisths by months (State) 1972—cont.

Name of Districts.	August.			September.			October.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1 Madras ..	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)
2 Chingleput ..	91	76	167	111	111	222	78	60	138
3 North Arcot ..	45	30	75	37	34	71	46	35	81
4 South Arcot ..	83	58	141	78	69	147	89	69	158
5 Thanjavur ..	40	27	67	30	28	58	39	30	69
6 Tiruchirappalli ..	78	69	147	98	81	179	135	93	228
7 Madurai ..	83	72	155	69	62	121	72	66	138
8 Ramanathapuram ..	118	86	204	117	85	202	173	151	324
9 Tirunelveli ..	46	36	82	48	39	87	40	23	63
10 Salem ..	73	52	125	76	39	115	66	48	114
11 Dharmapuri ..	73	63	136	63	76	139	66	56	121
12 Coimbatore ..	10	8	18	6	11	17	12	11	24
13 The Nilgiris ..	112	92	204	100	83	183	122	100	222
14 Kanyakumari ..	14	10	24	14	11	25	21	13	34
Total..	905	701	1,606	884	750	1,634	987	782	1,769

Name of Districts.	November.			December.			Total.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1 Madras ..	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)
2 Chingleput ..	213	207	420	120	99	219	1,298	1,287	2,585
3 North Arcot ..	50	39	89	34	39	73	629	431	1,060
4 South Arcot ..	61	74	135	94	100	194	937	792	1,729
5 Thanjavur ..	59	46	105	43	30	73	521	377	898
6 Tiruchirappalli ..	88	68	156	98	72	170	1,147	966	2,113
7 Madurai ..	67	68	135	90	75	165	927	816	1,743
8 Ramanathapuram ..	111	109	220	172	162	334	1,460	1,213	2,673
9 Tirunelveli ..	45	28	73	72	58	130	538	428	966
10 Salem ..	71	50	121	94	78	172	839	704	1,543
11 Dharmapuri ..	75	61	136	69	52	121	890	754	1,644
12 Coimbatore ..	7	5	12	11	5	16	140	102	242
13 The Nilgiris ..	133	102	235	136	100	236	1,423	1,113	2,536
14 Kanyakumari ..	11	12	23	7	10	17	129	127	256
Total..	1,018	896	1,914	1,074	921	1,995	9,459	349	736

Age group of members.		Total.	
(1)	(2)	(3)	(4)
1 Below 15 years ..	..	..	32
2 15—19 years ..	..	..	2,831
3 20—24 years ..	..	..	5,812
4 25—29 years ..	..	..	5,657
5 30—34 years ..	..	..	3,795
6 35—39 years ..	..	..	1,955
7 40—44 years ..	..	..	559
8 45 and above ..	..	..	103
Total ..	..	..	20,624

STATEMENT VIII.
Statement showing Deaths by Community-wise, 1972.

Name of the districts.	Number of deaths registered.											
	Hindus.		Muslims.		Christians.		Others.		Total.			
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
1 Madras ..	15,266	12,845	1,502	1,302	858	779	56	36	17,682	14,962	32,644	
2 Chingleput ..	11,785	9,890	206	176	172	118	4	1	12,167	10,185	22,352	
3 North Arcot ..	17,789	16,181	1,186	904	199	177	7	1	19,181	17,263	36,444	
4 South Arcot ..	12,819	12,112	218	176	153	143	2	3	13,192	12,434	25,626	
5 Thanjavur ..	13,902	13,657	822	684	381	374	17	5	15,122	14,720	29,842	
6 Tiruchirappalli ..	17,966	16,881	519	654	654	569	2	1	19,141	17,831	36,972	
7 Madurai ..	17,335	16,172	626	663	515	425	1	2	18,477	17,262	35,739	
8 Ramanathapuram ..	10,718	10,602	606	557	327	326	6	1	11,657	11,486	23,143	
9 Tirunelveli ..	13,566	12,505	816	767	1,557	1,337	9	..	15,939	14,609	30,548	
10 Salem ..	12,334	11,274	259	217	87	89	6	1	12,680	11,581	24,267	
11 Dharmapuri ..	6,219	5,576	205	148	24	32	..	..	6,448	5,756	12,204	
12 Coimbatore ..	16,218	14,326	479	374	265	185	12	4	16,974	14,889	31,863	
13 The Nilgiris ..	1,241	924	148	124	182	154	8	9	1,579	1,211	2,790	
14 Kanyakumari ..	3,844	3,433	164	136	2,222	2,047	..	..	6,230	5,616	11,846	
Total	171,002	156,378	7,756	6,608	7,596	6,755	121	64	186,475	169,805	356,280	
Rural ..	117,337	112,116	2,307	2,199	4,602	4,324	..	3	124,246	118,642	242,888	
Urban ..	53,665	44,262	5,449	4,409	2,994	2,431	121	61	62,229	51,163	113,392	

STATEMENT VIII (a).

Community-wise Statement of deaths in 1972.

Name of districts.	Rural.									
	Hindus.		Muslims.		Christians.		Others.		Total.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1 Madras	8,758	7,552	55	64	61	33	..	..	8,874	7,649
2 Chingleput	14,273	13,342	255	163	89	91	..	..	14,587	13,596
3 North Arcot	10,968	10,627	86	92	108	93	..	..	11,162	10,813
4 South Arcot	10,273	10,694	476	382	241	251	..	..	10,990	11,327
5 Thanjavur	14,314	14,208	185	184	426	418	..	..	14,925	14,810
6 Tiruchirappalli	11,673	11,172	238	346	183	189	..	..	12,084	11,707
7 Madurai	7,978	8,118	387	381	261	247	..	..	8,626	8,746
8 Ramanathapuram	10,110	9,597	285	255	1,138	1,013	..	..	11,533	10,895
9 Tirunelveli	9,149	8,657	42	35	38	38	..	..	9,229	8,730
10 Salem	5,867	5,310	127	86	17	27	..	..	6,011	5,423
11 Dharmapuri	10,296	9,485	69	79	49	40	..	..	10,414	9,604
12 Coimbatore	589	461	44	15	20	16	..	..	653	494
13 The Nilgiris	3,089	2,893	98	87	1,971	1,868	..	..	5,158	4,848
14 Kanyakumari	117,337	112,116	2,307	2,199	4,602	4,324	..	..	124,246	118,642
Total	..	..	..	..	..	..	..	..	..	..

4

Name of districts.	Urban.									
	Hindus.		Muslims.		Christians.		Others.		Total.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1 Madras	15,266	12,845	1,502	1,302	858	779	56	36	17,682	14,962
2 Chingleput	3,027	2,338	161	112	111	85	4	1	3,293	2,536
3 North Arcot	1,851	1,485	132	84	110	86	7	1	4,594	3,667
4 South Arcot	3,629	2,963	346	302	140	123	2	2	2,036	1,621
5 Thanjavur	3,652	2,673	344	196	228	151	17	5	4,132	3,393
6 Tiruchirappalli	5,662	5,000	398	317	332	236	2	1	4,216	3,021
7 Madurai	2,740	2,484	219	176	66	79	1	2	6,393	5,555
8 Ramanathapuram	3,456	2,908	531	482	419	324	6	1	2,740	2,740
9 Tirunelveli	3,185	2,617	217	182	49	51	..	..	3,457	2,851
10 Salem	5,922	4,842	78	62	7	5	..	..	437	333
11 Dharmapuri	632	463	104	109	162	138	12	4	6,580	5,285
12 Coimbatore	755	540	66	49	251	179	8	7	926	717
13 The Nilgiris	..	..	..	..	..	..	..	..	1,072	768
14 Kanyakumari	53,665	44,262	5,449	4,409	2,994	2,431	121	61	62,229	51,163
Total	..	..	..	..	..	..	..	..	..	..

STATEMENT VIII (b).

Deaths by month, (Rural) 1972.

Name of District.	January.				February.				March.			
	Males.		Females.		Males.		Females.		Males.		Females.	
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1 Chingleput	926	828	1,754	776	578	1,354	766	662	1,428	662	1,428	1,428
2 North Arcot	1,480	1,346	2,826	1,218	1,059	2,277	1,146	1,132	2,278	1,132	2,278	2,278
3 South Arcot	1,044	1,091	2,135	1,034	1,004	2,038	1,027	957	1,984	957	1,984	1,984
4 Thanjavur	1,157	1,148	2,305	981	1,017	1,968	994	1,091	2,085	1,091	2,085	2,085
5 Tiruchirappalli	1,513	1,462	2,976	1,195	1,128	2,323	1,234	1,149	2,383	1,149	2,383	2,383
6 Madurai	1,214	1,162	2,396	1,035	1,005	2,040	869	814	1,673	814	1,673	1,673
7 Ramanathapuram	743	797	1,540	671	707	1,378	671	669	1,340	669	1,340	1,340
8 Tirunelveli	1,217	1,135	2,352	1,040	932	1,972	964	854	1,818	854	1,818	1,818
9 Salem	819	729	1,548	699	688	1,387	749	672	1,421	672	1,421	1,421
10 Dharmapuri	607	513	1,120	438	408	846	451	461	902	461	902	902
11 Coimbatore	948	819	1,767	845	754	1,599	782	714	1,496	714	1,496	1,496
12 The Nilgiris	34	39	73	53	38	91	43	38	81	38	81	81
13 Kanyakumari	515	444	959	412	404	816	416	401	817	401	817	817
Total	12,217	1,153	23,750	10,367	9,722	20,089	10,102	9,604	19,706	9,604	19,706	19,706

43

Name of Districts.	April.				May.				June.			
	Males.		Females.		Males.		Females.		Males.		Females.	
	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
1 Chingleput	595	472	1,067	569	513	1,082	738	625	1,363	625	1,363	1,363
2 North Arcot	982	848	1,830	1,024	915	1,939	1,143	1,016	2,159	1,016	2,159	2,159
3 South Arcot	790	820	1,610	765	697	1,462	840	775	1,615	775	1,615	1,615
4 Thanjavur	849	889	1,738	829	834	1,663	738	729	1,467	729	1,467	1,467
5 Tiruchirappalli	1,072	1,017	2,089	1,057	999	2,056	1,092	1,057	2,149	1,057	2,149	2,149
6 Madurai	838	749	1,578	902	866	1,768	807	784	1,591	784	1,591	1,591
7 Ramanathapuram	683	545	1,228	592	519	1,111	534	638	1,172	638	1,172	1,172
8 Tirunelveli	760	725	1,485	733	696	1,329	751	705	1,456	705	1,456	1,456
9 Salem	671	660	1,331	779	728	1,507	784	786	1,570	786	1,570	1,570
10 Dharmapuri	524	459	983	460	423	873	470	486	908	486	908	908
11 Coimbatore	793	712	1,505	803	720	1,523	739	701	1,440	701	1,440	1,440
12 The Nilgiris	54	32	86	71	55	126	57	40	97	40	97	97
13 Kanyakumari	334	313	647	422	363	785	399	408	807	408	807	807
Total	8,845	8,232	17,077	8,996	8,228	17,224	9,092	8,700	17,792	8,700	17,792	17,792

STATEMENT-VIII (b)—cont.

Name of Districts.	July.			August.			September.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1 Chingleput	682	539	1,221	701	613	1,314	639	610	1,249
2 North Arcot	1,159	1,125	2,284	1,113	1,107	2,220	1,041	961	2,002
3 South Arcot	855	809	1,664	725	723	1,448	840	783	1,623
4 Thanjavur	844	782	1,626	787	769	1,556	711	781	1,492
5 Tiruchirappalli	1,019	1,095	2,114	1,031	1,057	2,088	975	1,073	2,048
6 Madurai	965	964	1,929	902	866	1,768	769	718	1,487
7 Ramanathapuram	744	721	1,465	719	724	1,443	669	664	1,333
8 Tirunelveli	789	786	1,575	734	709	1,443	802	709	1,511
9 Salem	832	819	1,651	756	695	1,451	694	639	1,333
10 Dharmapuri	552	538	1,090	460	427	887	409	344	753
11 Coimbatore	813	772	1,585	905	793	1,698	760	742	1,502
12 The Nilgiris	67	49	116	53	35	88	55	36	91
13 Kanyakumari	413	415	828	431	383	814	395	398	793
Total	9,734	9,414	19,148	9,317	8,901	18,218	8,759	8,458	17,217

Name of Districts.	October.			November.			December.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1 Chingleput	739	606	1,345	804	799	1,601	874	764	1,638
2 North Arcot	1,147	1,084	2,231	1,481	1,560	3,042	1,487	1,596	3,083
3 South Arcot	884	837	1,721	1,239	1,119	2,358	1,162	1,013	2,175
4 Thanjavur	888	865	1,753	1,239	983	2,222	1,162	1,013	2,175
5 Tiruchirappalli	1,210	1,262	2,472	1,881	1,619	3,500	1,619	1,630	3,249
6 Madurai	1,076	989	2,065	1,384	1,333	2,717	1,425	1,410	2,835
7 Ramanathapuram	754	642	1,396	1,104	1,016	2,120	1,084	1,107	2,191
8 Tirunelveli	915	897	1,812	1,461	1,367	2,828	1,626	1,746	3,372
9 Salem	693	637	1,330	929	777	1,706	1,533	1,895	3,428
10 Dharmapuri	459	385	844	485	432	917	929	873	1,802
11 Coimbatore	839	731	1,570	1,044	632	1,676	6,011	5,423	11,434
12 The Nilgiris	51	49	100	42	39	81	1,952	940	2,892
13 Kanyakumari	409	339	748	470	39	509	653	494	1,147
Total	10,084	9,323	19,407	13,827	12,801	26,628	1,24,246	1,18,642	2,42,888

STATEMENT VIII (b).

Deaths by months (Urban) 1972.

Name of Districts.	January.			February.			March.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1 Madras	1,731	1,412	3,143	1,349	1,200	2,549	1,548	1,282	2,830
2 Chingleput	291	179	470	271	221	492	332	204	536
3 North Arcot	438	311	749	385	281	666	383	353	736
4 South Arcot	196	151	347	180	136	316	161	158	319
5 Thanjavur	410	321	731	341	287	628	437	337	774
6 Tiruchirappalli	336	242	578	365	241	606	318	207	525
7 Madurai	639	574	1,213	593	467	1,060	447	448	895
8 Ramanathapuram	271	245	516	232	249	481	249	196	445
9 Tirunelveli	417	376	793	395	347	742	326	300	626
10 Salem	296	218	514	292	236	528	311	225	536
11 Dharmapuri	34	28	62	35	21	56	28	19	47
12 Coimbatore	579	468	1,047	514	432	946	550	422	972
13 The Nilgiris	78	50	128	44	33	77	77	53	130
14 Kanyakumari	92	82	174	84	61	145	76	51	127
Total	5,798	4,657	10,455	5,105	4,223	9,328	5,233	4,255	9,488

Name of Districts.	April.			May.			June.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1 Madras	1,217	1,027	2,244	1,391	1,125	2,516	1,297	1,158	2,455
2 Chingleput	258	197	455	185	170	355	333	245	578
3 North Arcot	364	266	630	414	294	708	371	313	684
4 South Arcot	143	132	275	159	118	277	124	137	261
5 Thanjavur	328	256	584	370	313	683	287	244	531
6 Tiruchirappalli	370	238	608	346	273	619	378	266	644
7 Madurai	481	411	892	557	473	1,030	527	435	962
8 Ramanathapuram	210	188	398	218	209	427	244	198	442
9 Tirunelveli	343	265	608	349	272	621	345	266	611
10 Salem	281	253	534	310	237	547	287	237	524
11 Dharmapuri	30	28	58	57	42	99	36	25	61
12 Coimbatore	479	396	875	581	480	1,061	455	370	825
13 The Nilgiris	74	69	143	101	64	165	78	74	152
14 Kanyakumari	79	60	139	91	59	150	79	60	139
Total	4,657	3,786	8,443	5,129	4,129	9,258	4,841	4,028	8,869

Name of Districts.	July.			August.			September.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
(1)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
1 Madras ..	1,488	1,253	2,741	1,484	1,237	2,721	1,314	1,135	2,449
2 Chingleput ..	242	182	424	251	199	450	229	182	411
3 North Arcot ..	336	279	615	343	304	647	348	275	623
4 South Arcot ..	155	131	286	162	124	286	153	122	275
5 Thanjavur ..	280	246	526	318	261	579	332	246	578
6 Tiruchirappalli ..	524	452	976	467	430	897	474	404	878
7 Madurai ..	279	233	512	217	205	422	236	181	417
8 Ramanathapuram ..	320	249	569	323	259	582	271	251	522
9 Tirunelveli ..	292	270	562	285	251	536	242	213	455
10 Salem ..	34	24	58	27	31	58	35	29	64
11 Dharmapuri ..	515	426	941	557	486	1,043	531	393	924
12 Coimbatore ..	83	51	134	68	61	129	68	64	132
13 The Nilgiris ..	89	61	150	91	65	156	105	70	175
14 Kanyakumari ..	..	..	..	..	..	..	..	..	..
Total ..	4,977	4,115	9,092	4,919	4,153	9,072	4,639	3,783	8,422

Name of Districts.	October.			November.			December.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
(1)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)
1 Madras ..	1,432	1,152	2,584	1,734	1,482	3,216	1,697	1,499	3,196
2 Chingleput ..	231	182	413	312	259	571	358	316	674
3 North Arcot ..	352	297	649	427	349	776	443	345	788
4 South Arcot ..	160	114	274	201	134	335	236	164	400
5 Thanjavur ..	295	258	553	365	318	683	379	306	685
6 Tiruchirappalli ..	548	475	1,023	493	423	916	367	247	614
7 Madurai ..	246	240	486	331	308	639	278	288	566
8 Ramanathapuram ..	362	292	654	441	380	821	514	457	971
9 Tirunelveli ..	277	246	523	308	248	556	276	217	493
10 Salem ..	35	32	67	26	26	52	47	28	75
11 Dharmapuri ..	552	389	941	612	540	1,152	635	483	1,118
12 Coimbatore ..	95	56	151	77	63	140	78	68	146
13 The Nilgiris ..	80	50	130	90	76	166	116	73	189
14 Kanyakumari ..	..	..	..	..	..	..	..	..	..
Total ..	5,024	4,051	9,075	5,892	4,999	10,891	6,015	4,984	10,999
									51,163
									1,13,392

STATEMENT-VIII (c)—Deaths by months (State) 1972

Name of the districts.	January.			February.			March.			April.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1 Madras ..	1,731	1,412	3,143	1,349	1,200	2,549	1,548	1,282	2,830	1,217	1,027	2,244
2 Chingleput ..	1,217	1,007	2,224	1,047	799	1,846	1,098	866	1,964	853	669	1,522
3 North Arcot ..	1,908	1,657	3,565	1,603	1,340	2,943	1,629	1,485	3,114	1,346	1,114	2,460
4 South Arcot ..	1,240	1,242	2,482	1,214	1,140	2,354	1,188	1,115	2,303	933	952	1,885
5 Thanjavur ..	1,567	1,469	3,036	1,292	1,304	2,596	1,421	1,428	2,849	1,177	1,145	2,322
6 Tiruchirappalli ..	1,849	1,704	3,553	1,560	1,369	2,929	1,552	1,356	2,908	1,442	1,255	2,697
7 Madurai ..	1,853	1,756	3,609	1,628	1,472	3,100	1,306	1,262	2,568	1,919	1,151	3,070
8 Ramanathapuram ..	1,014	1,042	2,056	923	955	1,879	920	865	1,785	793	733	1,526
9 Tirunelveli ..	1,834	1,511	3,345	1,435	1,279	2,714	1,290	1,154	2,444	1,103	990	2,093
10 Salem ..	1,115	947	2,062	991	924	1,915	1,060	897	1,957	952	913	1,865
11 Dharmapuri ..	641	541	1,182	473	429	902	479	470	949	554	487	1,041
12 Coimbatore ..	1,527	1,287	2,814	1,359	1,186	2,545	1,332	1,136	2,468	1,272	1,108	2,380
13 The Nilgiris ..	112	89	201	102	82	184	120	91	211	128	101	229
14 Kanyakumari ..	607	526	1,133	496	465	961	492	452	944	413	373	786
Total ..	18,015	16,190	34,205	15,472	13,945	29,417	15,335	13,859	29,194	13,502	12,018	25,520

Name of the Districts.	May.			June.			July.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
1 Madras ..	1,391	1,125	2,516	1,297	1,158	2,455	1,488	1,253	2,741
2 Chingleput ..	754	683	1,437	1,071	870	1,941	924	721	1,645
3 North Arcot ..	1,438	1,209	2,647	1,514	1,329	2,843	1,495	1,404	2,899
4 South Arcot ..	924	815	1,739	964	912	1,876	1,010	940	1,950
5 Thanjavur ..	1,199	1,147	2,346	1,025	973	1,998	1,124	1,028	2,152
6 Tiruchirappalli ..	1,403	1,272	2,675	1,470	1,323	2,793	1,359	1,353	2,712
7 Madurai ..	1,459	1,339	2,798	1,334	1,219	2,553	1,489	1,416	2,905
8 Ramanathapuram ..	810	728	1,538	778	836	1,614	1,023	954	1,977
9 Tirunelveli ..	1,082	868	1,950	1,096	971	2,067	1,109	1,035	2,144
10 Salem ..	1,089	965	2,054	1,071	1,023	2,094	1,124	1,089	2,213
11 Dharmapuri ..	507	465	972	506	461	967	586	562	1,148
12 Coimbatore ..	1,384	1,200	2,584	1,194	1,071	2,265	1,328	1,198	2,526
13 The Nilgiris ..	172	119	291	135	114	249	150	100	250
14 Kanyakumari ..	513	422	935	478	468	946	502	476	978
Total ..	14,125	12,357	26,482	13,933	12,728	26,661	14,711	13,529	28,240

STATEMENT VIII (c)

Name of the district.	August.			September.			October.		
	Males.	Female.	Total.	Male.	Female.	Total.	Males.	Females.	Total.
1 Madras	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
2 Chingleput	1,484	1,237	2,721	1,314	1,135	2,449	1,432	1,152	2,584
3 North Arcot	1,552	812	1,764	868	792	1,660	970	788	1,758
4 South Arcot	1,456	1,411	2,867	1,389	1,236	2,625	1,499	1,381	2,880
5 Thanjavur	887	847	1,734	993	905	1,898	1,014	951	1,965
6 Tiruchitappalli	1,105	1,030	2,135	1,043	1,027	2,070	1,183	1,123	2,306
7 Madurai	1,357	1,297	2,654	1,276	1,291	2,567	1,569	1,530	3,099
8 Ramanathapuram	1,369	1,296	2,665	1,243	1,112	2,355	1,624	1,464	3,088
9 Tirunelveli	936	929	1,865	905	845	1,750	1,000	882	1,882
10 Salem	1,057	968	2,025	1,073	960	2,033	1,277	1,189	2,466
11 Dharmapuri	1,041	946	1,987	936	852	1,788	970	883	1,853
12 Coimbatore	487	458	945	444	373	817	494	417	911
13 The Nilgiris	1,462	1,279	2,741	1,291	1,135	2,426	1,411	1,120	2,531
14 Kanyakumari	121	96	217	123	100	223	146	105	251
	522	448	970	500	468	968	489	389	878
Total	14,236	13,054	27,290	13,398	12,241	25,639	15,108	13,374	28,482

	November.			December.			Total.		
	Males.	Females.	Total.	Males.	Females.	Total.			
Madras	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)
1 Chingleput	1,734	1,482	3,216	1,197	1,499	3,196	17,682	14,962	32,644
2 North Arcot	1,163	1,063	2,226	1,250	1,115	2,365	12,167	10,185	22,352
3 South Arcot	2,001	1,830	3,831	2,408	1,867	3,870	19,181	17,263	36,444
4 Thanjavur	1,440	1,335	2,775	1,355	1,280	2,635	13,192	12,434	25,626
5 Tiruchirappalli	1,624	1,617	3,241	1,362	1,429	2,791	15,122	14,720	29,842
6 Madurai	2,318	2,204	4,522	1,986	1,877	3,863	19,141	17,831	36,972
7 Ramana'sapuram	1,929	1,940	3,869	1,324	1,825	3,749	18,477	17,662	35,739
8 Tirunelveli	1,358	1,412	2,770	1,197	1,314	2,501	11,657	11,486	23,143
9 Salem	1,902	1,858	3,760	1,881	1,826	3,707	15,939	14,609	30,548
10 Dharmapuri	1,284	1,117	2,461	1,053	965	2,018	12,686	11,581	24,267
11 Coimbatore	568	511	1,099	679	582	1,261	6,448	5,756	12,204
12 The Nilgiris	1,767	1,746	3,513	1,647	1,423	3,070	16,974	14,889	31,863
13 Kanyakumari	153	169	322	117	109	228	1,579	1,211	2,790
	553	546	1,099	665	583	1,248	6,230	5,616	11,846
Total..	19,824	18,826	38,650	18,816	17,684	36,500	1,89,475	1,69,805	3,56,280

STATEMENT VIII (d)

(i) DEATHS DUE TO CHOLERA BY MONTH 1972.

Name of the districts.		Jan- uary.	Febr- uary.	March.	April.	May	June.	July.	Augu- st.	Sept- ember.	Octo- ber.	Novem- ber.	Decem- ber.	Males.	Females.	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1 Madras	10	5	..	..	..	2	4	3	..	2	..	1	10	17	1	27
2 Chingleput	..	1	..	..	..	3	1	..	1	..	..	..	5	1	6	6
3 North Arcot	..	1	..	..	1	..	..	2	..	..	..	2	1	5	6	6
4 South Arcot	..	2	..	..	..	..	..	..	..	..	..	3	2	2	5	5
5 Thanjavur	..	2	..	..	..	..	..	..	..	..	..	..	2	..	2	2
6 Trichitappalli	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7 Madurai	1	..	1	1	..	..	..	..	..	..	..	..	3	..	3	3
8 Ramanathapuram	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9 Tirunelveli	..	..	..	1	..	..	..	..	..	..	1	..	1	1	2	2
10 Salem	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11 Dharmapuri	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
12 Coimbatore	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13 The Nilgiris	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14 Kanjakumari	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	11	11	1	2	1	5	5	5	1	2	1	6	25	26	51	51

DEATHS DUE TO SMALLPOX.

[illegible]

VIII, (3) (d) DEATHS DUE TO MEASLES 1972—cont.

Name of the districts.	Jan- uary.	Febr- uary.	March.	April.	May.	June.	July.	Aug- ust.	Sep- tember.	Octo- ber.	Novem- ber.	Decem- ber.	Male.	Female.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1 Madras ..	4	4	4	8	3	1	4	4	3	3	5	7	10	6	16
2 Chingleput ..	9	4	13	1	3	6	4	4	5	3	5	7	36	35	71
3 North Arcot ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4 South Arcot ..	1	1	3	1	3	2	3	4	1	1	2	1	11	6	17
5 Thanjavur ..	1	1	1	1	1	1	1	1	1	1	1	1	3	2	5
6 Tiruchirappalli ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7 Madurai ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8 Ramanathapuram ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9 Tirunelveli ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10 Salem ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11 Dharmapuri ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12 Coimbatore ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13 The Nilgiris ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14 Kanyakumari ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total ..	17	9	21	14	10	10	11	5	12	4	9	8	73	57	130

DEATHS DUE TO HYDROPHOBIA.

Name of the districts.	Janu- ary.	Febru- ary.	March.	April.	May.	June.	July.	Aug- ust.	Sep- tember.	Octo- ber.	Novem- ber.	Decem- ber.	Male.	Female.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1 Madras ..	6	10	5	6	7	5	4	4	4	6	5	4	48	18	66
2 Chingleput ..	9	2	4	1	1	4	3	7	2	1	2	1	25	12	37
3 North Arcot ..	3	1	1	2	3	6	2	1	3	3	1	3	19	14	33
4 South Arcot ..	1	1	1	1	2	2	2	1	4	1	2	1	10	5	15
5 Thanjavur ..	7	2	3	5	10	5	3	5	5	6	7	3	37	23	60
6 Tiruchirappalli ..	8	2	2	3	3	3	2	5	3	2	5	7	30	13	43
7 Madurai ..	5	2	4	1	2	1	1	1	3	1	3	7	25	4	29
8 Ramanathapuram ..	1	1	1	1	1	1	1	1	1	1	1	1	3	2	5
9 Tirunelveli ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10 Salem ..	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11 Dharmapuri ..	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12 Coimbatore ..	2	2	1	2	4	1	1	1	2	4	1	1	14	4	19
13 The Nilgiris ..	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14 Kanyakumari ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total ..	51	24	20	26	38	32	28	24	31	25	33	31	254	109	363

STATEMENT VIII 1972—cont.

DEATHS DUE TO FEVERS.

Name of the districts.	January.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Male.	Female.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1 Madras ..	337	264	277	234	294	237	353	275	217	318	2	323	1,707	1,504	3,211
2 Chingleput ..	406	303	399	256	277	348	266	351	305	409	514	424	2,163	2,034	4,247
3 North Arcot ..	1,078	877	992	722	789	825	911	914	836	963	1,268	1,245	5,552	5,868	11,420
4 South Arcot ..	885	825	750	621	578	629	685	656	624	722	1,042	991	4,485	4,523	9,008
5 Thanjavur ..	292	229	296	235	232	207	207	203	179	210	451	343	1,376	1,708	3,084
6 Tiruchirappalli ..	775	605	595	571	619	547	578	566	547	706	1,124	866	3,858	4,241	8,099
7 Madurai ..	851	728	654	618	697	697	695	643	609	761	1,146	937	4,412	4,644	9,056
8 Ramanathapuram ..	493	408	422	313	346	490	331	487	431	451	707	638	2,603	2,873	5,476
9 Tirunelveli ..	614	583	483	431	388	441	473	370	418	537	949	949	3,309	3,350	6,659
10 Salem ..	645	555	589	583	621	657	702	604	608	438	801	648	3,709	3,822	7,531
11 Dharmapuri ..	366	298	299	380	329	307	322	316	267	293	377	444	1,969	2,029	3,993
12 Coimbatore ..	462	430	435	425	435	389	459	421	377	439	638	526	2,663	2,773	5,438
13 The Nilgiris ..	24	22	24	41	44	38	39	39	34	28	36	26	232	163	395
14 Kanyakumari ..	103	93	122	74	119	116	196	98	137	82	171	139	675	775	1,450
Total ..	7,331	6,250	6,337	5,504	5,732	5,832	6,376	5,837	5,675	6,428	9,349	8,519	38,713	40,357	79,070

DEATHS DUE TO DYCENTRY.

Name of the districts.	January.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Male.	Female.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1 Madras ..	133	129	103	89	75	105	97	91	47	81	129	111	595	595	1,190
2 Chingleput ..	86	74	59	29	40	65	59	61	50	40	69	104	388	348	736
3 North Arcot ..	118	74	61	59	80	87	87	83	53	54	120	178	551	473	1,024
4 South Arcot ..	62	67	66	72	50	52	49	57	49	76	108	124	400	432	832
5 Thanjavur ..	12	9	7	12	11	14	16	3	5	15	4	12	57	63	120
6 Tiruchirappalli ..	52	43	37	52	31	16	29	47	39	53	47	130	266	310	576
7 Madurai ..	106	68	54	61	58	68	90	65	45	56	70	100	422	422	844
8 Ramanathapuram ..	77	41	48	33	31	40	48	71	34	55	100	92	298	371	669
9 Tirunelveli ..	43	22	22	15	22	23	14	20	13	11	20	44	136	143	279
10 Salem ..	35	16	25	17	28	28	25	21	21	27	44	20	156	137	293
11 Dharmapuri ..	55	14	21	22	23	28	25	21	25	16	45	45	320	293	613
12 Coimbatore ..	2	2	5	6	6	14	8	2	2	4	3	2	25	30	55
13 The Nilgiris ..	70	49	30	30	43	43	42	38	4	26	43	67	244	241	485
14 Kanyakumari ..	877	661	583	549	534	634	632	638	434	557	827	1,080	4,008	3,998	8,006
Total ..	877	661	583	549	534	634	632	638	434	557	827	1,080	4,008	3,998	8,006



DEATHS DUE TO DIARRHOEA.

Name of the districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1 Madras ..	93	149	174	131	176	198	222	218	245	173	264	262	1,156	1,149	2,305
2 Chingleput ..	91	58	73	41	60	134	82	80	96	70	88	136	524	485	1,009
3 North Arcot ..	149	161	135	114	136	184	211	169	114	88	183	228	917	945	1,862
4 South Arcot ..	112	125	115	90	52	117	86	65	83	63	118	141	587	580	1,167
5 Thanjavur ..	137	92	91	87	79	87	82	73	73	41	91	83	479	537	1,016
6 Tiruchirappalli ..	82	87	77	54	73	135	105	98	97	101	191	92	591	601	1,192
7 Madurai ..	80	49	45	52	44	59	63	59	49	55	64	84	555	551	1,106
8 Ramanathapuram ..	56	45	28	20	44	44	39	24	43	26	28	39	197	239	436
9 Tirunelveli ..	153	108	86	65	50	73	79	68	91	80	142	155	563	587	1,150
10 Salem ..	35	58	45	39	49	46	64	37	35	14	46	39	248	259	507
11 Dharmapuri ..	15	18	8	26	14	16	20	22	18	15	22	16	101	111	212
12 Coimbatore ..	85	48	41	46	59	59	82	78	63	56	80	78	365	410	775
13 The Nilgiris ..	1	1	4	8	12	9	11	8	4	4	2	2	30	39	69
14 Kanyakumari ..	6	9	4	1	5	3	3	3	28	4	7	5	39	39	78
Total ..	1,095	1,001	929	774	853	1,164	1,149	1,002	1,039	790	1,326	1,362	6,152	6,332	12,484

DEATHS DUE TO RESPIRATORY DISEASE, 1972.

Name of the districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1 Madras ..	704	646	600	517	477	462	554	566	502	622	688	686	3,800	3,254	7,054
2 Chingleput ..	186	165	215	171	130	171	150	141	156	155	191	190	1,551	1,770	3,321
3 North Arcot ..	296	253	270	230	232	241	200	215	209	296	336	307	1,902	1,183	3,085
4 South Arcot ..	116	99	103	80	113	123	142	98	121	99	149	133	844	532	1,376
5 Thanjavur ..	130	133	119	113	126	100	123	111	73	78	106	114	760	536	1,296
6 Tiruchirappalli ..	267	228	217	192	186	174	199	170	167	210	278	256	1,524	1,010	2,534
7 Madurai ..	296	195	232	200	204	192	222	227	180	201	247	235	1,552	1,084	2,636
8 Ramanathapuram ..	118	141	140	113	150	127	104	121	177	134	170	146	988	653	1,641
9 Tirunelveli ..	231	177	174	180	144	180	173	183	160	227	279	298	1,424	972	2,396
10 Salem ..	220	170	175	191	203	188	179	193	167	165	255	185	1,312	984	2,296
11 Dharmapuri ..	112	89	70	77	70	63	75	54	69	55	91	76	336	374	710
12 Coimbatore ..	259	248	267	254	210	193	232	242	236	249	321	230	1,693	1,243	2,936
13 The Nilgiris ..	34	36	32	43	48	35	34	42	39	39	37	39	263	195	458
14 Kanyakumari ..	64	75	79	53	83	84	85	68	73	97	116	100	573	404	977
Total ..	3,033	2,655	2,702	2,444	2,336	2,333	2,472	2,431	2,309	2,627	3,264	2,955	18,457	13,164	31,621

DEATHS DUE TO SUICIDES, 1972.

Name of the districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1 Madras ..	4	11	18	14	27	7	20	22	15	13	13	13	113	64	177
2 Chingleput ..	8	7	8	5	6	3	6	4	4	4	6	5	45	21	66
3 North Arcot ..	9	15	13	12	12	8	8	14	6	14	10	12	82	51	133
4 South Arcot ..	4	6	4	5	4	9	3	5	7	7	5	1	32	28	60
5 Thanjavur ..	13	10	12	14	15	16	12	14	18	9	10	11	94	55	149
6 Tiruchirappalli ..	7	10	12	23	13	20	21	5	18	4	10	5	85	63	148
7 Madurai ..	16	13	10	10	14	11	20	14	19	15	4	24	92	78	170
8 Ramanathapuram ..	5	14	10	6	6	9	4	1	7	2	12	10	54	32	86
9 Tirunelveli ..	14	19	10	24	19	20	21	16	15	12	18	22	132	78	210
10 Salem ..	6	15	5	11	19	5	15	13	11	8	9	5	78	44	122
11 Dharmapuri ..	11	13	9	11	14	14	23	17	4	9	6	6	79	58	137
12 Coimbatore ..	21	27	24	24	25	23	20	22	24	25	20	21	168	110	278
13 The Nilgiris ..	..	2	1	3	..	1	2	..	2	4	9	1	19	6	25
14 Kanyakumari ..	6	7	8	6	19	18	5	7	7	1	6	26	87	28	115
Total ..	124	169	144	167	193	164	180	149	157	127	138	162	1,158	716	1,874

DEATHS DUE TO WOUNDS AND ACCIDENTS, 1972.

Name of the districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1 Madras ..	72	81	76	77	88	46	110	108	91	103	100	90	661	381	1,042
2 Chingleput ..	10	11	34	23	18	33	32	24	16	17	30	23	210	61	271
3 North Arcot ..	27	26	27	28	31	35	26	22	21	22	39	46	241	109	350
4 South Arcot ..	15	18	20	18	34	9	17	21	19	35	25	37	201	67	268
5 Thanjavur ..	18	14	22	26	24	16	12	21	21	13	8	12	163	54	207
6 Tiruchirappalli ..	39	25	34	42	29	37	35	26	23	27	23	26	241	125	366
7 Madurai ..	18	24	24	19	22	13	17	36	15	31	24	33	147	129	276
8 Ramanathapuram ..	5	6	11	16	14	10	16	11	10	1	8	9	81	6	87
9 Tirunelveli ..	20	20	21	34	27	36	21	31	11	16	24	21	211	71	282
10 Salem ..	13	39	41	33	34	21	42	29	32	23	27	27	263	108	361
11 Dharmapuri ..	17	9	4	12	6	10	26	22	11	23	13	8	110	51	161
12 Coimbatore ..	27	35	31	42	50	42	38	46	56	55	38	44	353	149	502
13 The Nilgiris ..	8	3	14	3	5	9	7	5	2	2	4	9	49	22	68
14 Kanyakumari ..	8	7	14	6	5	7	6	5	7	7	5	11	66	22	88
Total ..	297	318	373	379	387	324	405	404	335	375	366	396	2,977	1,382	4,359

STATEMENT VIII—cont.

DEATHS DUE TO SNACK BITES.

Name of the districts.	January.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Male.	Female.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1 Madras ..	3	5	2	8	6	11	11	15	13	12	3	8	1	1	2
2 Chingleput ..	7	7	12	10	12	10	8	16	14	15	15	4	83	47	97
3 North Arcot ..	9	6	9	6	10	13	10	7	8	14	12	3	72	34	130
4 South Arcot ..	7	9	6	11	4	10	10	14	11	11	11	11	68	46	106
5 Thanjavur ..	7	10	2	8	9	7	9	7	13	14	2	3	48	42	114
6 Tiruchirappalli ..	3	5	9	6	6	7	7	15	8	11	12	9	62	36	98
7 Madurai ..	5	3	4	1	4	5	10	9	11	5	3	8	41	27	68
8 Ramanathapuram ..	5	3	4	1	3	4	11	10	2	5	9	4	36	32	68
9 Tirunelveli ..	6	2	8	4	6	7	9	11	14	10	10	10	81	33	114
10 Salem ..	4	10	9	14	6	7	9	4	4	6	2	7	116	21	52
11 Dharmapuri ..	2	1	1	2	6	7	9	11	4	6	2	7	7	21	198
12 Coimbatore ..	11	16	14	14	22	22	24	23	22	11	13	6	116	1	1
13 The Nilgiris ..	3	2	1	3	4	1	1	1	1	..	2	3	18	4	22
14 Kanyakumari ..	67	77	77	86	92	104	120	133	120	115	94	76	718	442	1,160
Total ..	187	160	157	252	243	230	203	222	216	177	189	187	..	2,428	2,428

MATERNAL DEATHS, 1972.

Name of the districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1 Madras ..	9	7	3	14	10	10	12	22	8	9	13	21	..	138	138
2 Chingleput ..	5	8	8	14	14	11	9	19	4	10	7	9	..	118	118
3 North Arcot ..	14	18	18	27	31	35	27	31	33	25	21	16	..	296	296
4 South Arcot ..	16	2	12	16	9	31	27	11	26	12	11	10	..	183	183
5 Thanjavur ..	28	16	22	28	34	18	16	28	22	17	21	30	..	280	280
6 Tiruchirappalli ..	19	23	19	32	37	35	33	20	17	20	26	16	..	297	297
7 Madurai ..	22	21	9	22	22	9	9	15	16	16	9	13	..	187	187
8 Ramanathapuram ..	8	3	10	13	12	6	9	13	19	14	10	8	..	125	125
9 Tirunelveli ..	18	24	18	26	27	29	21	19	25	17	29	27	..	278	278
10 Salem ..	9	13	16	24	14	15	12	18	6	10	9	10	..	156	156
11 Dharmapuri ..	8	3	3	7	10	6	9	2	8	6	11	5	..	78	78
12 Coimbatore ..	26	17	12	18	18	18	17	18	25	10	16	17	..	212	212
13 The Nilgiris ..	7	6	7	8	4	7	6	4	7	7	6	6	..	73	73
14 Kanyakumari ..	187	160	157	252	243	230	203	222	216	177	189	187	..	2,428	2,428
Total ..	187	160	157	252	243	230	203	222	216	177	189	187	..	2,428	2,428

STATEMENT VIII—cont.

DEATHS DUE TO DIPHTHERIA.

Name of the Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1 Madras ..	5	4	3	1	..	7	..	..	1	..	..	..	3	14	24
2 Chingleput ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3 North Arcot ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4 South Arcot ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5 Thanjavur ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6 Tiruchirappalli ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7 Madurai ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8 Ramanathapuram ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9 Tirunelveli ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10 Salem ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11 Dharmapuri ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
12 Coimbatore ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13 The Nilgiris ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14 Kanyakumari ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	7	13	16	6	12	18	11	9	11	4	9	6	62	59	121

DEATHS DUE TO KILLED BY WILD BEASTS.

Name of the districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1 Madras ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2 Chingleput ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3 North Arcot ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4 South Arcot ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5 Thanjavur ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6 Tiruchirappalli ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7 Madurai ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8 Ramanathapuram ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9 Tirunelveli ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10 Salem ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11 Dharmapuri ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
12 Coimbatore ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13 The Nilgiris ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14 Kanyakumari ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	1	1	1	1	1	1	1	2	1	..	..	1	6	3	9

STATEMENT VIII—cont.

DEATHS DUE TO ALL OTHER COURSES.

Name of the District.	January.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Novr.	Dec.	Male.	Female.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1 Madras ..	1,766	1,239	1,567	1,161	1,362	1,325	1,364	1,412	1,236	1,256	2,002	1,682	9,567	7,855	17,422
2 Chingleput ..	1,414	1,205	1,149	966	882	1,154	1,022	1,058	1,009	1,045	1,511	1,458	7,458	6,215	13,673
3 North Arcot ..	1,864	1,518	1,432	1,255	1,349	1,469	1,415	1,400	1,334	1,400	1,837	1,829	9,327	8,265	18,092
4 South Arcot ..	1,261	1,202	1,220	977	883	889	927	813	955	966	1,300	1,190	6,545	6,038	12,583
5 Thanjavur ..	2,392	2,079	2,271	1,791	1,809	1,523	1,666	1,667	1,661	1,908	2,531	2,174	12,060	11,126	23,472
6 Tiruchirappalli ..	2,299	1,898	1,910	1,712	1,677	1,817	1,696	1,709	1,654	1,962	2,820	2,468	12,496	11,126	23,472
7 Madurai ..	2,210	1,992	1,522	1,479	1,732	1,497	1,781	1,531	1,420	1,937	2,289	2,288	11,405	10,323	21,728
8 Ramanathapuram ..	1,288	1,217	1,113	1,000	967	1,027	1,257	1,231	957	1,162	1,729	1,548	7,384	7,121	14,505
9 Tirunelveli ..	2,048	1,746	1,621	1,311	1,267	1,256	1,329	1,303	1,307	1,556	2,264	2,185	10,108	9,091	19,199
10 Salem ..	1,102	1,008	1,055	950	1,071	1,125	1,165	1,034	892	1,105	1,253	1,069	6,833	6,026	12,858
11 Dharmapuri ..	611	476	524	502	498	514	635	486	411	487	565	651	3,451	2,889	6,340
12 Coimbatore ..	1,866	1,675	1,593	1,500	1,691	1,464	1,605	1,325	1,575	1,635	2,335	2,095	11,210	9,900	20,860
13 The Nilgiris ..	131	112	131	122	173	141	146	121	139	172	167	147	957	745	1,702
14 Kanyakumari ..	866	714	678	605	651	667	635	746	700	653	745	883	4,521	4,027	8,548
Total ..	21,118	18,061	17,836	15,340	16,002	15,808	16,643	16,431	15,300	17,244	23,148	21,673	131,872	100,732	2,14,604

56

STATEMENT IX
MATERNAL DEATHS BY COMMUNITYWISE 1972. (STATE)

Name of the District.	Female.					Total.
	Hindus.	Muslims.	Christians.	Others.	(5)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1 Madras ..	93	27	18	..	138	..
2 Chingleput ..	112	3	3	..	118	..
3 North Arcot ..	272	20	4	..	296	..
4 South Arcot ..	179	3	1	..	183	..
5 Thanjavur ..	263	19	8	..	290	..
6 Tiruchirappalli ..	278	9	10	..	297	..
7 Madurai ..	170	12	5	..	187	..
8 Ramanathapuram ..	110	12	3	..	125	..
9 Tirunelveli ..	227	25	26	..	278	..
10 Salem ..	161	4	1	..	166	..
11 Dharmapuri ..	76	2	2	..	78	..
12 Coimbatore ..	204	6	1	..	212	..
13 The Nilgiris ..	6	..	..	..	7	..
14 Kanyakumari ..	42	4	27	..	73	..
Total ..	2,173	146	109	..	2,428	..
Rural ..	1,206	51	60	..	1,322	..
Urban ..	967	95	44	..	1,106	..

STATEMENT IX (a).
Maternal deaths—State Total, 1972.

Name of districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1 Madras ..	9	7	3	14	10	10	12	22	8	9	13	21	138
2 Chingleput ..	5	8	8	14	14	11	9	19	4	10	7	9	118
3 North Arcot ..	15	17	19	26	31	35	27	31	33	25	21	16	296
4 South Arcot ..	16	12	12	16	9	31	27	11	26	12	11	10	183
5 Thanjavur ..	28	16	22	28	34	18	16	28	17	17	21	30	280
6 Tiruchirappalli ..	19	23	19	32	37	35	33	20	17	20	26	16	297
7 Madurai ..	22	21	9	22	22	9	9	15	16	20	9	13	187
8 Ramanathapuram ..	8	3	9	14	12	6	8	14	19	14	10	8	125
9 Tirunelveli ..	16	24	18	26	27	29	21	19	25	17	29	27	278
10 Salem ..	13	13	16	24	14	15	12	18	6	10	9	10	156
11 Dharmapuri ..	8	3	3	7	10	6	9	2	8	6	11	5	78
12 Coimbatore ..	26	17	12	18	18	18	18	18	25	10	15	17	212
13 The Nilgiris ..	..	..	..	3	1	..	1	2	..	..	..	..	7
14 Kanyakumari ..	7	5	7	8	4	7	6	4	7	7	6	..	73
Total ..	188	159	167	262	243	230	208	223	216	177	188	187	2,428

57

STATEMENT IX (b).
Maternal deaths—Rural 1972.

Name of districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1 Madras ..	..	..	..	..	..	..	..	..	..	..	..	..	..
2 Chingleput ..	..	..	..	..	..	..	..	..	..	..	..	..	..
3 North Arcot ..	..	..	..	..	..	..	..	..	..	..	..	..	..
4 South Arcot ..	..	..	..	..	..	..	..	..	..	..	..	..	..
5 Thanjavur ..	..	..	..	..	..	..	..	..	..	..	..	..	..
6 Tiruchirappalli ..	..	..	..	..	..	..	..	..	..	..	..	..	..
7 Madurai ..	..	..	..	..	..	..	..	..	..	..	..	..	..
8 Ramanathapuram ..	..	..	..	..	..	..	..	..	..	..	..	..	..
9 Tirunelveli ..	..	..	..	..	..	..	..	..	..	..	..	..	..
10 Salem ..	..	..	..	..	..	..	..	..	..	..	..	..	..
11 Dharmapuri ..	..	..	..	..	..	..	..	..	..	..	..	..	..
12 Coimbatore ..	..	..	..	..	..	..	..	..	..	..	..	..	..
13 The Nilgiris ..	..	..	..	..	..	..	..	..	..	..	..	..	..
14 Kanyakumari ..	..	..	..	..	..	..	..	..	..	..	..	..	..

STATEMENT IX (b).

Maternal deaths (Urban), 1972.

Name of district.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1 Madras	..	7	3	14	10	10	12	22	8	9	13	21	138
2 Chingleput	..	..	1	2	6	6	2	8	3	3	2	5	40
3 North Arcot	..	..	9	12	9	13	9	20	15	9	6	4	118
4 South Arcot	..	..	3	5	9	9	5	..	9	4	1	4	47
5 Thanjavur	..	1	3	3	21	4	10	14	16	2	7	8	104
6 Tiruchirappalli ..	..	10	5	5	13	5	10	2	7	2	7	4	74
7 Madurai	..	15	5	15	16	9	5	9	10	14	3	5	126
8 Ramanathapuram ..	..	16	5	8	6	3	4	10	9	9	5	5	70
9 Tirunelveli	..	2	9	13	9	12	11	6	14	8	9	15	120
10 Salem	..	6	7	19	10	10	10	9	5	5	3	3	88
11 Dharmapuri	..	3	..	1	13	10	3	..	3	..	11	11	11
12 Coimbatore	..	18	7	14	10	10	10	14	16	9	11	11	146
13 The Nilgiris	..	..	..	2	1	..	..	2	..	..	..	..	6
14 Kanyakumari	..	3	..	2	..	3	..	2	..	..	1	..	18
Total	85	76	56	115	117	95	90	118	117	75	71	91	1,106

STATEMENT IX (c).

Maternal deaths Communitywise, 1972.

Name of district.	Rural.					Urban.				
	Hindus.	Muslims.	Christians.	Others.	Total.	Hindus.	Muslims.	Christians.	Others.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1 Madras	78	..	..	..	78	93	27	18	..	138
2 Chingleput	168	..	..	..	168	34	3	3	..	40
3 North Arcot	133	7	3	..	143	104	13	1	..	118
4 South Arcot	160	12	..	..	172	46	..	1	..	47
5 Thanjavur	212	5	6	..	218	93	7	4	..	104
6 Tiruchirappalli ..	7	..	..	..	7	66	4	4	..	74
7 Madras	54	4	3	..	61	116	8	2	..	126
8 Ramanathapuram ..	48	5	2	..	55	62	7	1	..	70
9 Tirunelveli	126	11	21	..	158	101	14	5	..	120
10 Salem	67	..	1	..	68	84	4	..	..	88
11 Dharmapuri	65	..	..	..	65	11	..	..	..	11
12 Coimbatore	65	..	..	..	65	139	6	1	..	146
13 The Nilgiris	1	..	..	..	1	5	..	..	..	6
14 Kanyakumari	29	..	24	..	53	13	..	3	..	18
Total	1,206	51	65	..	1,322	967	95	44	..	1,106

STATEMENT IX (d).

Infant deaths by Communitywise—1972.

Name of districts.	Hindus.		Muslims.		Christians.		Others.		Total.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1 Madras	3,761	3,302	441	417	193	159	5	4	4,400	3,882	8,282
2 Chingleput	1,834	1,525	51	47	22	16	..	..	1,907	1,588	3,495
3 North Arcot	3,115	2,697	304	224	27	29	..	..	3,446	2,950	6,396
4 South Arcot	1,835	1,630	36	41	24	22	..	..	1,895	1,693	3,588
5 Thanjavur	1,812	1,624	138	96	40	50	..	..	1,990	1,770	3,760
6 Tiruchirappalli ..	2,324	1,997	84	87	78	74	..	..	2,486	2,158	4,644
7 Madurai	3,216	2,879	145	124	103	71	..	..	3,464	3,074	6,538
8 Ramanathapuram ..	1,681	1,380	99	75	45	44	..	..	1,725	1,499	3,224
9 Tirunelveli	2,072	1,792	165	134	251	153	..	..	2,488	2,075	4,567
10 Salem	1,691	1,752	52	47	12	12	..	..	1,755	1,811	3,566
11 Dharmapuri	751	666	20	38	5	2	..	..	776	706	1,482
12 Coimbatore	2,327	2,089	100	68	38	36	..	..	2,465	2,193	4,658
13 The Nilgiris	283	218	35	35	26	29	..	..	344	282	626
14 Kanyakumari	701	643	33	26	481	406	..	..	1,215	1,075	2,290
Total	27,303	24,194	1,703	1,459	1,345	1,103	5	4	30,356	26,760	57,116
Rural	17,018	15,236	338	281	816	664	..	..	18,172	16,181	34,353
Urban	10,285	8,958	1,365	1,178	529	439	5	4	12,184	10,579	22,763

Infant deaths by communitywise 1972. X (a)

Name of Districts. (1)	Rural.													
	Hindus.			Muslims.			Christians.			Other classes.			Total.	
	Males. (2)	Females. (3)	Total. (4)	Males. (5)	Females. (6)	Total. (7)	Males. (8)	Females. (9)	Total. (10)	Males. (11)	Females. (12)	Total. (13)		
1 Madras	..	..	..	..	..	..	..	..	..	..	..	..		
2 Chingleput	1,361	1,122	2,483	11	19	30	..	..	..	1,382	1,150	2,532		
3 North Arcot	2,451	2,127	4,578	44	23	67	..	..	..	2,505	2,166	4,671		
4 South Arcot	1,536	1,327	2,863	11	17	28	..	..	..	1,552	1,358	2,910		
5 Thanjavur	1,261	1,170	2,431	56	34	90	..	..	..	1,340	1,236	2,576		
6 Tiruchirappalli ..	1,907	1,649	3,556	25	19	44	..	..	..	1,975	1,708	3,683		
7 Madurai	2,017	1,840	3,857	31	36	67	..	..	..	2,084	1,900	3,984		
8 Ramanathapuram ..	1,544	1,344	2,888	59	43	102	..	..	..	1,799	1,627	3,426		
9 Tirunelveli	1,142	1,277	2,419	8	6	14	..	..	..	1,115	1,289	2,404		
10 Salem	711	616	1,327	9	15	24	..	..	..	724	632	1,356		
11 Dharmapuri	1,293	1,169	2,462	1	3	4	..	..	..	1,298	1,173	2,471		
12 Coimbatore	134	101	235	12	5	17	..	..	..	151	120	271		
13 The Nilgiris	..	..	..	..	..	..	..	..	..	..	..	..		
14 Kanyakumari	560	537	1,097	27	15	42	..	..	..	1,018	924	1,942		
Total	17,018	15,236	32,254	338	281	619	..	..	..	18,172	16,181	34,353		

Name of the Districts.

[illegible]

Deaths by Age group 1972 Rural.

Name of the Districts.	Under 1 week,		Under 1 week/Under 1 month.		1—6 months.		6—12 months.		Total.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1 Chingleput ..	359	249	290	238	347	313	386	350	1,382	1,150
2 North Arcot ..	568	438	498	423	812	742	627	563	2,565	2,166
3 South Arcot ..	377	342	366	295	434	381	375	340	1,562	1,358
4 Thanjavur ..	270	234	517	427	317	314	236	261	1,340	1,236
5 Tiruchirappalli..	476	385	389	361	638	462	572	500	1,975	1,708
6 Madurai ..	813	725	495	385	431	478	345	312	2,084	1,900
7 Ramanathapuram	347	296	414	303	195	188	233	240	1,189	1,027
8 Tirunelveli ..	541	352	481	365	400	393	377	388	1,799	1,498
9 Salem ..	472	591	258	245	242	244	213	209	1,155	1,289
10 Dharmapuri ..	190	164	195	151	168	170	171	147	724	632
11 Coimbatore ..	532	466	924	215	305	259	237	233	1,298	1,173
12 Nilgiris ..	78	53	31	28	31	22	23	17	151	120
13 Kanyakumari ..	304	228	300	263	244	253	170	180	1,018	924
Total ..	5,327	4,523	4,428	3,699	4,464	4,219	3,955	5,740	18,172	16,181

Deaths by Age group 1972 Rural.

Name of the Districts.	1-4 years.		5-9 years.		10-14 years.		15-24 years.		25-34 years.		35-44 years.	
	Male. (12)	Female. (13)	Male. (14)	Female. (15)	Male. (16)	Female. (17)	Male. (18)	Female. (19)	Male. (20)	Female. (21)	Male. (22)	Female. (23)
1 Chingleput ..	946	989	292	327	194	177	443	346	421	457	464	406
2 North Arcot ..	2,049	2,313	503	631	304	291	653	748	668	891	929	871
3 South Arcot ..	1,592	1,780	433	486	215	243	570	626	574	739	767	769
4 Thajajavur ..	1,056	1,172	285	304	197	223	399	464	490	765	702	837
5 Tiruchirappalli ..	1,953	2,144	579	588	285	329	760	884	673	892	988	991
6 Madurai ..	1,838	2,130	413	429	238	256	476	528	589	655	717	675
7 Ramanathapuram ..	1,551	1,847	97	88	418	443	268	313	96	127	686	711
8 Tirunelveli ..	1,678	1,873	380	365	190	203	420	530	471	634	643	552
9 Salem ..	744	791	251	244	195	215	550	571	538	592	634	571
10 Dharmapuri ..	655	719	199	207	144	114	295	374	239	385	422	405
11 Coimbatore ..	713	791	278	280	237	225	592	568	576	649	705	619
12 Nilgiris ..	88	71	27	38	15	16	4	17	28	10	28	21
13 Kanyakumari ..	651	882	57	79	216	199	226	189	88	74	333	292
Total ..	15,514	17,508	3,874	4,066	2,848	2,934	5,656	6,152	5,401	6,879	8,018	7,720

Name of the Districts.

Name of the Districts.	45—54 years.		55—64 years.		65—74 years.		75+ years.		Total.		
	Male. Female.		Male. Female.		Male. Female.		Male. Female.		Male. Female.		
	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)
1 Chingleput ..	..	960	1,105	813	1,293	1,036	1,374	1,338	8,874	7,649	16,523
2 North Arcot ..	..	1,238	921	1,700	1,282	1,810	2,168	1,918	14,587	13,596	28,183
3 South Arcot ..	..	..	1,605	1,466	1,602	1,356	1,229	1,066	11,162	10,813	21,975
4 Thanjavur ..	..	947	1,855	1,590	1,959	1,880	1,760	1,881	10,990	11,327	22,317
5 Tiruchirappalli..	..	1,178	1,034	2,062	1,978	2,158	2,314	2,517	14,925	14,110	29,735
6 Madurai ..	..	1,056	841	1,454	1,166	1,533	1,736	1,798	12,084	11,707	23,791
7 Ramanathapuram ..	..	176	184	2,218	1,855	825	1,102	1,305	8,625	8,746	17,372
8 Tirunelveli ..	..	884	706	1,329	942	1,838	1,562	1,901	11,533	10,855	22,428
9 Salem ..	..	826	542	1,222	940	1,196	1,896	2,040	9,229	8,730	17,959
10 Dharmapuri ..	..	442	350	632	461	858	1,401	1,118	6,011	5,422	11,434
11 Coimbatore ..	..	874	635	1,263	911	1,316	2,562	2,620	10,414	9,604	20,018
12 Nilgiris ..	..	22	30	81	42	82	67	65	653	494	1,147
13 Kanyakumari ..	..	127	106	1,160	877	425	410	816	5,158	4,848	10,006
Total ..	9,793	7,858	17,686	14,080	16,917	15,004	20,367	20,266	1,24,246	1,18,642	2,42,888

STATEMENT XI (a)
Deaths by Age Group (Urban) 1972.

Name of the Districts.	Under 1 week		Over 1 week		Under 1 month		6-12 months.		Total.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1 Chingleput ..	242	167	61	52	121	119	101	100	525	438
2 North Arcot ..	260	227	159	91	298	262	224	204	941	784
3 South Arcot ..	158	165	38	46	88	72	59	52	343	335
4 Thanjavur ..	345	244	80	62	115	121	110	107	650	534
5 Tiruchirappalli ..	309	260	58	53	84	73	60	64	511	450
6 Madurai ..	572	462	233	203	316	281	259	226	1,380	1,174
7 Ramanathapuram ..	220	187	93	79	119	100	104	106	536	472
8 Tirunelveli ..	280	237	104	73	157	130	148	141	689	581
9 Salem ..	273	224	18	69	152	138	95	91	600	522
10 Dharmapuri ..	14	15	8	11	20	31	10	17	52	74
11 Coimbatore ..	655	522	142	143	197	182	173	173	1,167	1,030
12 The Nilgiris ..	93	22	28	22	37	27	35	29	193	162
13 Kanyakumari ..	99	71	45	29	34	28	19	23	197	181
14 Madras ..	1,305	1,166	690	563	1,084	1,060	1,121	1,093	4,400	3,882
Total ..	5,025	4,031	1,819	1,498	2,822	2,624	2,518	2,426	12,184	10,579

62

Name of the Districts.	1-4 years.		5-9 years.		10-14 years.		15-25 years.		25-34 years.		35-44 years.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
1 Chingleput ..	221	259	79	93	68	48	99	119	247	220	320	192
2 North Arcot ..	400	421	139	119	93	76	245	278	300	320	397	280
3 South Arcot ..	140	137	68	41	34	31	88	94	133	162	168	157
4 Thanjavur ..	268	266	107	100	86	70	214	203	348	318	356	296
5 Tiruchirappalli ..	269	279	122	102	73	73	280	268	347	278	317	250
6 Madurai ..	639	743	174	165	130	95	212	217	414	434	414	392
7 Ramanathapuram ..	307	355	74	84	55	44	100	109	170	193	200	168
8 Tirunelveli ..	351	392	102	113	68	68	186	154	251	284	285	302
9 Salem ..	289	295	105	90	49	67	143	130	221	250	235	169
10 Dharmapuri ..	34	32	15	7	9	7	20	25	36	28	41	22
11 Coimbatore ..	463	460	148	147	116	121	305	343	443	530	536	437
12 The Nilgiris ..	90	94	27	29	14	10	47	40	57	56	68	39
13 Kanyakumari ..	81	66	26	33	19	12	28	18	69	70	83	66
14 Madras ..	2,562	2,245	652	667	453	500	655	827	843	771	1,102	774
Total ..	6,114	6,044	1,838	1,790	1,274	1,222	2,022	2,765	3,879	3,894	4,522	3,534

STATEMENT XI-(a)
Deaths by Age group—Urban—cont.

Name of the districts.	45-54 years		55-64 years		65-74 years		75+ years.		Total.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)
1 Chingleput ..	432	197	459	554	417	289	294	3,293	3,536	5,829
2 North Arcot ..	567	253	586	630	472	226	371	4,594	3,667	8,261
3 South Arcot ..	238	106	257	410	252	151	167	2,030	1,621	3,651
4 Thanjavur ..	479	302	482	819	674	323	326	4,132	3,393	7,525
5 Tiruchirappalli ..	513	254	559	743	514	475	364	4,216	3,921	7,237
6 Madurai ..	537	362	726	1,582	1,265	185	212	6,393	5,555	11,948
7 Ramanathapuram ..	315	184	358	801	720	115	185	3,031	2,740	5,771
8 Tirunelveli ..	462	236	585	1,011	759	416	478	4,406	3,714	8,120
9 Salem ..	312	163	344	662	535	497	432	3,457	2,851	6,308
10 Dharmapuri ..	64	25	39	60	33	67	56	437	333	770
11 Coimbatore ..	754	389	872	1,244	921	512	537	6,560	5,285	11,845
12 The Nilgiris ..	90	56	105	195	138	40	52	1,072	717	1,643
13 Kanyakumari ..	102	51	137	320	223	10	8	1,072	708	1,840
14 Madras ..	658	974	1,893	1,778	1,422	1,686	1,727	17,682	14,962	32,644
Total ..	6,523	3,552	7,402	10,809	8,445	5,062	5,207	62,229	51,163	1,13,392

63

STATEMENT XI
Deaths by Age group—STATE—1972.

Name of the districts.	Under one week		Under one month		One to Six months		Six to Twelve months		Total under one year.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1 Madras ..	1,505	1,166	690	563	1,084	1,060	1,121	1,093	4,400	3,882
2 Chingleput ..	601	416	351	290	468	432	487	450	1,907	1,588
3 North Arcot ..	828	665	657	514	1,110	1,004	851	707	3,446	2,950
4 South Arcot ..	535	507	404	341	622	453	434	392	1,895	1,693
5 Thanjavur ..	615	478	597	489	432	435	346	363	1,990	1,770
6 Tiruchirappalli ..	785	645	447	414	622	535	632	564	2,486	2,158
7 Madurai ..	1,385	1,187	728	590	747	759	604	538	3,464	3,074
8 Ramanathapuram ..	567	483	607	382	314	288	337	346	1,725	1,499
9 Tirunelveli ..	821	589	585	438	557	523	525	529	2,488	2,079
10 Salem ..	745	815	308	314	394	382	308	300	1,755	1,811
11 Dharmapuri ..	204	179	162	188	201	201	164	164	776	706
12 Coimbatore ..	1,187	988	366	358	502	441	410	406	2,465	2,193
13 The Nilgiris ..	171	137	59	50	68	49	46	46	314	282
14 Kanyakumari ..	403	299	345	292	278	281	189	203	1,215	1,075
Total ..	10,352	8,554	6,247	5,197	7,286	6,843	6,471	6,166	30,356	26,760

STATEMENT XI—c(b)
Deaths by Age group—STATE—1972.

Name of the Districts.	1 to 4 years		5 to 9 years		10 to 14 years		15 to 24 years		25 to 34 years	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1 Madras ..	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
2 Chingleput ..	2,502	2,245	652	667	453	500	655	827	843	771
3 North Arcot ..	1,167	1,348	371	420	262	225	542	465	668	677
4 South Arcot ..	2,449	2,734	702	750	397	367	898	1,026	968	1,211
5 Thanjavur ..	1,732	1,917	521	527	249	274	658	730	707	901
6 Tiruchirappalli ..	1,324	1,438	392	404	283	293	613	667	838	1,083
7 Tirunelveli ..	2,222	2,423	701	690	365	402	1,040	1,092	1,020	1,170
8 Ramanathapuram ..	2,477	2,873	587	594	368	351	688	745	953	1,091
9 Tirunelveli ..	1,588	2,202	171	172	473	487	368	432	266	320
10 Salem ..	2,029	2,265	482	478	258	271	606	684	722	918
11 Dharmapuri ..	1,033	1,086	356	334	244	282	693	702	759	842
12 Coimbatore ..	689	751	214	214	153	121	315	399	275	413
13 The Nilgiris ..	1,176	1,251	426	427	353	346	897	911	1,019	1,179
14 Kanyakumari ..	178	165	54	67	29	26	51	50	85	53
	732	948	83	112	235	211	254	207	157	144
Total ..	21,628	23,546	5,712	5,856	4,122	4,156	8,278	8,917	9,280	10,773

Name of the Districts.	35 to 44 years		45 to 54 years		55 to 64 years		65 to 74 years		75 and above years		Total.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Total.
1 Madras ..	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(34)
2 Chingleput ..	1,102	774	1,658	974	1,893	1,173	1,778	1,422	1,686	1,727	17,682	32,644
3 North Arcot ..	784	598	1,392	807	1,564	1,072	1,847	1,453	1,663	1,632	12,107	22,352
4 South Arcot ..	1,326	1,151	1,805	1,174	2,286	1,575	2,440	2,036	2,464	2,289	19,181	36,444
5 Thanjavur ..	935	926	1,241	1,030	1,862	1,605	2,012	1,608	1,380	1,233	13,192	25,626
6 Tiruchirappalli ..	1,068	1,123	1,426	1,277	2,337	1,904	2,778	2,554	2,083	2,207	15,122	29,842
7 Madurai ..	1,303	1,241	1,691	1,288	2,621	1,994	2,901	2,492	2,789	2,881	19,141	36,972
8 Ramanathapuram ..	1,131	1,067	1,593	1,203	2,180	1,552	3,115	2,702	1,921	2,010	18,477	35,739
9 Tirunelveli ..	886	879	491	368	2,576	2,083	1,626	1,566	1,217	1,488	11,657	23,143
10 Salem ..	928	854	1,346	942	1,914	1,289	2,849	2,311	2,317	2,518	15,939	30,548
11 Dharmapuri ..	869	740	1,138	705	1,566	1,138	1,880	1,725	2,393	2,216	12,686	24,267
12 Coimbatore ..	463	427	506	375	671	485	918	691	1,468	1,174	6,448	12,267
13 The Nilgiris ..	1,241	1,056	1,628	1,024	2,135	1,291	2,560	2,054	3,074	3,157	16,974	31,869
14 Kanyakumari ..	96	60	172	86	186	103	277	202	107	117	1,579	2,790
	416	358	229	157	1,297	947	745	633	867	824	6,230	11,846
Total ..	12,540	11,254	16,316	11,410	25,088	18,211	27,726	23,449	25,329	25,473	186,475	356,280

STATEMENT XII—A.

Infant Deaths by months (Rural) 1972

Name of districts.	January.		February.		March.		April.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Chingleput ..	145	131	276	108	71	179	137	102
2. North Arcot ..	295	267	562	210	176	386	173	169
3. South Arcot ..	159	157	316	163	141	304	146	113
4. Thanjavur ..	137	111	248	123	135	238	113	125
5. Tiruchirappalli ..	209	176	385	160	137	297	151	115
6. Madurai ..	250	213	463	193	204	397	148	120
7. Ramanathapuram ..	116	116	232	86	72	158	95	71
8. Tirunelveli ..	218	164	382	143	137	280	151	110
9. Salem ..	120	112	232	84	89	173	96	114
10. Dharmapuri ..	82	64	146	60	38	98	43	54
11. Coimbatore ..	132	116	248	117	108	223	91	90
12. The Nilgiris ..	..	9	9	13	7	20	12	11
13. Kanyakumari ..	110	89	199	73	87	160	89	88
Total ..	1,973	1,725	3,698	1,533	1,402	2,935	1,445	1,282
							1,112	2,359

Name of districts.	May.		June.		July.		August.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
1. Chingleput ..	76	83	159	133	138	118	126	101
2. North Arcot ..	191	165	356	244	190	187	199	159
3. South Arcot ..	107	112	219	115	109	124	115	85
4. Thanjavur ..	100	101	201	93	86	106	114	125
5. Tiruchirappalli ..	149	136	285	175	149	143	148	121
6. Madurai ..	194	177	371	133	143	168	123	128
7. Ramanathapuram ..	92	75	167	85	90	107	99	76
8. Tirunelveli ..	121	82	203	129	101	103	120	106
9. Salem ..	110	101	211	110	124	101	102	123
10. Dharmapuri ..	55	48	103	48	49	61	58	60
11. Coimbatore ..	116	123	239	97	89	111	137	95
12. The Nilgiris ..	21	14	35	9	12	13	12	11
13. Kanyakumari ..	75	69	144	69	78	80	92	73
Total ..	1,407	1,286	2,693	1,440	1,358	1,422	1,445	1,263
								2,708

STATEMENT XI (c)—cont.

Rural—Infant deaths, 1972—cont.

Name of Districts.	September			October			November			December			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1. Chingleput ..	101	81	182	100	80	180	127	93	220	122	100	222	1,382	1,130	2,512
2. North Arcot ..	186	139	325	177	149	326	232	218	450	247	206	453	2,505	2,166	4,671
3. South Arcot ..	124	96	220	127	107	234	140	122	262	139	123	262	1,358	1,358	2,716
4. Thanjavur ..	107	89	196	116	73	189	119	105	224	114	90	204	1,340	1,236	2,576
5. Tiruchirappalli ..	138	141	279	171	147	318	215	172	387	177	178	355	1,975	1,708	3,683
6. Madurai ..	119	112	231	162	159	321	231	181	412	207	209	416	2,084	1,900	3,984
7. Ramanathapuram ..	93	82	175	106	89	195	140	107	247	112	113	225	1,189	1,027	2,216
8. Tirunelveli ..	131	91	222	136	128	264	238	194	432	197	172	369	1,799	1,498	3,297
9. Salem ..	91	104	195	77	91	168	107	108	215	61	97	158	1,155	1,289	2,444
10. Channarayana ..	58	42	100	68	52	120	64	52	116	61	69	130	721	632	1,353
11. Coimbatore ..	91	76	167	106	92	198	102	104	206	90	83	173	1,298	1,173	2,471
12. The Nilgiris ..	12	16	28	17	7	24	22	10	32	9	5	14	151	120	271
13. Kanyakumari ..	77	68	145	90	66	156	88	77	165	104	92	196	1,018	924	1,942
Total ..	1,328	1,137	2,465	1,447	1,240	2,687	1,845	1,543	3,388	1,640	1,547	3,187	18,172	16,181	34,353

STATEMENT XI (d)

Infant Deaths by months (Urban), 1972

Name of Districts.	January			February			March			April		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1. Chingleput ..	47	33	80	39	36	75	35	28	63	19	26	45
2. North Arcot ..	88	68	156	78	61	139	83	66	149	71	59	130
3. South Arcot ..	26	27	53	33	36	69	23	17	40	27	34	61
4. Thanjavur ..	67	49	116	55	47	102	48	62	108	47	39	86
5. Tiruchirappalli ..	32	37	69	43	37	80	43	35	78	31	34	65
6. Madurai ..	161	128	289	143	107	250	94	36	197	113	95	208
7. Ramanathapuram ..	49	50	99	53	41	94	36	33	69	33	29	62
8. Tirunelveli ..	73	55	128	57	54	111	55	51	106	61	37	98
9. Salem ..	45	35	80	52	48	100	51	42	93	48	49	97
10. Dharmapuri ..	6	8	14	2	4	6	2	5	7	5	2	7
11. Coimbatore ..	91	89	180	94	95	189	89	80	169	81	65	146
12. The Nilgiris ..	26	11	37	13	8	21	13	13	26	17	16	33
13. Kanyakumari ..	11	19	30	18	9	27	14	13	27	20	15	35
Total ..	722	609	1,331	680	583	1,263	584	548	1,132	573	500	1,073
Madras ..	439	372	811	292	273	565	389	357	746	270	257	527
Total ..	1,161	981	2,142	972	856	1,828	973	905	1,878	1,843	757	1,600

STATEMENT XI (d)—cont.

Urban Infant Deaths—cont.

Name of Districts.	May			June			July			August		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1. Chingleput ..	14	15	29	17	18	35	20	21	41	23	24	47
2. North Arcot ..	27	31	58	87	58	145	43	33	76	45	31	76
3. South Arcot ..	75	76	151	87	79	166	92	63	155	87	71	158
4. Thanjavur ..	26	24	50	26	34	60	34	23	57	37	29	66
5. Tiruchirappalli ..	61	53	114	46	41	87	50	33	83	55	47	102
6. Madurai ..	44	46	90	62	42	104	51	31	82	44	37	81
7. Ramanathapuram ..	114	110	224	135	86	221	118	87	205	99	87	186
8. Tirunelveli ..	41	34	75	43	40	83	59	40	99	41	31	72
9. Salem ..	57	35	92	60	55	115	57	40	97	45	47	92
10. Dharmapuri ..	53	42	95	58	55	113	55	58	113	50	40	90
11. Coimbatore ..	6	5	11	10	7	17	2	5	7	5	10	15
12. The Nilgiris ..	114	96	210	76	77	153	96	77	173	119	114	233
13. Kanyakumari ..	16	11	27	14	16	30	17	8	25	15	12	27
Total ..	651	577	1,228	718	599	1,317	691	505	1,196	658	568	1,226
Madras ..	296	272	568	366	331	697	404	354	758	407	306	713
Total ..	947	849	1,796	1,084	930	2,014	1,095	859	1,954	1,065	874	1,939

STATEMENT XI (d)—cont.

Urban Infant Deaths—cont.

Name of Districts.	September			October			November			December		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1. Chingleput ..	45	36	81	36	23	59	45	42	87	57	61	118
2. North Arcot ..	73	51	124	43	47	90	70	67	137	94	76	170
3. South Arcot ..	28	22	50	23	23	46	21	22	43	39	44	83
4. Thanjavur ..	73	39	112	47	37	84	49	46	95	54	41	95
5. Tiruchirappalli ..	38	26	64	39	40	79	49	49	98	35	36	71
6. Madurai ..	73	68	141	102	66	168	96	110	206	132	127	259
7. Ramanathapuram ..	49	34	83	37	41	78	56	46	102	39	53	92
8. Tirunelveli ..	38	33	71	49	44	93	54	59	113	83	71	154
9. Salem ..	39	35	74	33	48	81	61	37	98	55	33	88
10. Dharmapuri ..	3	5	8	3	5	8	2	4	6	6	14	20
11. Coimbatore ..	107	83	190	95	70	165	90	80	170	115	94	209
12. The Nilgiris ..	19	18	37	21	14	35	13	21	34	9	14	23
13. Kanyakumari ..	28	16	44	17	10	27	10	17	27	15	10	25
Total ..	613	466	1,079	545	468	1,013	616	600	1,216	733	674	1,407
Madras ..	318	317	635	320	247	567	444	395	839	455	401	856
Total ..	931	783	1,714	865	715	1,580	1,060	995	2,055	1,188	1,075	2,263

STATEMENT XII.

Statement Showing The Primary Vaccination and Revaccination for the year 1972,

District.	Primary Vaccination.	Re-Vaccination.	Total.
Madras	75,925	2,95,870	3,71,795
Chingleput	1,05,223	1,40,214	2,45,437
North Arcot	1,33,766	3,40,883	4,74,649
South Arcot	1,24,728	4,22,416	5,47,144
Thanjavur	1,34,239	2,09,772	3,44,011
Tiruchirappalli	1,36,099	3,71,513	5,07,612
Madurai	1,39,646	3,69,451	5,09,097
Ramanathapuram	1,14,196	2,19,069	3,33,265
Tirunelveli	1,37,369	2,77,355	4,14,724
Salem	94,806	4,11,572	5,06,378
Dharmapuri	62,848	1,35,299	1,98,147
Coimbatore	1,56,148	3,28,597	4,84,745
The Nilgiris	20,230	61,055	81,285
Kanyakumari	48,560	1,80,253	2,28,813
Total	14,83,783	37,63,319	52,47,102

CONTENTS.

	Pages.
General.	70
Finance.	70
Prevention of Food Adulteration Act.	70
Nature of Adulteration.	70
Convictions and Sentences under the Prevention of Food.	73
Adulteration Act.	
Food Toxicology.	13
Analytical Advisory Services—	
(I) Hospital.	74
(II) Other Government Department.	74
(III) Private Institutions and Parties.	75
Drugs and Cosmetics Act.	75
Training.	76
Improvement—Schemes.	76

GOVERNMENT ANALYST LABORATORY.

Review of activities during 1972.

1. *General Staff.*—The sanctioned staff of this Laboratory consists of the Government Analyst, the Deputy Government Analyst, 13 Senior Analysts 13 Junior Analysts, one Technical Assistant, 5 Technicians Grade-I, 3 Technicians Grade-II, 9 Laboratory peons, and one menial. The Ministerial Staff consisted of one Superintendent, 3 Assistants, one Store-keeper, 4 Junior Assistants, 1 Steno-typist, 5 typists and one Record Clerk. Three posts of Junior Analyst were vacant from 23rd June 1971, 16th August 1972 and 21st August 1972 respectively. One post of Technical Assistant was vacant from 22nd December 1971. Two post of Technician Grade-I were vacant from 15th July 1972 and 10th September 1972.

Scientific Work.—As in the previous years, the work of the Government Analyst's Section comprised of the following:—

I. Analysis of foods, drugs and cosmetics under various penal statues and control orders.

II. Examination of foods involved in cases of food poisoning and of foods suspected to be contaminated with chemicals.

III. Analysis of diet articles from Hospitals, stock mixtures, drugs, etc., from Government Hospitals and Dispensaries and food samples from other institutions of the State as well as the Central Government and Private Parties.

IV. Advising the local bodies on the problems arising out of the enforcement of the Prevention of Food Adulteration Act and proposing appeals in food adulteration cases which have been acquitted in lower courts.

2. *Finance.*—The estimated expenditure for the year was Rs. 3,51,086.00 and the estimated revenue was Rs. 3,35,295.00.

3. *Prevention of Food Adulteration Act.*—Samples of food were received under the Prevention of Food Adulteration Act from 305 Local Bodies comprising of one Corporation, 89 Municipalities, 171 Town Panchayats, 10 Townships, 2 Cantonment Boards, 3 Panchayat Unions and 29 others as well as samples from Southern Railways. The Total number of samples received during the year was 19,189. The number of samples analysed during the year was 19,083. 26.2 per cent of the samples analysed were found to be adulterated or misbranded, etc. Details of the samples received and analysed during the year are given in Table-I.

TABLE—I.

Serial number and nature of samples.	Number of samples received.	Number of samples analysed.	Number found adulterated, misbranded etc.	Percentage.
(1)	(2)	(3)	(4)	(5)
1 Non-Alcoholic Beverages	258	257	168	65.5
2 Spices and Condiments	924	905	100	11.0
3 Sweetening Agents	212	201	17	8.4
4 Tea, Coffee etc.	1,394	1,343	142	10.6
5 Milk	8,612	8,652	3,775	43.6
6 Butter, Ghee, Ice Cream and other milk products.	325	300	94	31.3
7 Edible Vegetable oils and Fats ..	3,552	3,554	283	7.9
8 Fruit Products	6	8	1	12.5
9 Cereals and Cereal products ..	3,127	3,105	248	8.0
10 Miscellaneous Foods	779	758	168	22.2
	19,189	19,083	4,996	26.2

4. *Nature of Adulteration Milk.*—The adulteration of milk continued to be high since 43.6% of the total number of milk samples analysed was found to be adulterated.

Butter.—One hundred and two samples were analysed during the year out of which 27 were reported as adulterated seven samples were found to be admixed with Vanaspathi, eight samples were found to be deficient in milk fat content; one sample was reported for deficiency in milk fat content and admixture with vanaspathi; nine samples were found to be deficient in Reichert Value; two samples were reported for deficiency in milk fat content and in Reichert Value.

Ghee.—One hundred and forty-five samples were analysed during the year out of which 33 were reported as adulterated. Twenty-five samples were found to be admixed with vanaspathi, six were found to be deficient in Reichert Value, and two samples were found to contain Free Fatty Acids in excess of the permitted limit.

Oils—Gingelly oil.—One thousand six hundred and eighteen samples were analysed during the year out of which 182 samples were reported as adulterated, Hundred and eighteen samples were adulterated with groundnut oil, 21 samples with Niger seed oil and forty-three samples were found to have Free Fatty Acids in excess of the permitted limit.

Groundnut oil.—Six hundred and seventy eight samples were analysed during the year out of which 33 were found to be adulterated. Twenty four samples were found to contain Free Fatty Acids to excess of the permitted limit, 8 samples were admixed with Gingelly oil and one-sample with Coconut oil.

Coconut oil.—One thousand one hundred and forty four samples were analysed during the year out of which 31 were found to be adulterated. Twenty nine samples were admixed with groundnut oil and two samples with Gingelly oil.

Dhall.—One thousand five hundred and sixty nine samples of dhall were analysed during the year, out of which 158 samples were declared to be adulterated. Seventy-five samples were found to be coloured with metanil yellow, 74 samples admixed with kesari dhall and seven samples were infested with insects. Two samples of blackgram were faced with chalk.

Coffee.—Seven hundred and sixty eight samples were analysed during the year out of which 39 were declared to be adulterated. Thirty one samples were found to be admixed with chicory and eight samples with chicory and wild date seeds. The labels on thirteen samples of mixtures of coffee and chicory were declared to be defective as they did not conform to the labelling provisions of the Prevention of Food Adulteration Rules.

Tea.—Three hundred and seventy four samples were analysed during the year out of which 38 were found to be adulterated. Eleven samples were found to be coloured with coal tar dyes, four were admixed with blackgram husk six were admixed with coal tar dyes and black gram husk and 17 samples were declared to contain foreign organic matter not derived from Tea.

Flours.—Total number of samples received during the year was 978 out of which 53 were found to be adulterated. Three samples of arrowroot flour and one sample of wheat flour were found to consist entirely of Tapioca flour. Thirty two samples of Bengalgram and Smooth pea flours were found to contain varying amounts of Kesari dhall flour. Sixteen samples of Bengalgram flour were found to contain varying amounts of smooth pea flour. One sample of flour was coloured with metanil yellow.

Sugars and Artificial sweeteners.—During the year 139 samples of sugar and 75 samples of jaggery were examined. Fourteen samples of sugar were reported as adulterated as they were found to contain saccharin an artificial sweetener.

Honey.—Forty samples of honey were analysed out of which 2 were declared to be adulterated for deficiency in invert sugar content.

Non-alcoholic beverages.—Two hundred and forty seven samples were analysed during the year out of which 167 samples were declared to be adulterated as they contained saccharin in violation of the Prevention of Food Adulteration Rules or in excess of the permitted limit of 100 parts per million or for infringement of labelling provisions of the Prevention of Food Adulteration Act.

Ice-Fruit.—Twenty four samples were analysed out of which 15 contained non-permitted dye, 16 samples were found to contain saccharin in contravention of the Prevention of Food Adulteration Rules.

Biscuits.—Eighty four samples were analysed during the year out of which 20 samples of biscuits were found to contain the non-permitted coal tar dye, Rhodamine B.

Prepared Sweets and confectioneries.—Six hundred and twenty four samples were analysed out of which 143 samples were found to contain the non-permitted coal tar dyes, metanil yellow and Rhodamine B.

Pickles.—Nine samples were analysed out of which 7 were found to contain non-permitted coal tar dyes.

Food Colours.—Six samples were analysed and all of them were found to contain metanil yellow, a harmful coal tar dye.

5. Convictions and sentences under the Prevention of Food Adulteration Act.—Three thousand and fourteen cases have ended in conviction during the year 1972. Sentences of imprisonment for varying terms (i.e. from “till rising of the court” to one year R.I. were imposed in 52 cases. In most of these cases both fine and imprisonment were imposed. A fine of Rs. 1,000 with R.I. for 6 months were imposed in 9 cases. The total fines levied during the year was Rs. 4,85,988.00.

6. Food Toxicology.—

Twenty-six samples consisting of C.S.M. Food and salad oil and Bulgar wheat supplied by CARE organisation were analysed. Three samples of C.S.M. powder were declared to be unfit for human consumption. Six food stuffs were analysed for suspected food poisoning. One of them a rice sample was found to be contaminated with rancid oil.

Two food samples suspected to have caused food poisoning received from Primary Health Centre, Thookanaickenpalayam, were found on analysis to be free from chemical contaminants.

Four food samples suspected to have caused food poisoning received from Chinnalapatti Town Panchayat were found on analysis to be free from chemical contaminants.

One sample of milk received from the Commissioner, Sankarankoil was found on analysis to be contaminated with organo phosphorous compounds.

One sample of C.S.M. powder received from Primary Health Centre, Mudur, Arkonam was found to be heavily infested with insects.

One C.S.M. powder received from the Municipal Health Officer, Rajapalayam was found to be caked up and heavily infested with insects.

Two Butter oil samples received from the Madhavaram Dairy Department were found to be satisfactory.

Two samples of paddy and rice received from Madurai Corporation on examination were found to be free from chemical contaminants.

Seven samples (C.S.M. powder 3 numbers salad oil 2 numbers and Bulgar wheat 2 numbers) were received from the Municipal Higher Elementary School, Arkonam. All the 3 C.S.M. powders were found to be heavily infested with insects. The Bulgar wheat samples on examination were found to be fungus ridden and heavily infested with insects. The salad oil samples were found to be highly rancid. Two food samples (prepared rice and sambar) suspected to have caused food poisoning were received from Sholinghur. On analysis they were found to be free from chemical poisoning. One sample of C.S.M. powder received from primary Health Centre Naducauveri was found to be heavily infested with insects and was found to be unfit for human consumption.

The sample of C.S.M. powder received from ‘CARE’ Tamil Nadu, was found on analysis to be satisfactory. Two samples of Soya fortified Bulgar wheat received from ‘CARE’ were found on analysis to be satisfactory.

One sample of soya bean salad oil received from Health Inspector, Velliyur Panchayat and two samples of soya bean salad oil received from ‘CARE’ Tamil Nadu, was found on analysis to be satisfactory and fit for human consumption.

One sample of butter oil received from Tamil Nadu Dairy Corporation was analysed and reported upon. One sample of ghee substitute received from the Port Health Officer, Madras was found to be hydrogenated fat and fit for human consumption.

Eight Food samples received from Sri Rama Cafe, Kancheepuram which were suspected to have been contaminated with chemical poisons on analysis were found to be free from chemical poisons. Six samples of food (wheat soy blend 2 samples, paṇḍooṇ purē ḍḍures ḷ ḷḷo pēḷes uēḍ ḅḷos ḷḍures ḷ—ḷḷḷḷḷ ḷḷḷḷḷ ḷḷḷḷḷ ḷḷḷḷḷ ḷḷḷḷḷ uppuma 1 sample) received from District Health Officer, Tirunelveli were tested for suspected contaminated of chemical poisons. On analysis they were found to be free from chemical poisons.

On a reference from the Inspector of Factories about the occupational hazard in cashew Industries, this Department examined samples of fried whole nuts, oil collected during controlled frying of the cashew nuts for the incriminating principle, that is said to cause lesions on the human skin during handling by workers. The incriminating principle was found to be Anacardic Acid which is a phenolic acid similar to salicylic acid but with a large aliphatic chain in the second free ortho position to COOH group going by the name Orpentadecadienyl salicylic acid. Being a highly corrosive principle its nature as an oily viscous liquid at ordinary temperature entails easy absorption through the skin causing in the process irritative folliculites. Constant contact with this principle causing irreversible lesions through irritation increases its hazard to one of possible carcinogenicity. All the four samples gave positive reactions for Anacardic Acid. Two samples of Bulgar wheat received from CARE Tamil Nadu were condemned as unfit for human consumption as they were found to be heavily infested with insects. Two more samples of Bulgar wheat received from the same source was found on analysis to be satisfactory.

Three samples of milk received from the District Health Officer, Tirunelveli were tested for suspected contamination with organo phosphorous compounds. On analysis they were found to be free from Organo Phosphorous compounds.

A sample of wheat grain was received from Railway Police, Katpadi to find out whether it was free from acetone.

7. *Analytical Advisory service*—(1) *Hospital*.—Nine thousand four hundred and ninty diet articles consisting of milk, bread, edible oils, biscuits, coffee, brown sugar, dhall, etc., were received for analysis. Seven thousand and twenty-six samples were analysed out of which 767 were found either to be adulterated or not conforming to the standards laid down in the Tender Schedules.

Four Lactometers were received from Government Hospital, Tenkasi and 3 of them were found to be unfit for use and one was received broken.

II. Other Government Departments:—

Serial number and name of Institution.	Number of samples analysed.	Result.
(1)	(2)	(3)
1 Superintendent, ESI Hospital, Madras-23.	120 samples of food articles.	11 samples were reported to be either adulterated or not satisfactory.
2 Superintendent, ESI Hospital, Coimbatore.	37 samples consisting of different food articles	Four samples were reported to be either adulterated or not satisfactory.
3 Superintendent, ESI Hospital, Madurai ..	56 samples consisting of different food articles.	Six samples were reported to be either adulterated or not satisfactory.
4 Municipal Health Officer, Salem	One sample of dhall.	Adulterated as it contained 100 per cent of Kesari dal.
5 Health Inspector, P. H. C., Melsithanur, S. A. District.	One sample of skimmed milk powder.	Unfit for human consumption.
6 Regional Storage Officer (T) E.T. Mills compound, Vepery, Madras-7.	148 samples consisting of Maida suji atta, wheat wheat products	Analysed and reported upon regarding their fitness for human consumption.
7 Assistant Marketing Officer (C. S.), Thanjavur.	One sample each of Maida sooji and Atta.	Analysed and reported upon.

II. Other Government Departments:—

Name of Institution.	Number of samples analysed.	Result.
8 Commissioner, Pudukkottai Municipality, Pattukottai.	One sample of Aromex oil.	Standard quality.
9 Cuddalore	Five samples of Aromex oil.	Declared to be sub-standard. (2 samples).
10 Director of School Education, Madras ..	Three samples of C.S.R. Powder.	Unfit for human consumption.
11 Forest Range Officer, Satyamangalam ..	Two samples of Honey.	Genuine.
12 Forest Range Officer, Mudumalai	One sample of Honey.	Genuine.
13 'CARE' Tamil Nadu, Madras-6	Four samples of Bulgar wheat.	Unfit for human consumption.

III. *Private Institution and Parties*.—The following food samples were received from Private Institutions and Parties and the results of analysis of the samples are also shown below:—

II *Other Government Departments* :—The following food samples were received from Private Institutions and Parties and the results of analysis of the samples are also shown below :—

Name of Institution.	Number of samples analysed.	Result.
1 Messrs Seth J.N. Bansilal Thilwar Chowk, Saidan, Ludhiana-1.	Forty-three samples of Lakshmi compounded Asafoetida.	Conform to the Standards laid down under the P.F.A. Rules 1955.
2 Messrs Prabat and Company, Madras-9 ..	One sample of compounded Asafoetida.	Do.
3 Sri P.C. Bhansali, Coonoor-1	One sample of Tea ..	Satisfactory.
4 Thiru Nali Dharma Rao Palakol (A.P.) ..	One sample of Joera ..	Standard quality.
5 Messrs Hotel Shyam Prasad, Madras-2 ..	One sample of Ghee ..	Adulterated with 77 per cent of Vanaspati.
6 Managing Director, Bently's Produce Company, Limited, Coonoor-11	One sample of Tea ..	Genuine
7 Messrs Nutrine Confectionery Private Limited, Madras.	Two samples of sweets.	Containing only permitted coal tar colours.
8 Messrs Dunlop India Limited, Madras-53 ..	One sample of milk ..	Adulterated with water.
9 Messrs Egberts India (Private) Limited, Madras	Three samples of Chicory	Analysed and reported upon.
10 Sri Mappillai Vinayagar Soda Factory, Madurai.	One sample of Orange colour.	Does not conform to rules in respect of saccharin.
11 Do.	Three samples of Aerated Waters.	Analysed and reported accordingly.
12 The Linger Soda Company, Sivakasi ..	Two samples of Syrup products.	Samples does not conform to Rule 55 of the P.F.A. Rules 1955 in respect of the content of Class II Preservative.
13 Thiru C.P. Rathinavelu, Sripathy Bhavan, Collector's Office Canteen, Kancheepuram.	One sample of milk ..	Genuine.
14 Messrs. Golden Star Aerated Water Factory, Washermanpet, Madras-21.	Two samples of Orange colour Vito Cola.	Analysed and reported accordingly.
15 Thiru V. Srikanthan, 46A, Chamiers Road, Madras-18.	One sample of skim milk.	Reported in respect of its fat content.
16 Messrs Hopes Dairy Farm, T. Nagar, Madras-17.	One sample of Ghee ..	Reported in respect of its Reichert Melu.

8. Drugs and Cosmetics Act.—

	Number of samples received.	Number of samples reported.	Number of samples non-standard.
	(1)	(2)	(3)
Drugs and Cosmetic Act,	950	442	84
Hospitals	62	47	29
E.S.I. Hospital	22	17	1
Other Government Institutions;	32	23	5
Private;	6	6	1

A sample of Prednisolone was reported as not of standard quality since the label declaration stated it contained 5.0 g. per tablet whereas it contained only 2.5 mg. of the drug per tablet. A sample of Mepacrin was reported as sub standard since it was contaminated with fungal growth. A sample of greenish powder claimed as a cure for diabetes did not reveal the presence of Tolbutamide or Chlorpropamids. Three samples of Paracetamol Tablets B.P. one sample of Sulphadiazine tablets I.P. 2 samples of Diethyl Carbamazine Citrate Tablets I.P.; 2 samples of Prednisolone Tablets I.P. and 3 samples of Isoniazid Tablets I.P. were found to be spurious on analysis and the drug-content of these samples was nil. Two samples of Vitamin B Tablets I.P. were found to be deficient in Vitamin B to the extent of 90 per cent. Two samples of Chlorpromazine Hydrochloride were found to be deficient in the drug content to the extent of 80 per cent.

One sample of Woodward's Celebrated Gripe Water was found to be spurious since it did not contain Soda bicarb and alcohol. Three samples of Lysol I.P. were found on analysis not to conform to I.P. specifications.

Three samples of Phenyl did not comply with the label claim in respect of Rideal Walker Co-efficient.

Pipmol, Pipmol C. Febridin, Calniazid, Calniazid Forte and Caryol were the drugs in which diethylene glycol was found to have been used in the place of Propylene glycol in the base of the samples. A sample of Benedict's solution was found to be of no use in the detection of sugar in urine since it did not possess any reducing action. A sample of A.P.C. Tablet did not contain any Caffline or Phenacetin. Two samples of Turpentine Liniments were found to be deficient by about 35 per cent in the content of volatile oil and camphor.

Six samples of Phenyle were found to have low Rideal Walker co-efficient and hence reported as not of standard quality.

Four samples of Sulphadimidine tablets were found to contain no sulphadimidine at all.

Two samples of Prednisolone tablets did not contain any prednisolone. A sample of Triple Sulpha Suspension was found to be deficient in total sulphonamides content.

Two samples of Ferrous Sulphate Tablets (sugar coated) did not conform to Disintegration test and hence reported as not of standard quality. A sample of Paraffin Liquid C.P. did not conform to I.P. standards for readily carbonisable substances. A sample of Propylene glycol was found to contain 37.5 per cent of Diethylene glycol.

9. *Training.*—A programme of Training of Food Inspectors in Food sampling has been drawn up and submitted to Government for approval.

10. *Improvement Schemes.*—Government have sanctioned two district Laboratories for Food Analysis one at Madurai and the other at Tanjavur.

K. BALASUBRAMANIAM,
Government Analyst.

Office of the Government Analyst,
King Institute, Guindy, Madras-32,
28th June 1973.

ANNUAL REPORT FOR THE DEPARTMENT OF WATER AND SEWAGE EXAMINATION, KING INSTITUTE, GUINDY, MADRAS-32 FOR THE YEAR 1972.

INTRODUCTION

BY

THIRU A. S. HARIHARAN, M.Sc.

I am thankful for the opportunity to give this introduction for the Annual Administrative and Scientific Report of the Department of Water and Sewage Examination for the year 1972, the last year of my 28 years of service in the Department. I was privileged to serve the last seven years as the Chief Water Analyst of this laboratories division. I was also privileged to handle a number of problems in water, waste water and air quality and pollution control which called for work in the laboratory, in the field and pilot and large scale plant trials.

Some of the notable studies carried out by the department with which I was actively associated are:

1. Break-point chlorination, chloramination, cupric-chloramination and nitrate treatment of the raw water derived from Red Hills Lake—source of water supply to Madras City to control the production of hydrogen sulphide in the slow sand filters.
2. The use of percolating filter and its physico-chemical and biological role in water treatment especially as related to water laden with high organic matter content.
3. Coagulants and coagulant aids in water treatment.
4. Fluorine and removal of fluorine from water in a scheme sponsored by the Government in the Indian Institute of Science, Bangalore.
5. A study of the fluorine content of food materials—salt, turmeric, cereals, pulses, fruits, vegetables, oil, butter, ghee, coffee, tea, etc., on a scheme sponsored by the Indian Council of Medical Research and Government of Tamil Nadu.
6. A survey of the mineral waters in the composite state of Madras including a spectrographic study of the trace element.
7. Corrosion and water quality especially in hydro-electric projects.
8. Rheological survey and limnological studies of some of the storage reservoirs.
9. Extensive laboratory and pilot plant studies of the quality and treatment of tanning industry wastes (East Indian tanning) on a research scheme sponsored by the Government of India and Government of Tamil Nadu. Based on the studies a type design for the waste treatment has been evolved and copies printed.
10. Treatment of cane sugar molasses distillery wastes by two stage anaerobic lagooning followed by aerobic biological treatment. Based on a large scale trial one distillery has now formed the lagoons for the treatment of 2 lakh gallons of waste discharge from their plant.
11. Treatment and disposal of waste from glue, gelatine, pulp and paper, viscose rayon, cotton textile bleaching and dyeing, metal processing and finishing, insecticide manufacture (HHC), polyvinyl chloride, inorganic chemicals industries, etc.
12. Oil pollution to the bathing beach (sea) at Mahabalipuram.
13. Oxidation ponds in sewage treatment.
14. Air pollution caused by superphosphate and sulphuric acid industries and its control measures.
15. Air quality surveys in and around Madras and air pollution from some of the major industries in the State.

Thanks for the opportunities given for participating as Guest Lecturer for the M.Sc., and Short-term courses in Public Health Engineering in the Engineering College, Guindy the training course for water and waste water analysis at the Central Public Health Engineering Research Institute, Nagpur, Industrial Management in safety and industrial hygiene course in the Regional Labour Institute, Adayar, Training of sanitarians in the Rural Institute at Gandhigram and Pronarunallu Church Workers of South India and Refresher course in water plant design at the Engineering College, Guindy. The writer values greatly his association with the Environmental Sanitation and Health Education Committee and the Water and Sewage Purification Committee, constituted by the Government as the Secretary and the Air Pollution Committee, the Plantation Water Supply Committee, and the Task Group on Industrial wastes and Water Pollution Control. As a member of the Indian Standards Institution Water Sectional Committee and their panel the writer had the privilege of preparing a number of draft notes especially on methods of examination of industrial wastes, and sewage effluents, tolerance limits for sewage and industrial effluents for discharging into water courses, river water quality, etc.

The Department which started functioning in the year 1903 carrying out the sanitary analysis of water samples from the Municipal Piped Water Supplies in the composite state of Madras has rightly expanded its role and functions to meet the growing needs of environmental sanitation especially those relating to protected water supplies, both urban and rural, water supply investigations, fluorosis, removal of fluorides from water, control of algal growths, taste and odour, industrial water quality and treatment, corrosion and scale formation, waste water treatment and disposal, air quality and pollution control, milk bacteriology, testing of disinfectants and sanitary microbiology. The field investigations and researches including pilot plant studies on water and waste water quality and treatment and air quality and pollution control have also become the normal functions of the department. Water and air pollution and need to control these have roused the public considerably. There has been a phenomenal rise on the demand for the laboratory and field investigation services on pollution problems.

The department is also a teaching, training and post-graduate research organisation. The University of Madras have afforded recognition to the department for Post-graduate research leading to doctorate degree. The writer has been the first to avail this opportunity followed by another colleague of his. The department is also recognised by the Association of the Institution of Chemists for training Scientists for the Associateship Examinations of the Institution of Chemists, India.

The department has carried out considerable researches and field investigational studies and collected very important data. Because of the heavy routine work, many of the valuable scientific work carried out remain unpublished. The writer, has, made a beginning to make the annual report as an 'Annual Administration and Technical Report' presenting the investigational data.

The lack of accommodation which has been a major has to some extent been released by the sanction and construction of an extension building to the existing laboratory building. However, full utilisation of the building could not be done for want of provision of the necessary facilities like work benches, water supply, gas supply, etc. In the field of water pollution control to achieve the desired objective, there should be a periodical check of the waste water being discharged from the industries before and after treatment and also from bodies of water when the discharge is into them to ensure the adherence to requirements. Proposals for giving effect to this have been submitted and it is hoped that necessary sanction will be accorded to implement this. In the field of air pollution, too, there is a need to constitute a special division. The present division deals with both industrial waste and air pollution. The volume of work on water pollution control has increased enormously with the result the staff are unable to devote sufficient time for monitoring air quality, etc. The post of the Chief Water Analyst is a technical and scientific and the demands of the post are considerable. In order to enable him to discharge his functions satisfactorily, some relief should be provided to him in the routine work and also in the office so that he could devote his time for the scientific duties of advanced nature. Necessary proposals have been submitted for these also and it is hoped that necessary sanction will be accorded for these at an early date.

A number of protected water supplies - 60 - have been executed and are now in commission. It has not been possible to bring these under periodical collection and examination for want of necessary staff. Further the Regional Laboratory at Coimbatore which has been started recently has also not been able to shoulder the work related to the five districts. Necessary proposals for these have been submitted.

The department is now designated as "Department of Water and Sewage Examination" and the Chief of the Division as Chief Water Analyst. In view of the activities and nature of the work now being dealt with by the department, it may be appropriate to designate the department suitably to denote the functions at large being dealt with.

The writer had a very interesting and exciting service in the department. If the writer has been able to make any contributions to the organisation and the scientific field of the activities, it has been due to the unstinted co-operation of his dear colleagues who have whole heartedly given themselves up to the needs and also the encouragement received from the Additional Director of Health Services, Director of Health Services and Family Planning and the Government. Mention should also be made of the co-operation received from the sister departments like TWAD Board, Central Public Health Engineering Research Institute and also the facilities provided by the Director, King Institute, Guindy. The writer wishes the department and the staff a glorious future and public quality air and water.

STAFF.

CHIEF WATER ANALYST.

THIRU A. S. HARIHARAN, M.SC.

ASSISTANT WATER ANALYSTS.

Selvi S. Chellam, M.A.

Thiru G. Swaminathan, M.A., M.SC.

Thiru K. Venkatakrishnan, B.SC.

Thiru R. M. Veerappan, B.SC.

Thiru K. Sankaran, B.SC.

Thiru R. Srinivasan, M.SC.

MEDICAL BIOLOGIST.

Dr. K. M. Veerannan, M.A., M.SC., PH.D.

JUNIOR WATER ANALYSTS.

Thiru V. Sathyamurthy, B.SC. (from 28-11-1972).

Thiru B. Kamalakkannan, B.SC.

Thiru C. Bhasker, B.SC.

Thiru T. S. Venkataraman, B.SC.

Thiru T. G. Kuppuswamy, B.SC.

Thirumathi C. Parvathy, B.SC.

Thirumathi S. Meenakshisundaram, B.SC.

Thiru V. Santhanam, B.SC. (Up to 30-1-1972).

Thiru G. Balasubramaniam, B.SC.

Thirumathi A. Indirañi, B.SC.

Thiru Jacob M. Arulappan, M.SC.

Thiru T. G. Suryanarayanan, M.SC. (Up to 30-10-1972).

Thiru S. S. Pandiperumal, B.SC. (From 12-7-1972 relieved on 15-12-1972).

OTHER LABORATORY STAFF.

Technical Assistant	...	...	...	...	...	...	1
Sample Takers	...	...	...	...	...	...	7
Algae Collector	...	...	...	...	...	...	1
Technician, Grade I	...	...	...	...	...	...	1
Technician, Grade II	...	...	...	...	...	...	7
Laboratory Peons	...	...	...	...	...	...	7
Gardener	...	...	...	...	...	...	1
Last Grade Servants	...	...	...	...	...	...	4
Driver	...	...	...	...	...	...	1
Cleaner	...	...	...	...	...	...	1

OFFICE STAFF.

Thiru K. Radhakrishnan	...	...	...	...	...	Accountant
Store-clerk (in the grade of Assistant)	...	...	...	...	...	1
Junior Assistants	...	...	...	...	...	2
Junior Assistant-typist	...	...	...	...	...	1
Typists	...	...	...	...	...	3
Steno-typist	...	...	...	...	...	1
Record Clerk	...	...	...	...	...	1

FINANCE.

Receipts.—Income derived by cash, cheques and adjustment bills towards the analytical fees and other services rendered to private bodies, local bodies and others amounted to Rs. 41,329.85. The value of free services rendered in the collection, field and laboratory tests on samples taken from the protected water supplies and other water-supply schemes worked out to Rs. 1,16,417.00. The total income for the year would amount to Rs. 1,57,746.85.

Expenditure.—The department incurred an expenditure of Rs. 3,91,927.79 towards pay and allowances of laboratory and office staff, Travelling allowance, contingent, cost of instruments and chemicals and sundries.

GENERAL.

During the year, the office and few laboratory sections were moved to the new extension building managing with the minimum facilities available. The pressure on the laboratories due to increased volume of work in connection with water-supply investigations, water and air pollution control and industrial waste treatment continued during this year also. It has not been possible to bring under periodical analytical examination more than 40 major water supplies. Separate proposals have been sent for increase in staff and provisional of additional finance for taking up the work. It has been even suggested that the T.W.A.D. Board which is implementing many urban and rural water supplies may be requested to bear the additional cost involved in undertaking examination of the new water supplies. The expenditure on account of this in strengthening the laboratory services by the Chief Water Analyst would only be a negligible (decimal) fraction of crores of rupees of outlay on such schemes by T.W.A.D. Board.

ACTIVITIES OF THE DEPARTMENT.

Routine collection and examination of samples of water from the protected water supplies to urban areas and institutions were continued. The particulars of the sources of these water supplies treatment, etc., are furnished in Table I.

Samples were received in large numbers from various rural water-supply schemes to assess their portability and issue of certificates of portability. Samples were received from many individuals and firms for mineral examination to assess their suitability for non-domestic uses and advise on the treatment of water.

The monthly collection and examination of samples of milk, etc., from the Central Dairy at Madhavaram and samples of water from two city swimming pools were continued.

The tempo of activity of this department in the field of air and water pollution control was kept up.

TRAINING AND VISITORS.

Doctors undergoing the B.S.Sc., course of Madras Medical College were allotted to this department for a fortnight in connection with their syllabus on water and sewage examination.

Thiru Ram Mohan Rao, Senior Water Analyst, Institute of Preventive Medicine, Hyderabad, Andhra Pradesh spent about a fortnight in the laboratories to acquaint himself with the laboratory set up, procedures and administration in order to gain experience in organising similar laboratory services in the State of Andhra Pradesh. He was permitted in G.O. R. No. 1478, Health, dated 25th August 1971, Health and Family Planning Department, to make this study visit.

Among the visitors to the department were two foreign scientists:

- (1) Uganda State Government Chemist.
- (2) Herbert Allen, Head of Water Research Division, University of Michigan (WHO Expert).

Students and trainees from the following institutions were explained the activities of the department:—

- (1) Short term course students of College of Engineering, Engineering College, Guindy, Madras-25.
- (2) Final M.B.B.S. Students of Chingleput Medical College, Chingleput.
- (3) Final M.B.B.S. Students of Stanley Medical College, Madras.
- (4) Senior Medical Students of Medical College, Calicut.
- (5) Health Education Teachers, Health Education Bureau, Director of Health Services and Family Planning office, Madras.
- (6) Five Civil Engineering Trainees of Technical Teachers' Training Institute, Adyar, Madras.
- (7) Final M.B.B.S. Students of Madurai Medical College, Madurai.
- (8) Staff members of Government Polytechnic, Tiruchirappalli-15.
- (9) Final M.B.B.S. Students of Tirunelveli Medical College, Tirunelveli.

DIVISION OF BACTERIOLOGY

The division carried out bacteriological examination of samples of water received as a routine and under various schemes and private firms and individuals samples of milk, milk powder and utensil washings taken from the Central Dairy at Madhavaram and sewage. Particulars of the number of samples tested under each category are recorded in Table II. The routine bacteriological examination of water comprises of two tests for M.P.N. of coli-aerogenes bacteria and their nature 2 plate count. In addition in 18 samples test for pathogens S.S. group and vibrios were carried out.

On one sample referred by the Indian Standards Institution, proteolytic and lipolytic count were done. Sulphate reducing organisms were tested in two samples in connection with corrosion problems.

The division continued to maintain supply stock cultures of staph. aureus N.C.T.C. 3750 and Salm. typhi 786. Eighty-three (83) salm. typhi and 25 staph. aureus cultures were supplied.

Samples of phenyle disinfectant mostly referred by the Indian Standards Institution in connection with their certification scheme were tested for Rideal Walker and Staphylococcus aureus coefficients and for stability. Particulars of the tests are contained in the Table VI.

Two samples of phenyle were received from Haffkine Institute, Bombay for comparison of the results obtained in the two laboratories. The findings of the Haffkine Institute were corroborated by the results obtained in this laboratory.

SANITARY QUALITY OF THE PROTECTED WATER SUPPLIES.

In the following table the percentage of hygienically satisfactory samples of water taken from the different water supplies under periodical analytical section are summarised.

Percentage of Satisfactory Samples:

	Headworks		Distribution	
	1972.	1971.	1972.	1971.
1. Municipalities	85	86	74	76
2. Panchayats	90	—	75	65
3. Railway Stations	—	—	89	91
4. Madras City Hospital	—	—	78	73
5. Other hospitals	—	—	61	69
6. Jails	—	—	65	—
7. Other Institutions	—	—	68	65

As compared to last year (1971), only the Panchayat water supplies have shown appreciable improvement in the number of samples found satisfactory.

CHLORINATION OF WATER SUPPLIES.—

Gaseous chlorination plans are provided in 41 municipalities, 15 Panchayats and Railway Station Water Supplies. Under examination of these, at 32 places the gaseous chlorinators were not operated during varying periods due to disrepair of the plants (24 plants) and want of gas refill (8 places).

For five municipal water supplies (Arcot, Ranipet, Gudiyatham, Manapparai and Walajapad) and in one Panchayat Rajakkamangalam, no chlorination was done during certain periods.

At the city hospitals the practice of manual chlorination of the supplies by the addition of bleaching powder in the pumps was continued.

MADRAS DAIRY AND MILK PROJECT, MADHAVARAM.

The periodical monthly collection and bacteriological examination of milk and water samples was being continued.

The Dairy receives its milk supply from Madurai, Erode, Panchetti and other places and from its own colony.

The plate count of raw milk samples ranged from 60×10^4 to 20×10^{11} per ml. and the coliform density (MPN) ranged from 70×10^4 to 918×10^{11} per 100 ml. The Methylene blue reduction time on the raw milk sample ranged from 10mts. to 4 hours.

The plate count of the samples of pasteurised milk taken from the dairy ranged from 50×10^4 to 25×10^4 per ml. Therefore none of the samples satisfied Indian Standards Institution requirements in this respect. The coliform density (MPN) of the pasteurised milk sample ranged from 490 to 348×10^4 per 100 ml. and the M.B.R. time was always 4 hours.

DIVISION OF CHEMISTRY.

Five thousand and ninety-two samples of water were tested during the year for physical, chemical and mineral characteristics.

Three hundred and thirty-two samples of bleaching powder and three samples of alum collected from the water treatment plants in the state were analysed for their suitability in water treatment.

Five samples of urine and one specimen of bone collected from the patients of Government Hospital suspected of fluorosis were received for the estimation of fluorine content. The fluorine content of the urine samples ranged from 1.8 mg/l to 2.2 mg/l. However the bone specimen contained very high amount of fluorine 5022 mg/l 0.502%.

Six samples of water suspected to contain poisonous substances like Follidol were received for analysis from Rural Health, Medical and administrative authorities. Three of samples contained 0.12 mg/l to 0.50 mg/l of follidol. Suitable measures to detoxicate the water were given to the authorities concerned.

The division continued to render useful service to variety of industries in carrying out detailed mineral analysis of the samples of water to assess their suitability for specific industrial needs.

DIVISION OF RURAL WATER-SUPPLY.

During the year under report one thousand and six hundred and forty samples were tested under the various Rural Water-supply schemes, viz., Village Works Programme, Village Works Grant Scheme, Drought Relief Scheme, Velli Seerur Vizha Scheme, etc.

One hundred and two samples were declared as unfit for drinking and domestic purposes because they were highly mineralised, very hard and brackish or contained high amounts of fluorine.

District-wise data of the number of samples tested, number declared unfit, etc., are furnished in Table V below:

TABLE V.

Showing the sources tested and number of samples declared unfit due to fluorine content, etc.

Number and name of the district.	Number of sources tested.	Total number of samples found unfit.	Number of sources declared as unfit due to high fluorine content in water.
(1)	(2)	(3)	(4)
1. North Arcot	89	6	1
2. South Arcot	101	5	..
3. Chingleput	40	4	..
4. Coimbatore	59	10	3
5. Dharmapuri	38	5	4
6. Kanyakumari	4	..	..
7. Madurai	97	14	6
8. Nilgiris	1	..	..
9. Ramanathapuram	48	4	2
10. Salem	134	38	16
11. Thanjavur	85	8	4
12. Tiruchirappalli	74	4	..
13. Tirunelveli	49	3	2
14. Madras	1	1	..
Total	820	102	38

Some Interesting Features:

1. Samples of water taken from (a) old well in S. No. 62/6 at Kuliarsanthai, Ramanathapuram district, (b) old well at Mathampatty, Salem district were found to contain fluorine as high as 3.6 mg/l and 4.8 mg/l. Both the samples were declared as unfit for drinking and domestic purposes.

2. A sample of water tested from a new bore well in Mathiralandi Harijan Colony (Puliyar) in Madras district was very hard and brackish and electric conductivity (Reiprocal megohms per cm² at 20°C) was 10,400—almost like sea water.
Samples showing identical results:

Fourteen samples taken from different sources in the various districts were found to show similar results either because of faulty sampling or paudent substitution of samples for getting a favourable potability certificate. The data for this is given in Table VI below:

TABLE VI.
NUMBER OF SAMPLES SHOWING IDENTICAL RESULTS
DISTRICTWISE.

Serial number and name of the district.							Number of samples received and tested.
(1)							(2)
1.	North Arcot	..	..	..	..	..	2
2.	South Arcot	..	..	..	..	..	4
3.	Coimbatore	..	..	..	..	..	2
4.	Salem	..	..	..	..	..	4
5.	Tiruchirappalli	..	..	..	..	..	2
							14

A sample taker of this department was deputed to collect special samples from some bore wells at Panruti as the first set of samples showed similar results which was a peculiar feature. The special samples were collected on 21st May 1973 and 4th July 1972 from the following places:—

1. New bore well in R.S. No. 32 at Kokkupalayam.
2. New bore well in R.S. No. 339 at Badrakottai.
3. New bore well in R.S. No. 398 at Silambinathanpatti.

The special water samples collected from the first bore well above was reported as usable for drinking and domestic purposes. The special samples collected from the second and third bore wells contained a high amount of iron and so treatment for iron removal was suggested.

DIVISION OF WATER BIOLOGY.

This division carries out the microscopical examination of water samples that are urbid to determine the nature of the suspended matter. These samples are received from the protected water-supplies, water-supply investigational sources and other industrial units. Samples from industrial effluents, oxidation ponds and distillery units were also examined. The need for systematic algal control measures, advice and assistance on this matter was rendered.

During this year, one thousand seven hundred and twenty-five samples were examined (Table VII). Exclusive algal growths were encountered in the raw water impounded storage tanks of some of the municipalities of which Chidambaram Municipality, Annamalai University, Dindigul Municipality and Mannargudi Municipality are adopting regular algacidal treatment. The common algicide used is copper sulphate followed by bleaching powder to oxidise the organic matter and prevention of after growths.

During the month of December 1973, a complaint was received about the presence of "Horse hair whi worms" in the Mettur Township Water-Supply. The presence of this worm, 17 cms. in length is a rare phenomenon. Remedial measures to eradicate such worms were suggested and no recurrence was reported.

During the months of November–December Metacien Chemicals (Private) Limited, Madras sent samples of raw water and treated water (with various algicides) for algal count, sulphate reducing bacteria and presence of iron bacteria. The findings were furnished as a guidance to the factory.

DIVISION OF MEDICAL BIOLOGY.

Intestinal Parasitic Survey among the in-patients in T. B. Sanatorium Hospital, Tambaram. During the year 1972 two hundred and eighty-six faeces samples were collected from the in-patients in the T. B. Sanatorium, Tambaram to estimate the overall incidence of intestinal parasitic infection among the T.B. Patient.

The results of the microscopic examination of the faeces samples are presented in Table VIII, it is found that nearly 82 per cent of the total patients were positive for one or more species of intestinal parasites. The data were further processed to estimate the single and multiple infestation rates. 38.7 per cent of the total patients are harbouring single parasite, 26.8 per cent, double parasite and 12.2 per cent, triple. 2.1 per cent are harbouring different combinations of four parasites and only one sample consists of five parasites.

Table VIII shows percentage infestation of the different intestinal parasitic Protozoans and Helminths. *Giardia lamblia* is present in 5.9 per cent of total samples. *Entamoeba coli* is present in 17.2 per cent and *Entamoeba histolytica* in 43.2 per cent. The other parasitic Protozoans such as *Endolimaxnana*, *Chilomastix mensnili* and *Trichomonas hominis* are not significant since they comprise very small number.

The highest incidence of 46 per cent is recorded in case of *Ascaris lumbricoides* and infestation rate of Hook worm is 8.7 per cent. Other helminths such as *Trichuris trichioccephalus*, *Enterobius vermicularis*, and *Hymenolepis nana* are also recorded in some samples. In 5.8 per cent of the total samples presence of large number of pus-cells and macrophages was observed in the exudate which is the characteristic feature of bacillary dysentery.

During the same period 28 faeces samples were received from private parties also and examined for intestinal parasites. Five samples were positive for *Entamoeba coli*, 11 samples for *Entamoeba histolytica* and 8 samples for *Ascaris lumbricoides*. Nine samples were free from any parasitic organisms.

DIVISION OF SEWAGE AND INDUSTRIAL WASTES.

Field investigations on the treatment and disposal of effluent from eight industries carrying out distillation of alcohol from molasses, P.V.C. manufacture electroplating, fertilizer, B.H.C. textiles and vanaspathi were carried out.

One hundred and seventy-eight samples of industrial effluents before and after treatment were collected and examined to assess their physical, chemical and biological characteristics and the efficiency of the treatment provided.

Twenty-two samples of sewage from the sewage treatment works at the Indian Institute of Technology, Madras, Sewage Treatment Plants of Madurai and Ootacamund Municipalities were collected and examined to assess their efficiencies.

Twenty-one technical references on problems of treatment and disposal of effluents received from the Director of Health Services and Family Planning and industries were studied and technical opinion offered.

DIVISION OF AIR POLLUTION.

The Air Pollution studies carried out relate to assessment of air quality around fertiliser industries at Ennore. In this connection three samples of air were collected and examined. During this year four samples of air around insecticides manufacturing industry at Mettur were also examined for assessment of their characteristics.

FIELD INVESTIGATIONS AND RESEARCHES.

1. TREATMENT AND DISPOSAL OF WASTES FROM THE MADURAI MILLS COMPANY LIMITED, AMBASAMUDRAM.

(A. S. HARIHARAN AND R. SRINIVASAN)

A field investigation on the treatment and disposal of liquid wastes discharge from the Madura Mills Company Limited, Ambasamudram was carried out to assess the adequacy of the treatment provided.

The industry carries out bleaching, mercerising and dyeing of cotton yarn and cotton and terricotton fabrics.

The industry utilises 3500 m³ of water drawn from Tambaraparani river for its industrial needs.

The treatment of effluent discharge from the industry consist of segregation of coloured (dyed) and non-coloured wastes and installation of alkali recovery plant.

The coloured wastes 1864 m³ per day are neutralised by adding hydrochloric acid manually. Then alum is added, clariflocculated and settled.

The non-coloured wastes comprising of peroxide washings, after merceriser (1273 m³/day) are neutralised separately with hydrochloric acid, sprayed and settled.

The treated wastes from the two sections are allowed to mix and discharge into the Idaiyar river.

Samples of coloured and non-coloured wastes before and after treatment, composite of the combined wastes from the industry and Idaiyar river before admixture with the factory waste, at the point of admixture and after admixture were collected and examined.

The results of analysis showed that with the installation of alkali recovery plant there is considerable decrease in the quantum of alkali escaping into the effluents. The pH of the untreated effluent continues to be high (pH 11.5 and 11.4). The neutralisation has brought the pH of the mixture of the two sectional wastes to 5.7. The treated final effluent continues to be high in BOD (BOD 160 mg/l).

As the company proposed to execute certain additional treatment facilities, they were requested to intimate this department soon after these are implemented so as to carry out another investigation to assess the efficacy of the treatment.

2. TREATMENT AND DISPOSAL OF WASTES FROM MESSRS. HINDUSTAN LEVER LIMITED, EDAMALAIPATTI PUDUR, TIRUCHIRAPPALLI.

(A. S. HARIHARAN, R. SRINIVASAN AND C. BHASKER)

A field survey on the treatment and disposal of liquid wastes from Messrs. Hindustan Lever Limited, Tiruchirappalli was carried out to assess the characteristics of the wastes discharge and the adequacy of the treatment provided.

This is a vanaspathi manufacturing industry. In this raw vegetable oils are pre-refined using dilute caustic soda, washed free of soap, bleached with activated earths, filter pressed and then deodorised to remove all odour and vitaminised before filling

Fatty acids are recovered from the soap solution and the washings from the caustic refiner.

On an average 50.5 m³/day of water drawn from two open wells are used for industrial purposes.

The total quantity of waste discharge from the industry is approximately 34 m³/day and this comprise of filter press washings from the refinery, floor washings acid neutraliser, wash waters from the vathouse and barrel washings and wash waters from the workers canteen bath room and hand washings.

The waste waters from the refinery and vathouse, after fat removal are mixed with the waste waters from the workers canteen and bath-room and then after removal of fat in fat trap is allowed to stagnate in two earthen pits outside their premises. When these are filled up the wastes are pumped into two solar evaporation basins.

Samples of effluent from various stages of processing were collected and examined. The composite of effluent from the factory as it is let out has the following characteristics, total solids 12,300 mg/l, suspended solids 2,340 mg/l, 5-day BOD 2,050 mg/l, sulphate as SO₄ 3,790 mg/l, oils 570 mg/l and Nickel as Ni 6.5 mg/l.

During the survey it was seen that the pipeline carrying the waste was leaking profusely and waste were stagnating in an open land adjacent to a residential colony. Fuel smell was emanating from this and the earthen pits. This has been complained of by the public. The company was advised on the need for the treatment. The required treatment methods were also indicated.

3. A STUDY ON THE TREATMENT OF MOLASSES DISTILLERY WASTE IN ANAEROBIC LAGOON.

(A. S. HARIHARAN, R. SRINIVASAN AND V. SATHYAMOORTHY)

The study on the treatment of molasses distillery waste by anaerobic fermentation in a lagoon in a distillery at Tiruchirappalli in Tamil Nadu was continued. The relevant data pertaining to the size of the lagoon, the seeding and starting procedures were given in our Annual Report 1969. To effect the reduction in temperature of the liquid waste (spent wash) from this industry, it is first allowed to pass through cooling ponds before it enters the anaerobic lagoon for treatment for the reduction of BOD, suspended solids, etc.

Samples of spent wash from the cooling pond (influent to the lagoon) and effluent from the anaerobic lagoons I and II were tested once a week to assess the various characteristics and improvements.

Pending formation of full scale treatment plant the distillery has been permitted to discharge their waste in the Uyyakondan channel in a controlled manner after effecting thousand times dilution with the channel water. As a follow up measure, monthly survey and sample collection from various points all along the course of this channel before and after the admixture of the distillery as well as the Cauvery river where the channel finally joins is being carried out and examined. Based on the large scale trials and laboratory studies and technical assistance from the Public Health Engineering Department the distillery is now arranging to put up a full scale treatment plant for the entire volume of the waste. The treatment proposed is two stage anaerobic digestion in lagoons followed by aerated lagooning.

4. SURVEY AND INVESTIGATION ON THE FISH MORTALITY IN PARITHIPET (AVADI) LAKE NEAR MADRAS AND DISCHARGE OF INDUSTRIAL EFFLUENTS FROM MESSRS. SHAW WALLACE AND COMPANY, AVADI.

(A. S. HARIHARAN AND R. SRINIVASAN)

A detailed survey and investigation on the reported mortality of fish in Parithipet lake (at Avadi) and incidentally to assess the extent of pollution caused by the discharges of untreated effluents from the superphosphate industry nearby was made and samples of factory effluent stagnating in the drains and Parithipet lake were collected and examined.

This industry manufactures superphosphate, silica, sodium silico fluoride and hydrochloric acid are recovered as bye-products. The liquid wastes from this industry constitute waste water from (1) the filter press washwaters from the silica recovery plant and (2) centrifuge liquor from the sodium silico fluoride manufacturing section which contains about 2.5 per cent hydrochloric acid (discharge amount to 4,000–5,000 gallons per day).

The effluent (collected from a kutchra drain which carries the effluent from this industry to Parithipet lake) is high in dissolved solids (4,880 mg/l), is highly acidic chiefly due to hydrochloric acid (mineral acidity 300 mg/l and pH 2.0) and high in fluorides (600 mg/l).

The water from Avadi lake (Parithipet lake) close to the point of admixture of the effluent where the kutchra drain joins is distinctly acidic (pH 4.4) and has a fluoride content of 400 mg/l.

The water taken at the farthest point from the lake with reference to the admixture point is also distinctly acidic (pH 4.5) and has a fluoride content of 30 mg/l.

The discharges of these noxious pollutants and the acidity caused thereby has resulted in the incidence of fish mortality in the lake and also rendered the lake water unsuitable for agricultural and other uses. The authorities concerned were advised to prevent such discharges into the lake.

5. INVESTIGATION ON THE TREATMENT AND DISPOSAL OF LIQUID AND GASEOUS WASTES FROM THE MICO FARM CHEMICALS LIMITED, METTUR DAM.

(A. S. HARIHARAN, R. SRINIVASAN AND JOCOB ARULAPPAN)

A field survey on the treatment and disposal of liquid and gaseous pollutants from the Mico Farm Chemicals Limited, Mettur was carried out to assess (1) the characteristics of the waste discharges and (2) the adequacy of the treatment provided, if any, for their innocuous disposal.

This industry is located about 100 meters due south of the Mettur Industries and manufacture about 10–12 tonnes of benzene hexachloride (BHC) daily by reacting photochemically benzene (3.5 tonnes) and chlorine (9.5 tonnes).

The waste waters from this industry comprise mainly of (1) steam below down from boiler house, (2) steam condensates from the concentrator, distillation still, vaporiser and decanter (3) equipment and floor washings and (4) the slurried lime used for absorbing the wreched gaseous chlorine and the wastes are stored and drained once or twice a week.

The composite waste before treatment, on examination, showed the presence of BHC (Benzene hexachloride) to the extent of 142.5 mg/l. It has a pronounced odour of BHC and is acidic in character (pH 5.6). The composite of the treated waste is slightly alkaline (pH 8.4) and shows removal of 37 per cent BHC but still contains BHC to the extent of 90 mg/l. The boiler steam below down and wash waters, from workers, bathroom do not contain BHC. The composite of all the wastes as let out has a pH of 7 and shows a residual BHC content of 47.5 mg/l.

During the visit air samples were also collected and examined at ground level at 100 meters distance from the plant in different directions and the results show the absence of BHC in all the sample. The factory has provided a lime absorber for absorbing the untreated chlorine that emanates from the process and has also provided a cyclose separator and bag filters to minimise the BHC dust escape from the pulverising unit.

6. A SURVEY ON THE TREATMENT AND DISPOSAL OF INDUSTRIAL EFFLUENTS FROM MESSRS. TUBE PRODUCTS OF INDIA, AVADI WITH REFERENCE TO THE CONTAMINATION OF NEARBY ANNANOR LAKE.

(A. S. HARIHARAN, R. SRINIVASAN AND JACOB ARULLAPPAN.)

A field investigation on the treatment and disposal of industrial waste water from Messrs. Tube Products of India, Avadi was conducted on the basis of a complaint from the inhabitants of Annanor, a village near Avadi, that the effluents from this industry has rendered in the nearby lake (Annanor lake) unfit for cultivation. A composite sample of effluent discharge from the Factory and a sample of Annanor lake water were collected and examined.

The industry manufactures steel tubes, cold rolled strips and cold metal sections and the main wet processing involves pickling with 12–15 per cent hydrochloric acid and occasional chromium plating. The salient analytical figures representing the composite effluent of this industry and that of Annanor lake are tabled below:

Characteristics.	Composite of effluent from the industry.	Annanor lake water.
Colour	Brownish.	Brownish.
pH	4.3	3.9
Acidity as } Total acidity	170	132
CaCO ₃ mg/l } Mineral	14	62
Suspended solids mg/l	84	120
Iron as Fe, mg/l	828	72.8

It would be evident from the above, that the lake water has become acidic and unsuitable for normal uses such as for irrigation agriculture. It was stressed that the discharge of this effluent should be prohibited all the time the company concerned institutes adequate treatment measures suggested by this department to render the effluent innocuous.

7 ALGICIDAL TREATMENT OF THE MUNICIPAL STORAGE TANK, MANNARGUDI.

(A. S. HARIHARAN AND B. KAMALAKKANNAN.)

At the request of the Municipal Commissioner, Mannargudi, the summer storage tank (impounded) was treated during June 1972 with copper sulphate and bleaching powder. Prior to the treatment the tank water supported as abundant growth of algal organisms and zoo plankton mainly comprising blue green cyanophycean group. The tank water was greenish and emitted bad odour. The organic growth was causing stress on the slow sand filters rendering filtration inefficient. The algicidal treatment however showed considerable reduction in the algal population and odour nuisance was also bated to a certain extent.

Subsequently, suitable remedial measures to improve the aesthetic condition in the water supply was suggested by advocating periodical algicidal treatment, break point chlorination and proper maintenance of the slow sand filters.

8. ALGICIDAL TREATMENT OF KAMARAJASAGAR LAKE, DINDIGUL.

(A. S. HARIHARAN AND B. KAMALAKKANNAN.)

At the request of the Municipal Engineer, Dindigul municipality, algicidal treatment was done during the month of August 1972 to the Kamarajasagar lake an impounded reservoir, the main source of water supply to Dindigul town. The lake water was laden mainly with cyanophycean group of algae, greenish in colour and highly turbid. The reservoir had also abundance of fish population. The algicidal treatment was carried out divided dose to avoid fish mortality. The treated water showed appreciable reduction in algal population, turbidity and organic matter content. The prechlorinated alum treated and sand filtered water is expected to show further improvement. Periodical and systematic algicidal treatment was also recommended in this case.

9. STUDIES ON OXIDATION PONDS AROUND MADRAS CITY— I. PERCENTAGE REMOVAL OF PARASITIC ORGANISMS.

(A. S. HARIHARAN AND K. M. V. VEERANNAR.)

A follow up study of the percentage removal of parasitic organisms in three oxidation ponds deriving sewage from communities whose level of sanitation is significantly different was carried out.

The average percentage removal of parasitic cysts and eggs is ranging from 38.5 to 100 per cent. The percentage removal of cysts of *Entamoeba histolytica* was ranging from 74.2 to 100. *Gardia lamblia* cysts were found in raw sewage samples from the pond at T.B. Sanatorium where complete destruction of the cysts in the effluent was observed.

The data regarding percentage removal of helminths show that 93.3% of *Ascaris* eggs present in the raw sewage are reduced by the oxidation pond at Kodungaiyur. The corresponding values for the ponds at the T. B. Sanatorium, Tambaram and at the Indian Institute of Technology are 88.5 and 62.9 per cent respectively. Hook worm (*Ankylostoma duodenale*) was totally absent in the pond at T. B. Sanatorium whereas in the other two ponds 100 per cent reduction of hook worm eggs is recorded. The other helminths observed were *Trichuris trichocephalus*, *Enterobius vermicularis* and *Hymenolepis manana*. There occurrence is not considered significant as they comprise such a small number.

Details regarding the number of samples collected and the percentage removal of the parasitic organisms are present in Table IX and X appended.

In order to prepare a comprehensive review on the qualitative and quantitative of human intestinal parasites and the factors influencing their occurrence and survival, pertinent literature from the year 1900 to 1970 was collected from the various libraries in the city.

Fifteen faeces samples were also microscopically examined for intestinal parasitic protozoans and helminths.

OTHER FIELD INVESTIGATIONS:

10. At the request of the Tamil Nadu Electricity Board, three field investigations were carried out in the Suruliya, Vellithorai and Kadamparai hydro-electric Projects by Thiru K. Sankaran, Assistant Water Analyst for the purpose of designing suitable power house machinery, pump sets, etc., and for providing drinking water supply to the Project Camps.

11. At the request of the Tamil Nadu Water Supply and Drainage Board, monthly field investigation and sample collections were made for 13 months by the analysts of this department at Poolampattu and Mettur Dam to study the chemical characteristics of the wastes, in connection with the provision of drinking water supply to Salem Steel Project.

WATER AND SEWAGE PURIFICATION COMMITTEE:

The Water and Sewage Purification Committee conducted five meetings during the course of this year, and during which discussions were held and resolutions passed on the problems relating to the treatment and disposal of effluent from the following industries:

1. *M/s. Sakthi Sugars Limited, Appakudal.*—This industry proposed to establish a distillery at Appakudal, 29 kilometres away from Erode to manufacture 2 million gallons of industrial alcohol per year from molasses. The manufacture of alcohol is by the fermentation of diluted molasses using solid yeast purchased from the manufactures and distillation of alcohol through a rectification column. The water required for the dilution of molasses, cooling system, etc., was to be derived from nearby Bhavani river. The Water and Sewage Purification Committee suspected the proposed site to assess the various aspects effecting public health such as

the volume of discharge of waste water (about 1.5 lakh gallons a day), significant characteristics of the waste water (BOD: 4500 or more; temperature—60—70°C, colour and odour) and also on factors affecting agriculture in consultation with an assistant agronomist. Then the committee approved the company's proposal of treatment of the waste water i.e., settling and cooling the effluent in masonry tanks and dispensing the same after dilution (about 10 times) in 385 acres of land for sugar cultivation on certain conditions and should also satisfy the I.S.I. specifications. (i) It was also stipulated that there should be no seepage or drainage of the treated effluent to the nearby Bhavani river, (ii) the effluent should be cooled and diluted sufficiently as to bring down the BOD (to a tolerable 500 mg/l) suspended solids and dissolved salts concentration as to safeguard soil organisms and crop cultivation. (iii) the treatment and disposal of arrangements are to be completed before the distillery is commissioned.

(2) *Mys. Trichy Distilleries and Chemicals Limited, Tiruchirappalli.*—In continuation of the recommendations already made by the committee with regard to the treatment and disposal (anaerobic lagooning), the committee also considered (i) separation and drying of yeast tank washings as to reduce the BOD, suspended and dissolved salts concentration, (ii) the addition of lime to spent wash stagnating over large area of land in the factory premises in order to reduce foul odour and (iii) the formation of compartments to facilitate drainings of the stagnant effluent and formation of additional lagoons.

A preliminary laboratory trial conducted at the Water Analysis Laboratory, Guindy showed that addition of lime to spent wash taken from the stagnant area in the distillery reduces the odour considerably at pH 8.3 and above. The committee considered the same and also the laboratory studies that are to be conducted in collaboration with the Central Public Health Engineering Research Institute Zonal Centre, Madras.

(3) *M/s. Vorian Industries and Chemicals, Vedanarayanapuram, Chingleput District.*—This industry informed the Chairman of the committee (Additional Director of Health Services and Family Planning), of their proposal to start a distillery with a capacity of 1,000 gallons of rectified spirit per day under the Government of India licence and Additional Director of Health Services in turn referred this to the committee. The committee inspected the site of the proposed distillery on 8th March 1972 with particular reference to the problem of treatment and disposal of the effluent from the industry and held discussions with the company representative, Thiru Ghalak. Later, the committee resolved to accept and recommend for the discharge of the treated effluent into the nearby a Ollalur channel on the basis of the company's assurance that the effluent will be discharged after treatment to conform to the standards specified by the Indian Standards Institution and subject to the conditions that (i) the BOD of the effluent shall not exceed 300 mg/l at any time, (ii) the Ollalur channel water after the admixture of the waste should not show an increase of more than 10 hazen units and (iii) it should be free of odour, toxic substances and should not cause frothing.

(4) *M/s. Arvind Distilleries (Private) Limited, Kadampuliyur.*—*M/s. Arvind Distilleries (Private) Limited*, established a distillery at Kadampuliyur on the Panruti-Vadalur road about 8 KM south of Panruti town crossing Ghadilam river about 6 KM beyond the river, and abutting main road on its east. The company sought permission for the disposal of the effluent in the distillery land. The committee inspected the site on 26th March 1972 with reference to the proper disposal of effluent after treatment and problem arising out of odour, high BOD, acidity, etc., and also discussed the particulars furnished by the company on 27th March 1972. It was stated that the volume of effluent for the production of 2,200 gallons of alcohol per day will be about 45,000 to 50,000 gallons and this will increase proportionately as the company expands the production.

On the basis of that the distillery has facilities for land disposal (available land 200 acres) and the company's stand that the effluent will be diluted ten times with fresh water, cooled and dispersed for irrigation of different crops, apart from standing cashew

bress the committee recommended that the effluent should be treated by Anaerobic lagooning after proper neutralisation in a scientific manner with a detention period of 70 days and 40 days in the primary and secondary lagoons respectively. It also stressed (i) that the washings from the yeast culture tanks should be segregated, dried in shallow impervious ponds and scraped (or filter pressed after centrifugation) and used as manure, (ii) the land disposal of the final treated effluent should be done in such a manner that it does not find its way to any water course nearby, (iii) the treatment and disposal arrangements should become operative before production.

(5) *M/s. Annamalai Brick and Ceramic Industries Limited, Irungalur, Tiruchirappalli.*—This company proposed to start a brewery at Irungalur, Lalgudi taluk near Tiruchirappalli. The committee considered the note circulated by the Secretary and the inspection report of the Superintending Engineer, Public Health Engineering, Madurai on the subject during its meeting on 27th March 1972 and taking into consideration the manufacturing processes, proposed to be adopted for brewing beer, the probable characteristics of the effluent and its volume and facilities available for disposal on land, the committee resolved to recommend that the effluent from the proposed distillery be permitted to be discharged in 30 acres of land available with the company subject to the conditions that (i) provision should be made for settlement and dilution to bring down the suspended solids and BOD (to less than 500 mg/l) and also neutralisation to maintain the pH between 5.5 and 9.0, (ii) the yeast tank washings should be segregated and dried or filter pressed, leaving only the residual clean liquor along with the main effluent, (iii) the softening plant regenerant waste should be separated, evaporated to dryness in impervious shallow ponds, if in practise it tends to increase the salts concentration of the effluent to more than 2,000 mg/l and also sodium% (iv) at any time shall the effluent be let out in the water course nearby and (v) in case of further expansion or dispute over the adequacy of the treatment arise, the company should take up alternate or additional treatment measures at their own cost.

(6) *M/s. Southern Agricurane Industries, Mundiambakkam.*—This industry along with its main concern M/s. South India Corporation Limited was setting up a distillery under a licence already granted to manufacture arrack and Indian made foreign liquor from molasses and also furfural and furane out of the bye-products of sugar manufacture. The distillery and the furfural plants were to be housed in the premises of M/s. South India Steel and Sugars Limited, Mundiambakkam.

The committee inspected the site of the proposed distillery on 11th July 1972 with particular reference to the treatment and disposal of effluents and also held discussions with the company representatives. After discussing the process of manufacture and the quantity of waste water, etc., it resolved to recommend the anaerobic method of treatment for the spent wash (waste water) after cooling in two stages i.e. primary lagooning followed by secondary lagooning and dilution to reduce the BOD and dissolved salts concentration and utilisation of the same in their own lands for sugarcane cultivation without allowing the effluent to find its way to the nearby odai under any circumstances.

7. *Other subjects.*—Apart from the discussions and resolutions regarding the treatment and disposal of effluent from the above industries, the committee also considered the matters relating to (i) sanitation in industries, (ii) inspection of the proposed brewery site at Tiruchirappalli with particular reference to the possibility of ground and surface water pollution, (iii) the status and function of the committee, (iv) visit of the some of the distilleries in India outside the State, to have a first hand knowledge of the method of disposal, etc., (v) odour nuisance in anaerobic lagoons and (vi) inspection of a proposed distillery site at Kotagiri. These are to be followed up next year.

93

TABLE I.

Serial number and name of place.	Total number of		Nature of sources.					
	Places.	Sources.	Impounded reser-voirs.	River or Stream.	Tank.	Well.	Infl. Gallery and in fil. well.	
							Bed.	Bank.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1 Municipalities	57	112	15	14	3	33	34	13
2 Panchayat Boards and Town-ships.	25	35	4	14	4	5	3	5
3 Jails and Approved schools.	14	15	2	1	..	4	3	1
4 Railway stations	25	27	1	3	1	17	9	2
5 Hospitals	56	68	17	10	2	15	21	3
6 Other Institutions	25	57	10	7	1	39	..	2
7 Swimming pools	2	2	..	..	..	2	..	..

	Filtration.					Chlorination.			
	Slow sand filters.	Mechanical.		Inf. Gallery w/ well.	Not filtered.	Automatic Liquid chlorination.	Bleaching powder.		No chlorination.
		Pressure.	Gravity.				Mechani-cal.	Hand controlled.	
	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1 Municipalities	6	2	10	47	47	60	3	49	..
2 Panchayat Boards and Town-ships.	4	..	2	3	20	10	2	22	..
3 Jails and Approved schools.	1	..	2	3	2	10	..	5	..
4 Railway stations	..	1	4	5	17	13	4	10	..
5 Hospitals	9	1	18	24	16	26	1	31	..
6 Other Institutions	4	2	7	2	43	7	1	48	..
7 Swimming pools	..	2	..	..	..	2	..	..	..

TABLE II.

Details of samples tested Bacteriologically.

Serial number.	Particulars.	Number of samples.
(1)	(2)	(3)
1 Protected water supplies		3,219
2 Miscellaneous samples Government agencies		231
3 Miscellaneous samples Private bodies		213
4 City Hospitals		600
5 Milk and utensil washings		53
6 Milk Powder		3
7 Ice cream		251
8 Sewage samples		8

TABLE III.

Details of water samples and chemicals used in water treatment received for Physical and Chemical tests.

Serial number.	Particulars.	Number of samples.
(1)	(2)	(3)
1	Protected water supplies	2,796
2	Miscellaneous Government Water supply investigation schemes, Private parties and special investigations, etc.	1,572
3	Non-domestic purposes	376
4	Insecticides	6
5	Alum samples	2
6	Bleaching Powder	530
7	Urine analysis for fluorine	5
8	Bone for fluorine	1
9	Scales for analysis	2
10	Rural water supplies	1,640
		<u>6,731</u>

TABLE IV.

Details of samples of water tested for non-domestic uses.

Serial number.	Particulars.	Number of samples tested.
(1)	(2)	(3)
1	General industrial purposes	79
2	Air conditioning	12
3	Boiler feed and cooling water	23
4	Concrete and construction purpose	20
5	Photographic purpose	6
6	Agricultural purposes	9
7	Textile industry	8
8	Electroplating	5
9	Automobile industry	6
10	Humidification purpose	2
11	Manufacture of distilled water	4
12	Distillery and brewery	15
13	Leather industry	1
14	Manufacture of food products	3
15	Laundry purpose	1
		<u>188</u>

TABLE V.

Showing the number of sources tested and number of samples declared unfit due to high fluorine content.

Serial number.	Name of the district.	Number of samples tested.	Number of samples certified as unfit.	Number of samples declared unfit due to high fluorine content.
(1)	(2)	(3)	(4)	(5)
1	North Arcot	89	6	1
2	South Arcot	101	5	..
3	Chingleput	40	4	..
4	Coimbatore	59	10	3
5	Dharmapuri	38	5	4
6	Kanyakumari	4	..	..
7	Madurai	97	14	6
8	The Nilgiris	1	..	..
9	Ramanathapuram	48	4	2
10	Salem	134	38	16
11	Thanjavur	85	8	4
12	Tiruchirappalli	74	4	..
13	Tirunelveli	49	3	2
14	Madras	1	1	..
		<u>520</u>	<u>102</u>	<u>38</u>

TABLE VI-A.

Number of samples showing identical results—district-war.

Serial number.	Name of the district.	Number of samples received and tested.
(1)	(2)	(3)
1	North Arcot	2
2	South Arcot	4
3	Coimbatore	2
4	Salem	4
5	Tiruchirappalli	2
		<u>14</u>

TABLE VI-B.

Serial number.	Particulars.	Number of tests.
(1)	(2)	(3)
1	Rideal walker co-efficient tests	23
2	Staphylococcus aureus co-efficient	12
3	Stability tests	1

TABLE VII.

Serial number	Details of samples examined microscopically.	Number of samples tested.
(1)	(2)	(3)
1	Protected water supply	635
2	Miscellaneous (Government and Private)	454
3	Domestic samples	102
4	Rural water supply	274
5	Sewage and industrial wastes	170
Total ..		1,735

TABLE VIII.

Percentage infestation of intestinal parasites.

Parasite.	Number of positive sample.	Percentage infestation.
(1)	(2)	(3)
Number of samples examined	267	
Number of samples Positive	235	88
Number of samples Negative	52	18
Number of samples Single Parasite	111	38.7
Number of samples Double Parasite	77	26.8
Number of samples Triple parasite	35	12.2
Number of samples Four parasites	6	2.1
Number of samples Five parasites	1	0.4

TABLE IX

Effect of oxidation pond treatment on removal of parasitic protozoans

Serial number and Location of oxidation pond.	Number of samples examined.	Entamoeba coli.		Percentage removal.
(1)	(2)	Average number of cysts/litre.		(5)
		Raw sewage.	Pond effluent.	
I T. B. Sanatorium, Tambaram	20	686	156	77.4
II Indian Institute of Technology, Adyar	20	506	311	38.5
III Kodungaiyur sewage farm	20	844	232	72.5

	<i>Entamoeba histolytica.</i>			<i>Giardia lamblia</i>		
	Average number of cysts/litre.		Percentage removal.	Average number of cysts/litre.		Percentage removal.
	Raw sewage	Pond effluent.		Raw sewage.	Pond effluent.	
	(6)	(7)	(8)	(9)	(10)	(11)
I T. B. Sanatorium Tambaram	394	Nil.	100	63	Nil.	100
II Indian Institute of Technology, Adyar	204	63	74.2	Nil.	Nil.	..
III Kodungaiyur sewage farm	431	62	84.5	Nil.	Nil.	..

TABLE X.

Effect of oxidation pond treatment on removal of parasitic Helminths.

Serial number and Location of oxidation pond.	Number of samples examined.	<i>Ascaris lumbricoides.</i>		Percentage removal.	<i>Ancylostoma duodenale.</i>		Percentage removal.
		Average number of ova/litre.			Average number of ova/litre.		
		Raw sewage.	Pond effluent.		Raw sewage.	Pond effluent.	
		(1)	(2)		(3)	(4)	
I T. B. Sanatorium, Tambaram.	20	581	67	88.5	Nil.	Nil.	..
II Indian Institute of Technology.	20	488	181	62.9	19	Nil.	100
III Kodungaiyur Sewage farm.	20	838	56	93.3	12	Nil.	100

	<i>Trichuris trichocephalus.</i>			Percentage removal.	<i>Entrobæus vermicularis.</i>			Percentage removal.	<i>Hymenolepis nana.</i>			Percentage removal.
	Average number of ova/litre.		Raw sewage.		Average number of ova/litre.		Raw sewage.		Average number of ova/litre.		Raw sewage.	
	Pond effluent.	Pond effluent.			Pond effluent.							
	(9)	(10)			(11)	(12)			(13)	(14)		
I T. B. Sanatorium, Tambaram.	19	6	68.4	Nil.	Nil.	..	6	Nil.	100			
II Indian Institute of Technology.	Nil.	Nil.	..	Nil.	Nil.	..	Nil.	Nil.	..			
III Kodungaiyur Sewage farm.	6	Nil.	100	79	Nil.	100	Nil.	Nil.	..			

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TABLE XI.

Particulars regarding the number of investigations carried out and effluent samples examined during the year 1972.

Number of sewage samples	44
Number of industrial waste samples	256
Number of air samples	7
Number of field investigations carried out	17

Type of industries.	Number.	Number of samples.
(1)	(2)	(3)
I Connected with Industrial wastes—		
1 Chemical industry	1	14
2 Distillery	2	256
3 P. V. C.	1	20
4 Electroplating	1	4
5 Fertilizer	1	6
6 Insecticides	1	3
7 Textiles	1	26
8 Vanaspathi	1	18
II Connected with Air Pollution—		
1 Fertilizers	1	3
2 Insecticides	1	4



HEALTH AND FAMILY PLANNING (P-2) DEPARTMENT
(Health)

G.O. No. 802, 25th March 1975

Administration Report—Public Health Administration Report for 1972—Reviewed.

READ—the following paper:—

From the D. H. S. and F P. Lr. R. No. 49810/VS/73, dated 15th May 1974.

Order—No. 802, Health, dated 25th March 1975.

Recorded.

2. The Bureau of Vital Statistics is responsible for the improvement of registration of births and deaths for the compilation of vital statistics. The vital statistical indices for the year under report reveal the following salient features:—

- A decrease in the birth rate from 25.2 in 1971 to 24.4 in 1972.
- A decrease in the death rate from 8.6 in 1971 to 8.4 in 1972.
- A slight increase in the infant mortality from 54.9 in 1971 to 55.3 in 1972.
- An increase in still birth rate from 17.9 in 1971 to 19.6 in 1972.
- A slight increase in the maternal mortality rate from 2.1 in 1971 to 2.3 in 1972.

3. *Control of Communicable diseases*—(i) *Cholera*.—There were 3,670 attacks and 205 deaths due to Cholera in the whole State during 1972 as compared to 2,518 attacks and 179 deaths during 1971. Cholera was prevalent in Madras City and in all other districts except the districts Ramanathapuram and The Nilgiris. A total of 14,69,731 inoculation was done during the year.

(ii) *Smallpox*.—The State was free from Smallpox during the year 1972. 15,02,118 primary vaccinations and 38,21,548 re-vaccinations were done.

(iii) *Dysentery and Diarrhoea*.—There were 20,490 deaths due to Dysentery and Diarrhoea during 1972 as against 20,097 deaths in 1971.

(iv) *Plague*.—The State was free from plague during the year under report.

(v) *Malaria*.—The National Malaria Eradication Programme was continued to be implemented successfully in the State. In the Central Malaria Laboratory, necessary training courses including lectures on entomology, epidemiology, parasitology and haematology were conducted.

(vi) *Filaria*.—The Four National Filaria Control Units in the districts of Ohingleput, North Arcot, South Arcot and Thanjavur continued their anti-larval measures. But the programme has been reorganised with the establishment of eight new units.

1. Kancheepuram,
2. Villupuram,
3. Cuddalore,
4. Thanjavur,
5. Nagapattinam,
6. Srirangam,
7. Pudukottai and
8. Madras,

Thus totally 12 units are functioning in the state,

Respiratory Diseases.—There were 31,621 deaths due to respiratory diseases as against 32,080 deaths in 1971.

Yaws.—During the year under report 1,205 villages were surveyed 1,89,598 persons were examined, 352 yaws cases were treated.

Guinea worm.—During the year 1972, 14,048 villages and hamlets were surveyed for Guinea worm infection and 47 villages were found to be endemic for guinea worm diseases. A total of 285 cases were detected and treated.

4. *Health Services*—(i) *Maternity and Child Health*.—There were 3,840 Maternity and Child Health Centres at the end of 1972 as against 3,801 at the end of 1971.

(ii) *Health Visitors*.—There were 574 Health Visitors during 1972 as against 547 during 1971.

(ii) *School Medical Inspection*.—The programme is carried out effectively in 18 Primary Health Centres and in the two Municipalities of Tiruchirappalli and Coimbatore. Each Medical Officer of the Primary Health Centre examine 2,000 school children in the age group 6-11 years he being paid an honorarium of Rs. 50 per month for this work. The target fixed in the case of Municipality is 10,000 school children per year. During the year 1972, 51,991 school going children were examined and out of these 28,614 were found to be suffering from one disease or other. Cases requiring specialised treatment are referred to nearby hospitals.

(iv) *Primary Health Centres*.—The total number of Primary Health Centres in the state was 379.

(v) *UNICEF assisted programme*.—The supplementary feeding programme was assisted by care during 1972. Under the programme the gift food commodities are distributed at present through about 1,216 feeding centres including Primary Health Centres. About 45,060 daily beneficiaries are there. A total of quantity of about 25 lakhs of kilograms of gift food commodities was received and distributed during the year.

5. *Food Adulteration*.—The provisions of the prevention of Food Adulteration Act were continued to be implemented with the help of three Food Analysts Laboratories (viz, (1) Government Analysts Laboratory at King Institute, Coimbatore, (2) The Food Analysts Laboratory attached to the Corporation of Madras, and (3) The Public Analysts Laboratory at Coimbatore.

In the Government Analysts Laboratory at King Institute, Coimbatore, 19,083 samples were analysed. 4,996 samples representing 26.2 per cent were found adulterated. Out of 4,231 prosecutions launched under the Prevention of Food Adulteration Act, 3,288 cases ended in conviction and 52 were imprisoned. The fines realised amounted to Rs. 4,85,976.

In the Food Analysts Laboratory attached to the Corporation of Madras about 4,000 samples are analysed per year. The Public Analysts Laboratory started analysing samples only from 1st August 1972.

6. *Water Analysis Department*.—The collection, examination and reporting on the samples of water taken thrice a year from the water supplies to 57 Municipalities, 25 Panchayats, 14 jails and approved schools, 25 railway stations, 56 Government hospitals and 25 other institutions were made.

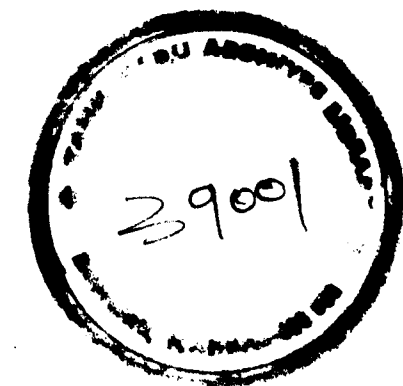
Government Analyst Department.—During the year under report 305 local bodies comprising one Corporation, 89 Municipalities, 171 town panchayats, 10 townships, 2 contentment boards, 3 panchayat unions and 29 others as well as the Southern Railway sent samples of food articles under the Prevention of Food Adulteration Act. The total number of samples received during the year was 19,189. The number of samples analysed during the year was 19,083. 26.2 per cent of the samples analysed were found to be adulterated or misbranded, etc.

General.—The Public Health Administration of the State during the year under report continued to be satisfactory.

(By order of the Governor)

A. PADMANABHAN,
Secretary to Government.

To the Director of Health Services and Family Planning, Madras-6
.. Director of Stationery and Printing, Madras-1.



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106

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