Annual public health report of the Province of Orissa; and Annual vaccination report.

ANNUAL PUBLIC HEALTH REPORT

OF THE

PROVINCE OF ORISSA

FOR THE YEAR

1937

AND THE

ANNUAL VACCINATION REPORT

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1937-38

BY

Lt.-Col. G. VERGHESE, I.M.S.
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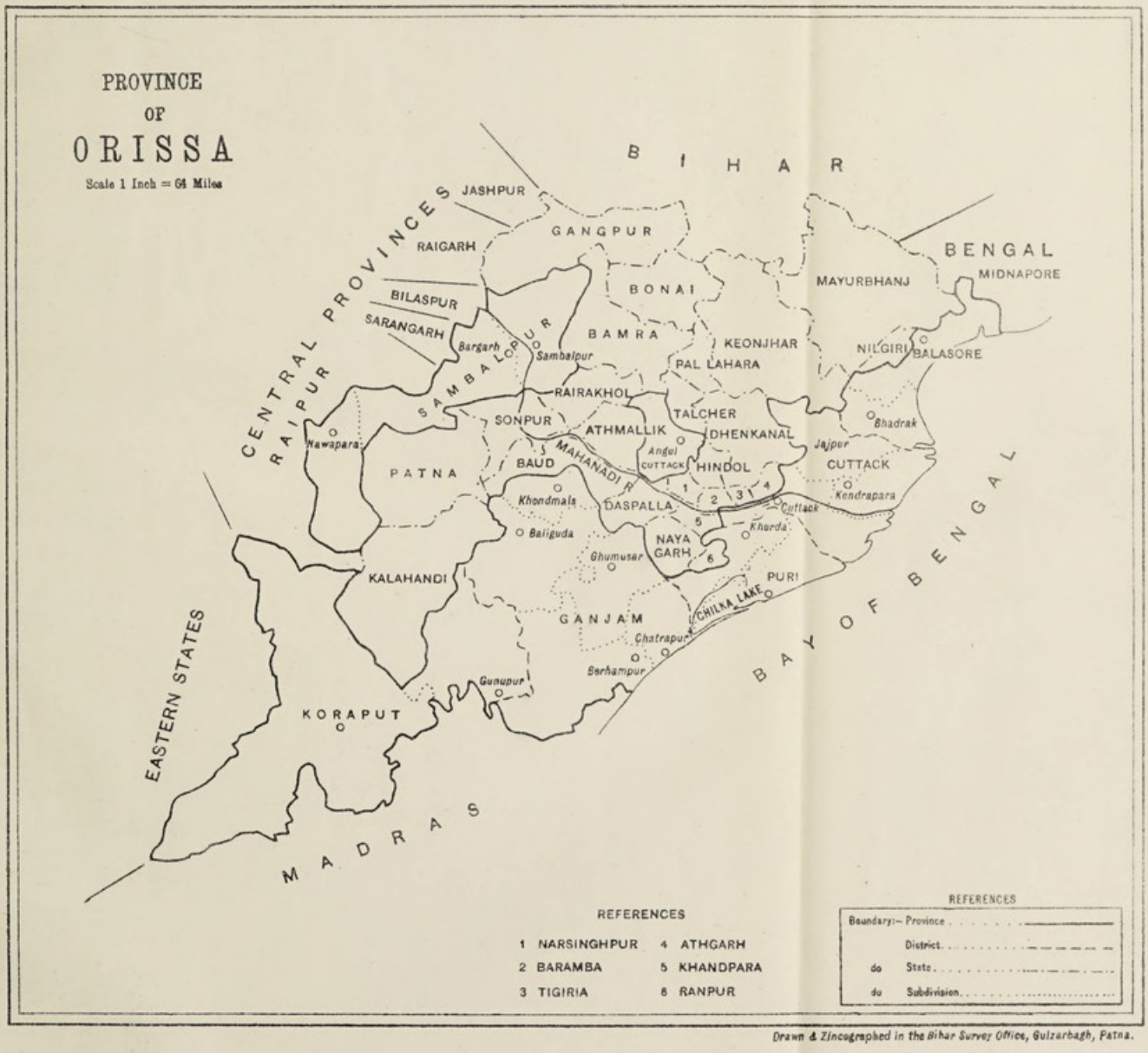

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Annual Public Health Report of the Province of Orissa for the Year 1937.

CHAPTER I.

Meteorology, Prices of grains, etc.

The following short account of the meteorologioal conditions in the province of Orissa during the year 1937 is taken from the report of the Director General of Observatories.

The total rainfall in January was in defect by 0·37″. The maximum and minimum temperatures were below normal while the humidity was in defect throughout the province.

The total rainfall in February was in excess by 3·08″. A portion of the western disturbances which were affecting the central parts of India, moving eastward caused widespread rainfall in the province on the 21st of the month. The maximum temperature was below normal and the minimum above normal. The humidity was in excess throughout the province.

The total rainfall in March was in moderate defect. The skies were more clouded than usual. The maximum temperature was below normal and the minimum temperature was slightly above normal; and the humidity recorded slightly above normal throughout the province.

The total rainfall in April was in slight excess over the province. The maximum and minimum temperatures were below the normal while the humidity was in defect.

The total rainfall in May was in defect by 0·32″. Both the maximum and minimum temperatures and the humidity were above the normal during the month.

The total rainfall in June was in excess by 1·06″ and the mean cloud amount was above the average. Both the maximum and minimum temperatures remained above normal while the humidity was in defect throughout the province.

The total rainfall in July was in excess by 3·90″. Two depressions that formed off in the north-west angle of the Bay of Bengal developed into cyclonic storm and crossed Orissa coast between Chandbali and Puri and then travelled as a depression over Orissa. Under the influence of this disturbed condition monsoon was strengthened in the province. The maximum and minimum temperatures were roughly normal and the humidity was in excess.

The total rainfall in August was in defect by 4·39″. A low pressure wave which moved westward across the Arakan coast into the Bay of Bengal developed into a depression at the head of the Bay on the 1st of the month. Thereafter it moved westwards and crossed the coast between Balasore and Saugar Islands. This depression caused widespread heavy rain in Orissa, Central Provinces and other parts of India. According to press reports as the result of heavy rains in these parts wide spread and disastrous floods occurred in Orissa causing great loss of life and property. The maximum and minimum temperatures and the humidity were roughly normal during the month.

In association of two depressions that formed off the Orissa coast during the 1st half of September the monsoon was continued to be active in the province. The total rainfall was in excess by 2·28″. The maximum and minimum temperatures were roughly normal while the humidity was in excess.

The total rainfall in October was in defect by 2·12″. The maximum and minimum temperatures and the humidity were roughly normal throughout the province.

The total rainfall in November was also in defect by 2·08″ but the mean cloud amount was above normal in the province. The maximum temperature was above normal and the minimum temperature was roughly normal while the humidity was in large defect.

The total rainfall in December was also in defect by 0·32″. The maximum and minimum temperatures were roughly normal while the humidity was in large defect.

The total rainfall in the province during the year under report was 56·79″, that is 1·34″ or 2·4 per cent in excess over the usual fall, as against 77·36″ in the previous year.

2. **Price of common grain**:—The average price of common rice during the year under review varied from 9 seers 9 chs. to the rupee in the district of Ganjam to 22 seers 14 chs. in Khondmals; but in the majority of the districts it remained over 12 seers as in the previous year.

The following statement shows the monthly average price of common rice at the headquarters of the districts of the province for the year 1937 :—

Statement showing the monthly average price of common rice (cheapest) at the headquarters markets of the districts of the province of Orissa for the year 1937.

District.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	Sr. Ch	Sr. Ch.	Sr. Ch.	Sr. Ch.	Sr. Ch.	Sr. Ch.	Sr. Ch.	Sr. Ch.	Sr. Ch.	Sr. Ch.	Sr. Ch.	Sr. Ch.
Cuttack	15 12	15 12	14 7	14 7	14 2	13 2	13 2	12 13	12 5	13 12	14 12	15 12
Balasore	17 2	16 4	15 12	15 3	14 4	13 10	13 0	13 0	14 0	14 6½	15 8	17 3
Puri	16 11	16 6½	15 0	15 12	14 7	13 2	13 10	13 7	13 12	14 7	13 15	14 7
Sambalpur	19 13	18 0	18 0	18 0	18 0	18 0	18 0	18 0	18 0	20 4	21 15	20 15
Angul	22 0	19 14	19 15	19 13	18 2	16 4½	15 12	15 14	16 4	19 2	21 2	20 9
Khondmals	19 8	19 8	19 0	18 0	16 14	15 0	15 0	14 4	16 2	18 0	22 14	19 13
Ganjam	9 9	9 9	9 9	9 10	9 10	9 10	9 10	9 10	9 10	9 10	9 10	9 10
Koraput	14 3	13 13	13 13	13 12	13 13	13 13	13 8	13 0	13 0	13 6½	13 8	13 8

CHAPTER II.

Vital Statistics.

The population of the province in the British territories as calculated at the census taken in February 1931 was 8,009,559. The vital statistics recorded relate however, only to a population of 6,956,597. This figure is exclusive of the population of a large portion of the Agency areas of Ganjam and Koraput districts, where there is no proper system of collection of vital statistics.

2. The total number of births in the province during the year was 241,746 (124,129 males and 117,617 females) as against 254,697 in 1936. This means a decrease of 12,951 births or 1·9 per thousand of population during the year over those recorded in the preceding year. The provincial birth rate for the year 1937 was 34·8 as against 36·6 in 1936.

3. The statement below gives figures of birth-rates in other provinces during 1937 including Orissa :—

Province.	Birth rate per mille of population, 1937.
Orissa	34·75
Bengal	34·20
Bihar	34·00
United Provinces	35·92
Central Provinces	40·65
Punjab	46·49
Bombay	40·68
Madras	38·72
Burma	34·55
Assam	31·31
North-West Frontier Province	30·74
Sind	19·96

Orissa recorded a lower birth-rate than the United provinces, Central Provinces, the Punjab, Bombay and Madras. Her birth rate was higher than all the other provinces.

4. **Birth Registration.**—The highest birth-rate 39·7 was recorded in the Angul district and the lowest birth-rate 16·3 in the Agency districts. In the urban areas the municipalities of Berhampur and Parlakimedi registered high birth-rates, viz., 39·5 and 35·7 respectively, whilst the municipalities of Cuttack, Jajpur and Balasore registered low rates, viz., 12·7, 16·4 and 16·6 respectively.

The rural and the urban areas of the province recorded 236,629 and 5,117 births, the birth-rates for these areas being 35·1 and 23·6 per mille of population, respectively. The higher birthrate in the rural areas, as compared to the urban birth-rate appears to be due to the population of the rural areas (*i*) being more than that in the urban areas, (*ii*) being poor illiterate agriculturists among whom early marriage is encouraged and children are regarded as an asset to the villagers, (*iii*) any manner of birth control being unknown to them and (*iv*) the number of married females being greater in villages from where many married men have to earn their living in towns.

The mean birth-rate for the province cannot be worked out as the number of births of the last five years of the whole area, including the added areas, is not available.

5. **Deaths.**—The total number of deaths registered in the province during the year under review was 199,165 (99,043 males and 100,122 females) as against 193,588 in the previous year. Out of these the rural areas recorded 194,521 deaths and the urban areas 4,644. This means an increase of 5,577 deaths or 0·8 per mille of population over those recorded in the preceding year. This slight rise is due to fever and general causes. The provincial death-rate for 1937 was 28·6 as against 27·8 in 1936.

The statement below shows comparatively death-rates in other provinces :—

Province.	Death rate per mille of population, 1937.
Orissa	28·63
Bengal	24·70
Bihar	22·53
United Provinces	21·38
Central Provinces	32·63
Punjab	23·71
Bombay	27·50
Madras	23·99
Burma	24·76
Assam	22·21
North-West Frontier Province	21·27
Sind	12·09

Orissa recorded a higher death rate than all the other provinces except the Central Provinces.

6. **Death Registration.**—The highest death-rates were recorded in the districts of Khondmals, Balasore and Cuttack as 33·4, 32·3 and 30·9 respectively,whilst the lowest rates were recorded in the Agency districts, Ganjam Plains and Sambalpur being 11·9, 25·6 and 25·7, respectively. Amongst the towns in the province the highest death-rates were recorded in Puri and Kendrapara as 36·5 and 32 3 respectively and lowest in Cuttack (10·6), Jajpur (15·7) and Parlakimedi (18·5). With regard to Puri town, the comparatively higher death-rate is due to the influx of a large number of Pilgrims to this town from many parts of India that visit the town on holy pilgrimage some of whom in an advanced state of ill health, intending to have their last days on earth after having had a Darsan of Lord Jagannath.

The average death-rate of the rural areas was 28·9 and of the urban areas 21·4. Thus the rural death-rate was higher than that of the urban area by 7·5. There was an increase of 42,581 births over deaths in the province during the year against an increase of 61,109 births over deaths in 1936.

The rate of increase in the population, i.e., the excess of birth-rate over the death-rate in the province was 6·2 as against 8·8 in the previous year.

7. **Mortality according to age, class and sex.**—99,043 males and 100,122 females died in 1937 with a death-rate of 29·9 for males and 27·4 for females against 95,347 males and 98,241 females with a death-rate of 28·8 for males and 26·9 for females in the previous year. 51,893 deaths were recorded amongst infants under one year of age during 1937. The mortality rate for infants under one year was 222·8 for males and 206·1 for females with the total infant mortality rate of 214·7 per mille of births registered as against the corresponding total of 198·8 in 1936. The high mortality rate in this province as in other parts of India is to a very great extent due to ignorance, poverty, lack of well conceived maternity and childwelfare efforts and inadequate supply of wholesome drinking water in the rural areas, especially in the low-lying and water-logged parts of the province, causing heavy epidemics of cholera and other bowel diseases in recurring waves year after year. Malaria also is an important contributory factor in mounting up the mortality amongst the people.

There were, as usual, considerable differences in the death-rates amongst the different classes of community. The death-rate was highest amongst Hindus (29·1) and lowest amongst the Christians (12·6). The Muhammadan death-rate was 27·3 and that of other classes 13·8.

8. **Verification of the registration of vital occurrences.**—Registration of vital occurrences is compulsory in all the eight municipalities of the province. It is not compulsory in the rural areas of the province except in those of Ganjam district (Plains portions only), and that is only in such villages which has a population of 2,000 and over.

There are two systems of reporting occurrences of vital statistics in this province. The reporting agency in the rural areas and in most of the municipalities of the ex-Bihar, ex-Central Provinces areas or North Orissa, is the Police, whereas the system in the ex-Madras areas (South Orissa) is through the village headman. No vital statistics are, however, collected from the Agency areas of Koraput and Ganjam Agency except a few villages of the latter as there is no proper system of registration of births and deaths. The population of these areas from where no vital statistics are collected has been excluded from the total population in calculating vital statistical figures. These systems although prevailing in most parts of India yet remain defective, especially with regard to the correct classification of the causes of deaths. The diagnosis of the diseases lies with the village chaukidars or village headman, as the case may be, who are mostly uneducated, and as they have to depend entirely on what they are told by the members of the family, it is obvious that a classification based on such diagnosis cannot approach accuracy.

The accuracy of 50,838 vital occurrences were investigated in the compulsory areas and verified by the health officers, health staff and officers of the Vaccination Department; 1,467 omissions were detected, 126 prosecutions were instituted and 51 convictions were obtained.

In the rural areas where the registration of births and deaths are not compulsory, 98,421 vital occurrences were verified by the health and vaccination staff. Verification of vital statistics in these areas is very difficult, especially in the districts which do not maintain a complete health organisation under district health officers.

The registration of births and deaths is still unsatisfactory and substantial improvement has not yet been achieved, as the village headmen or chaukidars who are in charge of registration fail to realise the importance of this branch of public health work. Further they are uneducated and lethargic to make correct enquiries and record all occurrences. In areas where compulsory notifications are in force the penal provisions of the Act were seldom enforced. It is a mistaken impression among the Registrars that all responsibility regarding the collection of statistics of births and deaths ceases with the introduction of the Act for compulsory registration. Most of the people, whether due to ignorance of the operation of the compulsory Act or to the fact that no cognizance is generally taken for failure to notify, fail to report the occurrences of births and deaths to the Registrar.

9. **Publication of vital statistics.**—The weekly publication of vital occurrences for all the municipal towns in the province with a population of over 30,000 continued as usual throughout the year.

Weekly epidemic reports of all the districts showing attacks and deaths from cholera, smallpox, plague and influenza were published regularly in the *Orissa Gazette* and also in some of the important newspapers.

By the publication of these statistics it is hoped to keep the public informed of the actual state of health of the large towns and of the prevalence of epidemic diseases in the districts. Publicity of this kind also demonstrates the utility of vital statistics and helps to create an interest in the minds of the people for general public health.

CHAPTERS III and IV.

State of public health in the province and history of the chief diseases—Epidemiology.

Incidence of chief diseases.—The statement below shows the ratios per 1,000 of population under the chief heads of mortality in 1937:—

	Urban.	Rural.	Combined.
Cholera	0·4	0·7	0·7
Smallpox	0·1	0·3	0·3
Fevers	7·7	15·5	15·2
Dysentery and diarrhoea ...	3·1	2·5	2·5
Respiratory diseases ...	1·7	0·7	0·7
Injuries	0·4	0·4	0·4
All other causes	8·0	8·8	8·8
Total ...	21·4	28·9	28·6

The death-rate appears to have increased from 27·8 in 1936 to 28·6 per mille of population in 1937. The increase in the number of deaths was chiefly due to large number of deaths from fever under which the death-rate of 15·2 was reported as against 14·0 in the preceding year.

The highest death-rate 15·2 was recorded from fevers but in the absence of any arrangements to report correct diagnosis it is not possible to say what percentage of deaths under fevers is definitely due to malaria.

The urban death-rates from cholera, smallpox and fevers were lower than those of the rural areas. This is ascribed to better standard of sanitation in the municipal towns but the mortality rates from dysentery and diarrhoea and respiratory diseases still remains higher in the urban areas. The high mortality rate from dysentery and diarrhoea in the urban areas of this province is mainly due to the bad state of water-supply.

2. **Cholera statistics.**—The death-rate from cholera decreased from 1·1 per mille in 1936 to 0·7 per mille in 1937. The districts of Cuttack and Balasore recorded high death-rates from cholera, viz., 1·4 and 1·5 respectively. Amongst the towns, Kendrapara (1·4) reported the highest death-rate.

3. **Cholera in the province.**—The province being notorious for cholera, this disease remained more or less prevalent throughout the year though in a somewhat mild form. The total number of deaths from this disease in 1937 was 5,076 as against 7,977 in 1936. The districts of Cuttack and Balasore recorded the highest number of deaths from cholera, namely, 3,103 and 1,499, respectively. Cholera was prevalent in the districts of Cuttack, Balasore and Puri throughout the year. The epidemic of cholera was in the maximum intensity in the districts of Cuttack and Balasore from January to April and July to September. The rest of the districts recorded sporadic cases of cholera. Nevertheless the mortality from cholera in the province was remarkably less during the year than the previous year.

4. **Cholera preventive measures.**—The following anti-cholera measures were adopted:—

(*a*) *Inoculation.*—About 192,610 C.cs. of anti-cholera vaccine were issued in 1937 against about 2 lakhs in the previous year. The total number of inoculations performed was 242,531 against 170,399 in the previous year (April 1936 to 31st December 1936). The excess in the number of inoculation over the number of doses of cholera vaccine supplied during the year may be accounted for the surplus quantity of cholera vaccine left over from the previous year and for inoculations performed in half doses to children.

Anti-cholera inoculation has now become a popular preventive measure. People now offer themselves of their own accord for inoculation at the approach of the cholera season. The whole supply of anti-cholera vaccine throughout the province was made by Government free of cost. In addition to anti-cholera inoculation, cholera Bacteriophage was also used as a prophylactic measure against cholera. 11,969 phials and 500 ampoules of cholera Bacteriophage were purchased by the Government for free supply in the province.

(*b*) *Disinfection.*—All sources of public water-supplies are disinfected with Potas Permanganate and bleaching powder, a sufficient stock of which is maintained by the local bodies, during epidemic season and also before the approach of the rainy season. At the time of actual epidemic occurring in any area, all private wells, tanks, houses, etc., are also disinfected. 31,000 wells, 5,862 tanks and 3,827 houses were disinfected in the Cuttack and Puri districts.

(*c*) Inoculation of pilgrims to the Rath and Snan Jatra festivals and also other more important festivals in the province.

(*d*) Assistance to the various district boards and municipalities with vaccine and Government doctors for anti-cholera work.

(*e*) *Public health propaganda.*—Now that all the districts except one have got a fairly well equipped public health organisation with properly trained staff this aspect of the preventive work has fairly improved. Extensive public health propaganda work has been carried out through the local public health staff and the Government school medical inspecting staff with magic lantern demonstrations and the distribution of leaflets and pamphlets.

5. **Smallpox.**—The total number of deaths from smallpox during 1937 was 2,269 as against 3,789 in 1936 giving a mortality rate of 0·3 as against 0·5 in the previous year. With 263 deaths in January the epidemic almost remained stationary till May. From June it turned downwards till it reached its lowest in the month of October from where it again stirred up as will appear from the following table:—

Months.	Deaths from smallpox.
January	263
February	301
March	280
April	299
May	293
June	189
July	102
August	94
September	98
October	82
November	90
December	178

As usual the rural areas suffered more than the urban areas and the highest death-rate was registered in the districts of Cuttack (0·6) and Khondmals (1·6) while the districts of Sambalpur and Puri returned the lowest death-rates, viz., 0·03 and 0·1 respectively. Amongst the towns Jajpur reported the highest death-rate (0·3).

The benefit of compulsory vaccination can be estimated from the less number of incidence from smallpox in urban areas where it is compulsory. Vaccination is not compulsory in rural areas except in the district of Puri and

the Ganjam Plains. So they suffer more from the disease. The question of making it compulsory throughout the province has been under the consideration of Government and it is hoped that with the passing of the new consolidated Local Self-Government Act for the province of Orissa, vaccination and re-vaccination will be made compulsory ere long.

At present under the existing Bengal and Madras Acts, primary vaccination is compulsory in all the urban areas, and the rural areas of Puri district in North Orissa; and in the Ganjam Plains and in the municipalities of Berhampore and Parlakimedi, both primary and re-vaccination are compulsory and free.

The control, supervision and management of vaccination have been transferred to the district boards of Cuttack, Puri and Balasore in North Orissa and in these districts the Health Officers of the district boards have been appointed Superintendents of Vaccination. The Civil Surgeons still function as Superintendents of Vaccinations in places where the local bodies have no health officers.

Vaccine lymph was purchased from the Vaccine Depot, Namkum, Ranchi, by Government and was supplied throughout the province free of cost. 641,971 vaccination operations were performed during the year as against 531,721 during the previous year. Out of these 229,188 were primary cases and 412,783 re-vaccinations.

6. **Plague.**—No case of plague was reported in this province during the year under report. Particular care was, however, taken to prevent this infection getting through the port of Gopalpur into this province through immigrants returning from plague-infected ports, such as Rangoon.

7. **Dysentery and diarrhoea.**—There were 17,194 deaths from this group of disease during 1937 as against 16,283 deaths in the preceding year and the mortality rate was 2·5 as against 2·3 per mille of population in the previous year. The districts of Cuttack and Puri recorded the highest death-rates, namely, 4·1 and 3·6, respectively. Amongst the towns Puri (6·6), Sambalpur (4·5) and Berhampur (3·4) reported the highest death-rates.

The highest death-rate in the districts of this province from this disease is probably due to climatic conditions and to a large extent is associated with the bad state of water-supply and defective sanitation.

CHAPTER V.

Fairs and Festivals.

As Orissa is famous for fairs and festivities, a great many *melas* are held every year in different parts of this province. Some of these *melas* are only of local interest and are attended by the people of the districts in which they are held and those of the adjoining districts. The Snan and the Rathjatra festivals, which are held at Puri, are the most important festivals in the province as well as in India. Puri, being the sacred place of the Hindu pilgrimage, attracts a large number of pilgrims from all over India. In 1937, the Snan and Car and return Car festivals were held at Puri on 23rd June, 9th July, and 17th July respectively. About 65,000 pilgrims, besides the normal population of Puri, numbering 37,558 assembled to participate in the celebration of the Car festival against 75,000 in the previous year. Nine Sub-Assistant Surgeons were deputed by Government for making sanitary and preventive arrangements at Puri during the festivals. Five of these were employed on sanitary duties and the remaining four were put on special duty at the cholera hospital. Besides these one Sub-Assistant Surgeon appointed by the Puri Municipality and the Sub-Assistant Surgeon incharge of the Puri Leper Asylum were employed on sanitary duties for the occasion. The town as usual was divided into six sanitary wards and each ward was put under the charge of a Medical Officer. About ten thousand pilgrims stayed in Dharmasalas and lodging houses. Some stayed with their friends and the majority, who came for a few hours, stayed on the road sides, etc. All the wells, numbering 2,059, were regularly treated with choleraphage during the

mela period. The wells at the railway stations of Sakhigopal, Delang, Khurda Road and Bhubaneswar were regularly treated with choleraphage under the supervision of the railway doctors on special duty during the period. The wells on the road sides between Puri and Sardaipur near Bhubaneswar were also regularly treated with choleraphage by the Health Officer of the District Board, Puri. Before and during the festival period intensive anti-cholera inoculations were carried out among the Pilgrims and residents of Puri as a measure against possible outbreaks of cholera ; 58, 743 anti-cholera inoculations were given to the pilgrims and the residents of the Puri town during the festival period. Both anti-cholera inoculations and administration of choleraphage were resorted to for the prevention of cholera in the festival area. Although sporadic cases of cholera were occurring in the town during the past few months, in as much as 19 cholera patients were admitted into the cholera hospital between 1st and 20th June 1937 and there were cholera in Puri district, the incidence of cholera in the *mela* did not at all assume high proportions. The total number of cholera cases reported during the *mela* period was only 12 cases in the whole town against 24 of the preceding year. All these cases were removed to the hospital and treated with choleraphage although some of them required intravenous saline injection. It is gratifying to note that there were no deaths from cholera among the patients against three in the previous year. Piped water from the Puri water-supply was available for 24 hours for 30 days throughout the town from the 450 street water hydrants ; the supply being continuous, quite a large number of pilgrims and residents were able to get pure water for drinking and cooking purposes. The whole water-supply was thoroughly chlorinated before the festival. Suspicious sources of water-supply were over-chlorinated, wherever possible so as to make the water unsuitable for any purpose, thereby compelling people to have recourse only to protected water.

Special arrangements were made as usual for prompt reporting of the cases of infectious diseases occurring in Dharmasalas, lodging houses and private houses by the house owners and medical practitioners. Ambulance cars were also posted at different places for the quick removal of cholera patients to the cholera hospital.

As regards propaganda work, besides general distribution of handbills and pasting of posters on various subjects at important places, lectures on personal hygiene and prevention of cholera, were regularly delivered with magic lantern demonstrations by the medical officers on the festival duty. Several volunteer organisations, viz., Puri Seva Samity including the Junior Red Cross group of the Puri Zilla School, St. John Ambulance Brigade, Bharat Sevashram Sangha, etc., worked during the festival. They rendered humanitarian services, such as distribution of drinking water, giving first-aid and carrying the sick and the injured to the hospital, etc.

Of the other important *melas*, Chandaneswar *mela* in the district of Balasore may be mentioned. This year the festival was held from 6th to 12th April. About 40,000 pilgrims assembled on the last day of the *mela*. The usual sanitary and water-supply arrangements made for the *mela* was satisfactory and no case of epidemic disease was reported from the *mela* area.

Numerous small fairs are usually held in all the districts of the province in which necessary sanitary arrangements are made by the local bodies under the supervision of the local health staff.

CHAPTER VI.

Urban Sanitation.

The province has eight municipalities, of these, Cuttack, Puri and Berhampur have each a qualified health officer paid for by Government. The former two are provincial officers with D. P. H. qualification and the latter is a subordinate provincial officer with L. P. H. diploma and the rest have no health officers and the sanitation of those municipalities is looked after by a Sanitary Inspector or a Sanitary Overseer not altogether a satisfactory arrangement. Nine Sanitary or Health Inspectors were employed in the municipal towns of the province during the year.

The need for the appointment of at least second class health officers in the bigger municipalities of Parlakimedi, Sambalpur and Balasore is immediately felt for improving the sanitation of those municipalities. These officers, if appointed, could in addition to their own sanitary duties supervise and perform the duties of a Supetintendent Vaccination. Sanitary Inspectors that are employed by these municipalities by reason of their limited training and outlook, are not considered qualified enough to undertake the work of health officers, nor are they capable enough to carry out effective preventive measures during epidemics.

Vaccination is compulsory in the municipalities of Cuttack, Puri, Balasore, Sambalpur, Kendrapara and Jajpur under the engal Vaccination Act. Both vaccination and re-vaccination are compulsory in the municipalities of Berhampur and Parlakimedi under the Madras District Municipalities Act.

Four out of the eight municipalities in the province, besides a number of union boards and union committee areas, were inspected by the Director of Health and Inspector-General of Prisons during the year under review and reports of these inspections were duly submitted to Government. Most of the recommendations made in the inspection reports involving small expenditure were carried out by the municipalities themselves, but recommendations with regard to bigger schemes for improved drainage, etc., have had to be postponed for paucity of funds.

2. **Expenditure on sanitation in municipal towns.**—The statement below shows the receipts and the expenditure for sanitary purposes during the year 1936-37 as compared with those of the previous year :—

Number of Municipalities.	Total receipts including opening balance.		Heads of expenditure.	1935-36.	1936-37.	Percentage of expenditure to the total receipts.	
	1935-36.	1936-37.				1935-36.	1936-37.
1	2	3	4	5	6	7	8
	Rs.	Rs.		Rs.	Rs.		
8	9,55,178	7,70,204	Conservancy ...	1,86,824	201,916	19·6	26·2
			Drainage ...	22,660	12,602	2·4	1·6
			Water-supply ...	22,869	27,503	2·4	3·6
			Vaccination ...	2,858	2,784	0·3	0·4
			Epidemics ...	10,254	8,337	1·1	1·1
			Markets and fairs ...	17,279	16,071	1·8	2·1
			Other sanitary charges	803	1,566	0·03	0·2
			Public health staff ...	16,376	13,840	1·7	1·8
			Total ...	2,79,523	2,84,619	29·3	37·0

3. **Chief sanitary works in municipal towns.**—The details of expenditure under this head are dealt with in the report of the Superintending Enginner, Public Health Circle, Bihar and Orissa.

CHAPTER VII.

Rural Sanitation.

The public health organisation of all the newly constituted six districts in the province remained unchanged. The several Acts and Rules relating to Public Health were in force in each district as they were before the amalgamation of the districts into a separate province, viz., the Madras Acts and Rules were in force in ex-Madras areas, the Central Provinces Acts and Rules in ex-Central Provinces areas and Bihar and Orissa Acts and Rules in the old Orissa Division.

The Public Health arrangements in Koraput and Ganjam Agency, Angul and Khondmals were managed by a staff maintained by Government.

Out of the six districts, Cuttack (excluding Angul), Puri, Balasore and Ganjam (excluding Khondmals and the Agency areas) have each a fully qualified health officer and a proper health organisation scheme. The last named health officer belongs to the Provincial Public Health Service and the former three officers are district board servants. In the Ganjam Agency, including Khondmals, and in Koraput district, the Civil Surgeon, Ganjam, and the Agency Surgeon, Koraput, were respectively directly in charge of the public health administration. In Koraput, the Agency Surgeon is assisted by a second class health officer for the performance of his public health duties. In Sambalpur, the Civil Surgeon is the head of the public health administration. He has a Government vaccination inspecting staff consisting of one Inspector and three Sub-Inspectors who attend to vaccination work as well as to other epidemics. The question of the appointment of a full-time qualified health officer, for Sambalpore is under the consideration of Government.

Vaccination is compulsory in the rural areas of Puri district under the Bengal Vaccination Act and both vaccination and re-vaccination are compulsory in the plains portion of Ganjam district under the Madras Local Boards Act. Vaccination in rural areas of North Orissa is performed in a licensed system, while in South Orissa this is done through paid vaccinators. It is absoultely necessary that vaccination should be made compulsory throughout the province and the question is already under the consideration of Government.

Introduction of a more efficient health organisation with a qualified health officer is considered an urgent necessity for every district. Without a health officer in the district efficient supervision of the work of the subordinate health staff and effective control of epidemics and the development of further important public health measures can hardly be possible.

Quite a lot of adulteration of food stuffs is going on in the rural areas, the Bihar and Orissa or the Madras Food Adulteration Acts not being enforced in them. It is hoped that when the "Orissa Prevention of Adulteration and Control of the Sale of Food Act", which has since been passed by the Legislature, comes into operation matters will impove.

The system of registration, collection and transmission of vital statistics still continued to work unsatisfactorily as the Bengal Births and Deaths Registration Act and the Madras Act of 1899 have not been extended to the rural areas, but it is hoped that the new province of Orissa which is now in its public health evolution will take definite measures to ensure the correct recording of vital statistics in no very distant date.

1,79,309 inoculations were performed in the rural areas of the province, the cholera mortality having decreased from 7,814 in 1936 to 4,999 in 1937. There was also a decrease of smallpox mortality from 3,752 in 1936 to 2,259 in 1937. Malaria still takes a heavy toll of lives in the rural areas and it is difficult to control it with the funds and the staff available. The measures against the disease which have been taken by the local bodies or the Government during the year in question can only be regarded as patch works in certain local areas, although these were not without adequate value, notably in the way marked reduction of malaria in Balugaon, a notoriously malaria-ridden fishing village on the Chilka Coast in Puri district, was noticed.

2. **Expenditure on sanitation by district boards.**—The following statement shows the receipts and expenditure of district boards under the principal headings of sanitation :—

Number of district boards.	Total receipts including opening balance.		Heads of expenditure.	1935-36.	1936-37.	Percentage of expenditure to the total receipts.	
	1935-36.	1936-37.				1935-36.	1936-37.
1	2	3	4	5	6	7	8
	Rs.	Rs.		Rs.	Rs.		
6	36,31,992	29,98,583	Conservancy ...	14,454	11,455	0·4	0·4
			Drainage	990	480	0·03	0·02
			Water-supply ...	43,872	54,733	1·2	1·8
			Vaccination ...	37,113	30,203	1·0	1·0
			Epidemics	4,373	2,179	0·1	0·07
			Markets and Fairs ...	1,562	2,826	0·04	0·08
			Other sanitary charges	...	...	...	...
			Public Health staff ...	1,17,154	1,00,631	3·2	3·4
			Total ...	2,19,518	2,02,007	6·0	6·7

It will be seen from the above statement that the expenditure on sanitation by district boards, although some of them are in receipt of Government grants towards the maintenance of a health organisation scheme in their districts, is too little to provide for adequate public health amenities to the people.

It is therefore very necessary to make it obligatory on the part of the local authorities to set apart a certain percentage of their income for adequate expenditure on public health and sanitation of the district.

CHAPTER VIII.

Fevers.

Fevers appear to be the chief cause of mortality in the province. 1,05,931 deaths from fever alone or 53·2 per cent of the total mortality from all causes were reported to have occurred during the year as against 50 per cent in the last year. A number of diseases in which the rise of temperature is a marked symptom continue to be grouped under the general heading 'fever'. The births and deaths registration being not compulsory in the rural areas and the agency through which vital statistics are collected, being not educated or at least not qualified to diagnose the cause of death, it is not possible to account for the deaths caused by different kinds of fever, such as malaria, enteric fever, measles, relapsing fever, kala-azar, influenza, typhoid, cerebrospinal fever, etc., but it may be admitted that in Orissa the bulk of the deaths from fever is without doubt due to malaria.

The death-rate under the general head 'fever' was 15·2 during the year 1937 as compared with 14·0 in 1936. The highest death-rates were recorded in Khondmals (27·7), Angul (21·9) and in the district of Balasore (19·5). Amongst the towns, Kendrapara (16·2) and Puri (12·8) respectively reported the highest death-rates from this disease.

From the mortality table given below month by month, it would appear that turning downwards from its previous year's maximum in December 1936, the death-rates from fevers steadily reached its lowest in July although there was a slight rise in March. From August its tendency to rise was marked till it rose to the maximum of the year in December. Compared with the previous year, the mortality under this head was higher in all the months except in July to September and December in which the mortality from this cause was lower :—

Month.		1936.	1937.
January	...	7,169	12,123
February	...	7,413	8,831
March	...	8,261	9,267
April	...	7,103	8,974
May	...	5,761	7,992
June	...	6,748	6,255
July	...	7,411	5,989
August	...	8,579	7,949
September	...	8,140	7,880
October	...	7,767	8,584
November	...	9,680	9,698
December	...	14,340	12,389

Malaria.

As has been noted above, the bulk of deaths from fever is attributed to malaria. There was a sharp epidemic of malaria during the year 1937 specially in the coastal areas of the province. This epidemic may be responsible for the increase of death-rate from fevers in 1937 as compared to 1936.

The coastal villages of Ganjam district had to experience a severe epidemic of malaria almost during the whole year. 417 villages were affected with malaria and about 73,000 cases were treated in hospitals and dispensaries and also by the health staff of the District Board and the special staff appointed by Government. 155 lbs. of quinine sulphate out of which 140 lbs. were supplied by Government and 40,000 quinine tablets purchased by District Board were distributed free of cost. In addition to the permanent staff of the District Board 2 Government Sub-Assistant Surgeons and six compounders were appointed to combat the epidemic.

The sad experience of the heavy incidence of malaria in the villages bordering the Chilka lake in Puri district, specially the portion under the Banpur and Tangi police-stations and in the island of Parikud which suffered very badly from this disease in 1936, attracted the attention of the Provincial Government and it was decided to take proper measures to prevent its recurrence. Various causes leading to the outbreak had to be explored and it was decided to undertake on an experimental basis a better standard of anti-malarial measure in a particular locality found to be worst affected in this area. The village Balugaon with its surrounding villages had suffered badly and the splenic index of the place lent strength to its selection for this experiment.

The campaign consisted of the clearance of weed from the foreshore of the lake, which was believed to be the breeding ground of mosquitoes, and treatment of the whole population, viz., 2,778 persons men, women, and children of the village with quinine and plasmochin. The total cost of the

campaign was approximately Rs 2,000 of which the major portion was contributed by Government. The result obtained was very encouraging as by the end of May the whole village was found to be completely fever free. A detailed report of the anti-malarial campaign has been submitted to Government separately. As malaria plays havoc in this part of the district year to year it is proposed to continue this measure next year covering a larger area, 25 miles in length and 4 miles in breadth along the Chilka shore.

The districts of Cuttack and Balasore also experienced a severe outbreak of malaria. The town of Kendrapara and some villages in Aul thana in the Cuttack district suffered very badly for which special malaria staff with necessary medicines had to be deputed by Government. A strong anti-malarial committee with the Subdivisional Officer, Kendrapara as President and the local Assistant Surgeon as Secretary was formed for the town of Kendrapara and much useful work was done through this society.

The anti-malarial operations in the Koraput, Jeypore, Padwa and Pottanghi in the district of Koraput which mainly consist of anti-larval measure, viz., Paris-greening and oiling of breeding grounds continued during the year. The anti-malarial provision made for Padwa was shifted to Malkanagiri at the close of the year.

Anti-malarial schemes for the districts of Ganjam, Puri, Balasore, Cuttack and Sambalpur were submitted to Government during the year. These schemes are intended for localised areas in the districts where malaria is reported to be hyperendemic and they are only patch works considering the vastness of the problem the Government have to tackle in the province.

Sale and free distribution of quinine.—Quinine worth Rs. 2,142 was sold through post offices and other vendors during the year 1937. The system of sale of quinina through post offices were also extended to the districts of Ganjam and Koraput. 220 lbs. of quinine sulph. costing Rs. 3,960 out of the Government of India stock was distributed free in the malaria affected areas of the province. This supply was in addition to the quantity purchased by the Provincial Government and the local bodies for the normal requirements of the districts concerned.

The field experiment to demonstrate the effects of Paris-green on paddy crops was again conducted at the Government Agricultural Farm, Cuttack, under the direct supervision of the Deputy Director of Agriculture, Orissa, the materials and apparatus being supplied by the B. N.Ry, free of cost. The experiment was conducted with sufficient number of replications and designed on paired plot basis. The object of the experiment was to study the effect of Paris greening on paddy plants in the flowering stage and on the ultimate outturn of the crop thus treated. One per cent mixture of Paris-green with powdered soap stone at 1 lb. per acre was used. From the yields of paddy in the treated and untreated plots, it was found that the yield of the untreated plots calculated on acre basis exceeded that of the treated plots by one maund and seven seers. This difference in favour of the untreated plots would appear no doubt to be quite significant to a lay man but when statistically interpreted, the difference in the yields has been found to be insignificant.

The Provincial Government sanctioned the appointment of a Provincial Malaria Officer with the necessary staff during the close of the year and it is hoped that the question of tackling the malaria problem of the province will now be taken up on more efficient and scientific lines.

CHAPTER IX.

Maternity and child-welfare.—As the new province of Orissa could not form a Maternity and Child-Welfare Society of its own the Bihar Maternity and Child Welfare Society continued to work through its Managing Committee in so far as the North Orissa districts were concerned. No share of the invested capital of the Bihar and Orissa Child Welfare and Maternity Society was received by Orissa as it was held that the invested capital of Rs. 20,000

was made up only of donations from the gentries of Bihar. The local centres in Orissa are financed from the annual grant made by the Provincial Government and by contributions made by the local bodies and donations collected locally.

There were five maternity and child welfare centres, viz., one at Cuttack, one in Balasore, and one in Sambalpur and two in Ganjam district, viz., at Berhampur and Parlakimedi. Each centre is managed by a local committee.

The Maternity and Child Welfare Centre at Cuttack is in charge of a qualified Lady Medical Officer designated as Maternity Supervisor. Her entire pay and allowances are met from contribution by Government. There are five trained *dais* employed in this centre. The Provincial Government make an annual contribution of Rs. 1,500 towards the upkeep of the centre through the Maternity and Child Welfare Society. The Cuttack Municipality and the Cuttack District Board contribute Rs. 400 and Rs. 200 per annum respectively to the centre. 4,725 of post-natal (including re-visits) and 941 (first visits) of anti-natal cases were attended by the staff of this centre. Classes for the training of indigenous *dais* are also held at this centre as well as at the Cuttack General Hospital under the Victoria Memorial Scholarship Fund. There are ten beds available for maternity cases in the Cuttack General Hospital.

Balasore.—The centre is managed by a local committee. It is in charge of the lady doctor attached to the Sadr Hospital, Balasore. The Provincial Government make and annual contribution of Rs. 600 to this centre. 311 abour cases were attended by the staff. Four trained *dais*, one appointed by the Municipality and three by the committee are employed in this centre. Indigenous *dais* are also trained at this centre under the Victoria Memorial Scholarship Fund.

Sambalpur.—The Maternity and Child Welfare Centre consisted of one qualified midwife who is also a qualified nurse and health visitor and a trained *dai*. They are paid by the local authorities, i.e., Municipality and District Council which contributed annually Rs. 1,000 and Rs. 500 respectively to this centre. The centre is managed by a local committee. The lady doctor attached to the Sambalpur Sadr Hospital supervised the work of the centre. 169 normal labour cases were conducted by the staff as against 181 of the previous year. Two *dais* are trained annually at the Sadr Hospital under the auspices of the Victoria Memorial Scholarship Fund.

The Bargarh Sanitation Committee also appointed a qualified trained *dai* during the year.

Berhampur.—There is a well organised maternity and child welfare centre in this station, the headquarters of Ganjam district and it is housed in a specially built model building. The management of this centre is under a local committee, the expenses towards its upkeep are chiefly met from local contributions and the Berhampur Municipality gives an annual contribution of Rs. 1,000. There is adequate staff which consists of a Lady Health Visitor (Lady L.M.P.), a midwife and a *dai* and some servants. This is a very popular centre where both pre-natal and child welfare activities are carried out besides home visiting in the homes of expectant mothers of the locality.

Parlakimedi.—The station is in Ganjam district. A small rented building has been taken where the work is carried on by a trained midwife under the supervision of the lady doctor and the Assistant Surgeon attached to the local Government hospital. This centre was opened only recently. Its management is vested in a local committee and practically the entire expense is met from local subscriptions and the Parlakimedi Municipality contributes a small amount towards it.

In addition to the above five centres maternity and child welfare work is also carried on at the following places :—

Puri.—There is one centre for maternity and child welfare work in the Puri town managed by the Puri Municipality, another centre at Khurda under the Puri District Board. In the former one midwife and one trained *dai* have been appointed and in the latter one trained *dai*.

An attempt has been made by the Puri District Board to reach rural areas with maternity and child welfare work. A batch of 12 indigenous *dais* were trained by Medical Officer in charge of the Local Fund dispensary at Pipli. Out of the 12 *dais* 8 have been supplied with a maternity outfit box.

A training class is also held at the Puri Pilgrim (Sadr) Hospital for the training of *dais* under the Victoria Memorial Scholarship Fund.

Three hundred and twenty labour cases were conducted by the maternity *dais* and midwives in this district.

Ganjam Plains.—All the District Board dispensaries have qualified midwives numbering 16 in all. The number of labour cases conducted during the year was 1,600, including those conducted by the two midwives at the Government Hospital, Berhampur. The Child Welfare Centre at Chatrapur was transferred to Ballipodoro and the midwife attached to it conducted 84 labour cases.

Ganjam Agency.—There are no maternity centres in the Ganjam Agency. Midwives have however been appointed, one at each of the Government hospitals at G. Udayagiri, Balliguda and Phulbani who attend to maternity cases.

Koraput.—There are no maternity centres in this district. As in Ganjam, midwifery service is available at some of the local fund dispensaries and hospitals. A maternity ward is under construction in the Local Fund Hospital at Rayagada and the Agency District Board has maintained a health visitor to organise maternity and child welfare work in the rural areas.

To encourage maternity and child welfare work in the province Health and Baby Week celebrations are organised by the District Health Staff. Prizes are given to well cared and healthy babies and also to mothers.

As there are innumerable unqualified *dais* engaged in midwifery practice all over the province, the Provincial Government have taken up the question of introducing a Bill in the Provincial Legislative Assembly for the registration of midwives and nurses and for that purpose the Nurses and Midwives Registration Act will be introduced shortly.

CHAPTER X.

School hygiene and medical inspection of school children.—The Government maintain a special staff for the medical examination of scholars of all the high English schools and all middle English schools in the urban areas where there are high English schools.

There is one School Medical Officer of the Provincial Public Health Service, with the necessary Public Health qualification and one Assistant School Medical Officer of Sub-Assistant Surgeon class for this province. These officers inspect all the high English schools and most of the middle English schools of the province. The boys in the middle English and the middle vernacular schools in the rural areas are examined by the District Board Health staff and District Board dispensary doctors. No examination of school children in primary schools is done as the number of such schools is too large for the existing Government or District Board staff.

Medical examination of scholars.—The total number of high schools and middle English schools visited by the Government School Medical staff was 23 and 11 respectively. Although the system of medical inspection was extended to the schools in South Orissa, actually no inspection was made during the year. A total of 4,087 students were examined in these schools, of which 2,509 or 61 per cent were found defective as against 82 per cent and

70 per cent in the years 1935 and 1936 respectively. The table below will show the percentage of defective students according to age groups :—

Age.	Percentage.
24	100
23	100
22	42
21	50
20	49
19	55
18	69
17	56
16	67
15	58
14	62
13	61
12	59
11	64
10	67
9	59
8	66
7	75
6	70
5	67

Height and weight.—The average height and weight of scholars examined at different ages may be seen in the table given below :—

Age.	Height in inches.	Weight in seers of 80 tolas.
24	64	52
23	63	51
22	65	55
21	64	52
20	64	53
19	65	54
18	64	51
17	63	51
16	63	49
15	62	46
14	60	42
13	59	39
12	57	36
11	54	31
10	53	30
9	50	27
8	51	26
7	49	24
6	46	21
5	47	21

The common ailments chiefly noticeable in the scholars examined were chronic malaria, enlarged tonsils, defective vision, pyorrhoea, caries teeth, skin diseases, hydrocele and leprosy. In the schools at Lakshmannath and Kendrapara the percentages of students suffering from chronic malaria were 71 and 50 respectively.

Incidence of leprosy.—As many as 93 students with leprotic patches as against 40 of the last year were detected, out of whom a good number was found in infective stage. The percentage of incidence among the scholars works out to 2·2. It seems as if the disease is becoming as common as the other ordinary ailments. This menace needs the urgent attention of the authorities concerned. The infective cases were however advised to be excluded from the school in the interest of the other students and to undergo systematic and regular treatment. The non-infective cases were allowed to attend school but at the same time they were compelled to undergo treatment regularly and were placed under careful medical surveillance.

Nutrition.—Of the total number of 4,087 scholars medically examined there were found 1,479 boys or 36 per cent with good nutrition, 2,116 or 52 per cent with fair nutrition, 492 or 12 per cent with poor nutrition. The number of students with good nutrition is noticed to be increasing in proportion to the decrease of the number of students with poor nutrition and this fact gives us a clear idea of the gradual development of sanitary consciousness and tendency towards better hygienic living among the younger generations.

The following schools need special mention on account of high percentage of defective students found in them :—

Kendrapara High School	...	...	89 per cent.
Biraja Middle English School	...	...	88 „
Lakshmannath High English School	...	...	85 „
Pograi Middle English School	...	...	82 „

During the year as many as 1,107 or 72 per cent of the scholars were benefited out of the total number of 1,537 old defectives examined.

In the rural areas, the total number of students in middle English and middle vernacular schools examined by the District Board staff was 3,205 and the number recommended for treatment was 1,744 or 54 per cent.

Lectures on hygiene.—The School Medical Officers also deliver lectures on hygiene, sanitation and epidemic diseases common in India to the students of classes X and XI of the high English schools. These are mostly illustrated with magic lantern slides. The School Medical Officer delivered 246 lectures during the year. Attendance at the lectures is compulsory according to the Patna University Regulations, but as hygiene is neither a compulsory nor an optional subject in the Matriculation class, the lectures do not receive quite the attention they deserve. These lectures however afford an opportunity for the propagation of knowledge and information on the public health subjects. They are expected to awaken an interest in the minds of the boys for healthy living and prevention of diseases.

Vacation course.—In the months of May, June and July when all the schools are closed for the summer vacation, the services of the School Medical Officer and his staff are utilized for delivering a course of vacation lectures to the village gurus and members of the teaching and inspecting staff of the Education Department and also for other public health duties, if necessary. In May 1937, the School Medical Officer delivered a series of lectures on personal hygiene, school hygiene, epidemic diseases and village sanitation to the primary school teachers at selected centres in South Orissa, viz., Aska, G. Udayagiri, Gunupur and Jeypore. 274 teachers attended these lectures besides the inspecting staff of the Education Department and a large number of students.

In the months of June and July the School Medical Officer and his staff were deputed for the Snan and Car festival duties at Puri.

Inspection of school premises and hostels.—During their visit to the school, the School Medical Officer and his staff regularly visit the school and hostel buildings. 73 such school premises were inspected during the year. These inspections have definitely helped in recent years to improve the sanitation and to rectify defects in the sanitary convenience for both day and night scholars. They also look into the arrangements made for physical exercises, games and suitable sitting accomodation provided.

Diet.—In almost all the hostels rice, dal, and vegetables were found to constitute the main items of food. The School Medical Officer advised the authorities how to balance the diet of the boarders. Milk and ghee are taken by a very few students as a luxury. Meat and fish are sparingly used but fish is taken oftener than meat in places where it is cheaper and sufficiently available. In many schools the system of compulsory tiffin is in vogue and many boys who otherwise would not have been able to take tiffin during the school hours are now getting it regularly. The Peary Mohan Academy in Cuttack town which contains the largest number of students has been able to prepare tiffin daily for nearly 500 pupils in a very clean and sanitary condition. It is hoped that those schools which consider this system as impracticable will follow this example.

The question of the appointment of a whole-time lady school medical officer for the province is still under the consideration of the Provincial Government and as there was no officer, the medical examination of girl students could not be carried out. A whole time medical officer of the Assistant Surgeon class was maintained by Government for the medical examination and treatment of students of the Ravenshaw College. Medical examination of students residing in hostels and private messes under Government supervision, was also carried out by local Civil Assistant Surgeons.

CHAPTER XI.

Health Propaganda.

This work was carried on by the Public Health staff of the province throughout the year under report as this work is one of the routine duties of the district and municipal health staff. The Public Health staff of each district delivered a series of lectures in their respective districts with and without magic lanterns. Leaflets and pamphlets on the prevention of cholera, smallpox and malaria in the vernacular language of the province were widely distributed especially during epidemics of cholera and smallpox.

During the year under report propaganda on various health subjects was made in 8,032 villages and in almost all the towns of the province 839 lectures with magic lantern demonstrations, 9,304 lectures and talks with illustrated charts were conducted during the year throughout the province to a total audience of about 8 lakhs.

At larger festivals interesting posters on public health subjects were hung up at important places and at railway stations to attract the notice of pilgrims.

The National Health and Baby Week was observed in 142 centres in the district of Ganjam. All the departments in the district participated. The following primary items were attended to in almost all the centres :—

(1) Cleanliness and sanitation of the villages.

(2) Lectures on health subjects, with magic lantern.

(3) Exhibiting posters and coloured charts and health models and explaining them to the villagers.

(4) Staging of health dramas.

(5) Taking out processions, singing health songs and slogans.

(6) Holding sports and distributing prizes and sweets.

(7) Distributing pamphlets and leaflets.

(8) Holding competitive examinations and awarding suitable prizes.

There was sufficient provision in the Provincial Public Health budget for publicity campaign, but full use of it could not be made on account of the non-appointment of the Assistant Director of Public Health who was to take charge of this work.

CHAPTER XII.

Public Health Administration.

The statement below shows receipts and expenditure under the head "39—Public Health (Medical) for the years 1936-37 and 1937-38". The Director of Health and Inspector-General of Prisons is the administrative head of the Public Health Department. He is also the head of the Medical and Jail Departments in Orissa.

Head.	Receipt.		Head of expenditure.	1936-37.		1937-38.	
	1936-37.	1937-38.		Budget provision.	Expenditure.	Budget provision.	Expenditure.
1	2	3	4	5	6	7	8
	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
Sale proceeds of sera and vaccine, etc.,	16,210	12,320	Public Health establishment.	83,538	65,612	91,227	69,262
			Medical examination of scholars and teaching of hygiene in high schools.	7,950	7,411	8,432	7,939
			Malaria ...	7,410	7,249	12,805	8,836
			Other epidemic diseases.	28,292	22,898	31,220	18,696
			Publicity campaign.	1,200	...	840	336
			Bacteriological laboratories.	2,593	3,985	23,373	15,447
			Grants to District Boards and Municipalities for public health purposes.	41,667	41,151	46,033	39,389
			Contribution to Pasteur Institute for vaccines.	1,600	1,120	2,360	245
			Total ...	1,74,890	149,376	216,290	160,150

All requisitions of the Public Health Department were met by Government and the funds were made available in most cases.

The following staff was maintained by Government for Public Health work during the year under report :—

(1) Director of Health and Inspector-General of Prisons.

(2) Three Medical Officers of Health of Provincial Service.

(3) Two second class Medical Officers of Health of Subordinate service.

(4) One School Medical Officer of Provincial Service.

(5) One Assistant School Officer of Subordinate Service.

(6) Two Inspectors of Vaccination.

(7) Four Sub Inspectors of Vaccination.

(8) Nineteen Health Inspectors.

(9) Thirty four Vaccinators.

The appointment of a Provincial Malaria Officer was sanctioned by Government at the close of the year but as no suitable qualified candidate with the necessary public health qualifications was available from within the province the post could not be filled up. As no Assistant Director of Public Health was employed in the province during the year under report the Director of Health and Inspector-General of Prisons alone supervised the sanitation and public health of the province visiting practically all the towns of this province and a very large number of villages some of them in the remote areas, and gave all necessary advice to the local bodies on public health work and in the improvement of all sanitary matters. It may be mentioned that wherever he visited, he received the closest co-operation from the local body authorities and the general public in the carrying out of his advice and it is a pleasing feature to note that in the new role of village development and reconstruction the importance of rurl sanitation and hygiene is beginning to receive its right place in the counsels of the people. The three Medical Officers of Health who possess special qualifications belong to the Provincial Service. Two of them have been appointed as Health Officers of the two important towns of Cuttack and Puri. The third one is the District Health Officer of Ganjam.

The two second class Medical Officers of health have been appointed as the Health Officer of Berhampore Municipality and the Assistant Health Officer, Koraput Agency. The Schcol Medicl Officer and his assistant were employed in the medical examination of scholars of high English schools and all middle English schools situated near about these high schools.

The Inspectors of Vaccination Sub-Inspectors of Vaccination and the Health Inspectors are employed for carrying out public health and vaccination work in rural areas under the supervision of Health Officers or Civil Surgeons whoever is in charge of the Public Health administration of the district.

Besides the above regular staff epidemic doctors of Sub-Assitant Surgeon class and a few Sub-Assistant Surgeons of Civil medical cadre were employed temporarily on epidemic duty when necessary to supplement the District Board Health staff.

The local bodies are held responsible for the sanitary requirements of the area, in their charge. A list of sanitary staff employed by the municipalities and the district board of the province is given in the Appendix 3.

The public health problem in rural areas of the province presents many difficulties. The scattered nature of the population, the extensive areas that have to be covered without adequate facilities for communication and the insufficiency of subordinate public health staff render it difficult for the efficient discharge of public health functions. Most part of the province being liable to flood every year it makes it very difficult to provide suitable drinking water in the rural areas. In addition, the villagers are so strictly conservative and superstitious that it takes time for them to appreciate the value of instructions on health subjects given by the Public Health workers.

CHAPTER XIII.

Vaccination.

The annual vaccination report is submitted as an annexure to this report.

CHAPTER XIV.

Other Public Health Services.

Public Health Laboratory.—There was no separate Public Health Laboratory for the province of Orissa during the year under report. The articles required for the chemical and bacteriological examinations were examined in the Public Health Laboratory, Patna, and in the King Institute, Guindy, Madras, on payment of a contribution by the Orissa Government. The total number of samples of water from various sources of the province examined chemically and bacteriologically during the year were 148 as against 142 of the previous year. Quarterly examinations of protected water supplies and annual examination of samples of water of the jails of the province were carried out as usual.

Food stuff.—During the year under report 267 samples of food articles were examined as compared with 235 articles of the preceding year. The following are the various samples of food stuffs examined and the number found adulterated.

Ghee.—One hundred and nineteen samples of ghee were examined out of which 99 or 83 per cent were found below the standard or adulterated as opposed to 66 per cent of the previous year.

Mustard oil.—Thirty-seven samples of mustard oil were examined out of which 18 or 48 per cent were found to be adulterated as opposed to 37 per cent. of the previous year.

Sweets.—Thirty samples of sweets prepared from ghee were examined out of which 23 or 76 per cent. were found to have been made of adulterated ghee as against 87 per cent. of the previous year.

Milk.—Sixty samples of milk were examined out of which 44 or 73 per cent. were found adulterated as against 82 per cent. of the previous year.

Atta.—Seven samples of wheat flour were examined as against 3 of the previous year but all of them found to be genuine.

Til oil.—Eight samples of Til oil were examined but only one was found to be adulterated.

Miscellaneous.—Five samples of ground-nut oil, 1 sample of linseed oil were analysed to determine their purity. Only the linseed oil sample was found to be non-genuine.

The increase in the number of samples of food stuffs analysed is due to the fact that the local bodies are beginning to realise the importance of enforcing the Food Adulteration Act, but they have not yet paid proper attention to the collection of sufficient samples of many other articles of food which are of great food value such as butter, cheese, etc. as well as of drinks, such as tea, coffee, etc.

The establishment of a combined Public Health Bacteriological and Pathological Laboratory for the province of Orissa at a total cost of Rs. 42,607 was sanctioned by the Provincial Government at the close of the year and all preliminary arrangements were made for starting work from the beginning of the next year. It is hoped that with the establishment of the institution, full advantage will be taken by the local bodies and others for the analysis of Food and water.

The new "Orissa Prevention of Adulteration and the Control of Sale of Food Act" which is before the Provincial Assembly covers new grounds and embodies better provisions to meet all reasonable requirements for effectively controlling storage, distribution and sale of various foods and drinks in the province and the most pleasing feature of it is that there is a very strong public opinion to back up the new Act which is before the Provincial Assembly.

CHAPTER XV.

General remarks.

1. **Incidence of cerebro spinal fever.**—Two hundred and sixteen cases of cerebro-spinal fever were treated in hospitals and dispensaries of the province during the year under report. Out of these cases five proved fatal. Besides the hospital and dispensary figure, there may be cases occurring in the rural areas, but under the existing arrangement for the collection of statistics, it is not possible to give the total approximate figure of the incidence of the disease in the province. Bad housing conditions is no doubt largely responsible for the growing incidence of the disease.

2. **Notification of infectious diseases.**—The Bihar and Orissa Municipal Amendment Act, 1935, which provides for the compulsory notification of cases suffering from certain infectious diseases, namely, cholera, smallpox, plague, tuberculosis by the occupier of the house, a manager of factory, dharmasala, hotel or sarai where a case occurs and by the medical practitioner treating such case to the Health Officer or Civil Surgeon of the district or the Commissioner continued to be in force in all the municipalities of North Orissa. But no such provision for the compulsory notification of these diseases exists in the Bihar and Orissa Local Self-Government Act for the rural areas and consequently frequent delays occur in taking adequate preventive measures in time. In municipalities of South Orissa the notification of above infectious and dangerous diseases is made compulsory under the Madras District Municipalities Act. The enforcement of the Act facilitates the health staff in undertaking preventive measures as soon as a case is reported and thereby further spread of the disease is greatly checked. It may however be mentioned that provisions for the compulsory notification of infectious diseases, throughout the province, specially in the rural areas are not considered adequate. It is hoped that this defect will be remedied when the new consolidated Local Self Government Act for the province which is under preparation comes into operation.

3. **Port Health Administration.**—There are three minor ports in this province, viz., Gopalpur, Puri, and Chandbali. The port of Gopalpur has a regular shipping traffic with Rangoon and the port of Puri maintains a periodical traffic with the ports, both inside and outside India. The port of Chandbali has got only occasional traffic with Calcutta.

The port of Gopalpur.—During the year those ships which were reported to be "infected" or "suspected" were inspected. No case of epidemic disease occurred in this port during the year under report but one case of chicken pox and one case of smallpox occurred on board for which appropriate measures of disinfection and vaccination were undertaken. The general sanitation of the port was satisfactory.

As the port of Rangoon remained infected with plague and smallpox during the most part of the year a disinfecting staff had to be maintained at the port of Gopalpur for disinfection of cargoes and personal effects of passengers and crew of infected vessels coming from Rangoon. It is always a source of anxiety for the Public Health Department as a constant vigil has to be maintained to prevent the introduction of plague into the province through this port as Gopalpur has got an extensive and direct shipping communication, both passengers and cargoes, with the port of Rangoon. On this account the port health work carried out by the part time medical officer is not considered adequate enough.

The port of Puri.—During the year only one cargo vessel with a crew numbering 14 landed at this port. The sanitation of the port was satisfactory and no case of infectious disease occurred on board.

The port of Chandbali.—During the year the general sanitation of the port was satisfactory. Only 3 vessels arrived at this port from Calcutta with cargo and with a few passengers and no infectious diseases broke out on board.

4. **Urban and rural housing conditions.**—The conditions are the same as reported last year. No headway towards improvement has been made since then. There is absolutely no law to enforce the building of houses on approved plans in the rural areas. Villages have therefore grown up haphazardly. Innumerable excavations may be found in villages due to the removal of earth for house construction. The houses are generally made of mud walls and thatched roofs. They are often dark and ill-ventilated.

With regard to urban areas, what little power has been vested in the municipal board with regard to the construction of houses under the Municipal Act, is seldom exercised.

5. **Flood Relief Work.**—In July and August 1937 there were heavy floods in the rivers Mahanadi and Kathjuri in quick succession, the highest flood level rose to 27 feet on 7th August 1937 in the river Kathjuri causing several breaches on the right and left banks of the river. As a result a large portion of the districts of Cuttack and Puri were submerged in flood water. Forty-two villages in the district of Sambalpur were also affected on account of high flood in the Mahanadi. Medical and sanitary measures were taken quickly in order to prevent the outbreak of epidemic diseases in the flood affected areas. The Director of Health and Inspector-General of Prisons accompanied by the Civil Surgeon of Cuttack visited the areas seriously damaged by the flood. Six centres each in the districts of Cuttack and Puri, were opened for medical relief and for taking sanitary measures. In addition to the District Board staff six Government medical officers were deputed to work in these centres. Two medical relief parties consisting of the senior students of the Orissa Medical School, each in charge of a Sub-Assistant Surgeon, were organised. They did excellent relief work and one student actually rescued a party of women and children stranded in a country boat in the mid-stream.

Sufficient quantities of drugs and disinfectants were stocked by the District Boards concerned and in addition Government supplied 448 lbs. of bleaching powder, 16,000 c. cs. of cholera vaccine and 800 phials of choleraphage. District Medical Relief Committees were formed with the Health Officer of the District Board as Secretary and all the Government and District Board staff were placed at the disposal of this Committee for medical relief work and sanitary measures. In the district of Cuttack, 5,685 cases were treated for all diseases, 3,919 wells were disinfected, 23,855 persons were inoculated against cholera and 1,859 persons were given medical comforts in the flood-affected areas.

It is gratifying to note that as a result of the precautionary measures taken, not a single case of cholera or any other acute bowel disease was reported from the affected areas. All the departments of Government and local bodies fully co-operated in carrying out necessary relief measures.

It is however regrettable to note that one of the young Government Assistant Surgeons who was deputed for flood relief work in Puri district developed pneumonia and succumbed to the disease subsequently.

6. **Leprosy Relief.**—Leprosy is combated in the province by three methods, viz., (1) isolation, (2) treatment and (3) propaganda.—

(1) The Cuttack Leper Asylum which is the largest in the province is maintained from contribution by the "Mission to Lepers in India" by the capitation grant made by the Provincial Government at Rs. 3 *per capita*, and from contribution made by the local bodies. There were 357 inmates in the Asylum during the year under report. The asylum is being extended by the construction of a special children's ward at a cost of Rs. 15,000 which will be met from the King George V Memorial Fund. The foundation stone of this new ward was laid by His Excellency the Governor of Orissa.

Leper Colony, Puri—There are 75 inmates in this colony. It is managed by a managing committee. In addition to the services of a Government medical officer who is in charge of this colony, the Provincial Government made a contribution of Rs. 2,556 for the upkeep of the colony. The District Board and the Muncipality of Puri contributed Rs. 300 each.

Bargarh in the district of Sambalpur.—About 75 lepers have isolated themselves in huts one mile away from the town.

Hatigarh in Balasore district.—Fourteen families have isolated themselves by building houses of their own. They maintain themselves by the help of their relatives and by doing labour for others. This colony has been organised by the local missionary.

(2) *Treatment.*—Besides being isolated at the above asylums, the patients are also given treatment there. Treatment is also given in the 71 leprosy clinics established in the hospitals and dispensaries of the province, distributed as follows :—

District.	Number of clinics.	Patients treated.
Cuttack	20	994
Puri	8	1,701
Balasore	3	448
Sambalpur	13	1,066
Ganjam	21	3,340
Koraput	6	110

An amount of Rs. 2,700 was contributed by Government for the maintenance of the leprosy clinics in the districts of Cuttack, Puri and Sambalpur.

(3) *Propaganda.*—The Orissa Branch of the British Empire Leprosy Relief Association was inaugurated in April 1937, with His Excellency the Governor as President and 100 members, of whom 10 are life members, 68 ordinary members and 22 supporting members. An Executive Committee was also formed to carry on the work of the Association with the Director of Health and Inspector-General of Prisons as Chairman and six members. The activities of the Association have been embodied in a separate report submitted by the Honorary Secretary of the Association. Twenty-thousand leaflets on leprosy were printed by the Association for wide distribution.

The District Health Staff delivered lectures with magic lantern and distributed leaflets along with their other propaganda work in the district.

During the latter part of the year a District Leprosy Officer was appointed for the district of Sambalpur and much propaganda work was done by this officer under the supervision of the Civil Surgeon of the district.

(4) *General.*—The Director of Health and Inspector-General of Prisons submitted a comprehensive scheme to Government costing Rs. 36,000 for combating leprosy in the province at the close of the year. Dr. I. Santra (now Rai Sahib) visited the province at the close of the year and toured in all the districts. During his visit he held informal discussions with officials, social workers for the organisation of District Leprosy Councils and held training classes for doctors and medical students. A detailed account of his tour in Orissa has been printed and published by the Medical and Public Health Department.

The Ganjam District Leprosy Relief Committee continued to do excellent work during the year under the able guidance of its keen and energetic Honorary Secretary, Rao Bahadur M. V. Appa Rao.

7. *Nutrition.*—Orissa is chiefly a rice producing country and the staple food of the vast rural population is therefore rice. The Agency tracts and the areas lying to the west of the Bengal-Nagpur Railway line are hilly and the coastal disrticts are subject to annual inundation. Vegetables and other cereals are not therefore produced in sufficient quantities which could make up the deficiency of diets of the people. The absence of nature's bounties coupled with the ignorance of the people regarding the dietetic principles has made them economically and constitutionally poor. They cannot balance their diet. It is in the towns that the state of nutrition of the people is a little better as

compared to the people of rural areas. Wage earners, professionals, etc., generally live in towns and have a fixed income. They take a mixed diet consisting of atta, rice, meat, fish, milk, vegetables, etc. Although these articles of diet are not locally produced, they are generally drawn from the surrounding villages because they find a good market in towns.

Milk and milk products are not also sufficiently available because the question of supplying of fodder is perhaps a serious handicap for cattle farming.

Generally speaking nutritional deficiencies and deficiency diseases are most widespread amongst the rural population specially in the coastal and deltaic portions of the province. Adults and children may be found in large numbers manifesting vitamin B_2 deficiency characterised by angulostomatitis, etc. Cases of pelagra were also noticed amongst school children. It seems that the very high incidence of leprosy in Orissa is greatly due to the poor vitality resulting from insufficient and ill balanced food.

No nutritional enquiries were carried out in the province during the year, but the Provincial Government sanctioned an amount of Rs. 500 to help Dr. Curjel Wilson, M.D., of the Royal Society Nutritional Research, England, to carry out diet surveys amongst a certain number of rice-eating families at Cuttack and Puri which she did early next year. A medical officer of Health of the Provincial Public Health Service was deputed to Coonoor for training in nutritional survey work. Two hundred copies of the health bulletin on the nutritive value of Indian foods and the planning of satisfactory diet were purchased and distributed to all officers and institutions in this province.

8. *Village health units.*—Much ground has been covered in preparing the field for the formation of village health units throughout the province. All the medical officers in charge of rural District Board and Government dispensaries have been, in addition to providing medical relief, entrusted with the work of developing rural sanitation in the village where the dispensary is situated and in the villages within a radius of 2·3 miles from it, the cultivation of a sanitary and civic consciousness and formation of minor health unions, etc. They are also expected to look after the general well-being of school children, anti-malaria work in the circumscribed areas, organisation of Health and Baby Week celebrations, maternity and child welfare work, assistance in the collection of vital statistics and in the vaccination work of the health staff as far as possible. As a result healthy signs have been visible and in the year following several health units have been formed in many districts.

9. *Soil Sanitation.*—No work worth mentioning could be undertaken excepting the introduction of bore hole latrines at some of the important places in Koraput Agency. Arrangements were made to purchase bore hole machines and stock them in the office of the Director of Health and Inspector-General of Prisons for sending them to local bodies for use in the rural areas. Conservancy in the rural areas is in a primitive stage, the pigs, dogs and nature, etc., forming the principal scavengers. Promiscuous defecation by the people all over the open spaces in the surrounding areas of the villages has made the soil extremely contaminated and much of the bowel diseases which take a heavy toll of life year after year in the province may be attributed to this soil contamination.

10. *Rural water-supply.*—This is another important subject which should engage the attention of the authorities concerned. Unless the problem of rural water supply is satisfactorily solved, it would be difficult to tackle the colossal problem of cholera in the province.

Cuttack district.—Tanks were excavated and wells sunk in suitable places. During melas temporary tube wells were provided for and in important bazars tube wells have been sunk.

A special water supply scheme at a cost of Rs. 30,000 was drawn up by the Board. Rupees 10,000 was contributed by Government and Rs. 10,000 was promised by Tikayat Sailendra Narayan Bhanjdeo of Kanika. Several works in different police-stations of the district have been completed and it is expected that the whole scheme will be completed during the current financial

year (1937-38). Over and above this, the District Board from its ordinary allotment also constructed some wells and tanks in addition to repairing the existing ones.

Rupees 5,435 and Rs. 8,766 respectively have been spent during the years 1936-37 and the first half year ending 30th September 1937. The total provision made for the improvement of water supply in the budget for 1937-38 is Rs. 32,806 for both special and ordinary schemes.

Puri.—Minor water-supply works in the shape of providing wells were done by the two local boards of the district and the major works, viz., excavation and re-excavation of tanks, sinking stone masonry wells were done by the District Board for the supply of drinking water in rural areas.

A sum of Rs. 12,081 was spent by the District Board over water-supply during the years under report. This sum includes the Government grant of Rs. 7,635 made during 1934-35.

A sum of Rs. 5,506 has been provided in the sactioned budget for the year 1937-38 for water-supply.

Balasore.—The chief sources of water-supply in the district are tanks, masonry wells and tube wells. Tube wells are being supplied in greater numbers by taking a nominal contribution from the villagers who are benefited thereby and excavation of tanks and shallow wells is discouraged. The total amount spent for the improvement of water-supply was Rs. 14,162 during 1936-37 and a provision of Rs. 5,500 has been made for the year 1937-38.

Sambalpur.—The District Council of Sambalpur renovated and excavated 92 tanks and excavated 181 wells in the rural areas of the district for the supply of drinking water up to 1st April 1936. A sum of Rs. 3,000 was provided in the budget for 1936-37 for the improvement of water-supply in the district and a sum of Rs. 2,168 was actually spent during that year. A sum of Rs. 6,887 has been provided in the budget of 1937-38, for the improvement of water-supply which includes the unspent balance of the previous year.

Ganjam.—Prior to 1st April 1936 wells were dug in rural areas with the grant received from Government of Madras supplemented by funds from the District Board. The District Board has spent an amount of Rs. 4,128 during 1936-37 for the improvement of water-supply and a provision of Rs. 4,430 has been made for 1937-38.

Koraput.—The sources of water-supply in the district are hill streams, rivers, springs, and wells. During the year under report 20 new wells were dug, two springs, 17 wells and one tank were repaired and an approach road to the local gedda (spring) at Rayagada was constructed, all at a cost of Rs. 15,621. The above amount included grants from Government sanctioned in the previous financial year.

In the coastal areas of the province which are liable to inundation, the question of supply of good drinking water is some what difficult to solve. Tube wells have been a failure in many places especially in Balasore district, as they yield brackish and saline water not suitable for drinking purposes. The District Boards have been advised to excavate tanks in these areas only—which should be protected by proper fencing and by high embankments to prevent animals and the flood water entering therein.

11. *Yaws.*—This disease is widely prevalent in the Koraput Agency specially in the Malkanagiri, Pottanghi and Gunupur taluks of the district. Five hundred and twenty cases were treated during 1937 in different hospitals and dispensaries of the district. The question of establishing an itinerant dispensary for the treatment of yaws in the rural areas of this district is under the consideration of Government.

12. *Venereal disease.*—The incidence of this disease is very high amongst the Khonds in the Agency areas of the province. Indoor and outdoor treatment is given in almost all the dispensaries of the Agency area. A special grant of Rs. 1,200 was made by Government for the treatment of venereal diseases in sadr and subdivisional hospitals during the year 1937.

13. **Personal proceedings and office.**—Lt.-Col. G. Verghese, M.D., Ch.B., D.P.H., D.T.M., D.T.H., I.M.S., remained in charge of the Department throughout the year.

14. **Touring.**—During the year the Director of Health and Inspector-General of Prisons was on tour for 99 days.

15. **Personnel.**—I would like to report that as in the previous year the Department had to work under heavy odds, incidental to the creation of the new province. It is but right that I should bring to the notice of Government the excellent work carried out by one and all in the Department including the Health Officers and the subordinate Public Health staff of the various local bodies of the province both the District Boards and Municipalities and for the cheerful manner in which they have carried out their arduous duties specially during the anxious times of floods, epidemics and fairs and festivals. The work thrown upon my office was also very heavy and one and all in my office have rendered valuable help. The co-operation which I have received from the authorities of the various local bodies is very praiseworthy and above all I cannot close this report without tendering my grateful thanks to Government for the encouragement and support which the Department had received in developing its various activities.

G. VERGHESE, Lt.-Col., I.M.S.,

Director of Health and Inspector-General of Prisons, Orissa.

Annual Vaccination Report of the Province of Orissa for the year 1937-38.

The statistics in the Vaccination Report are for the financial year while the statistics in the Annual Public Health Report are for the calendar year. The arrangement facilitates the inclusion of the figures for the complete vaccination season from October to March in the Vaccination Report.

2. *Staff.*—Lt.-Col. G. Verghese, I.M.S., held charge of the office of the Director of Health and Inspector-General of Prisons, Orissa, throughout the whole period under report.

The provincial vaccination inspecting staff consisted of 2 District Inspectors of Vaccination, 4 Sub-Inspectors of Vaccination, 19 Health Inspectors and 34 Vaccinators. The total number of vaccinators employed during the year 1937-38 was 265, of whom 12 were employed in towns and 253 in rural areas. Vaccination is performed by paid vaccinators in the municipal areas and also in the districts of Ganjam and Koraput, while licensed vaccinators are generally employed to perform vaccination in the rest of the areas of the province. Vaccination is compulsory in all the municipalities of the province and in the plains portion of Ganjam and the district of Puri. In the rest of the province, except in the district of Koraput and Agency portions of Ganjam district, vaccination is performed on a license system. In these places the licensed vaccinator is allowed to charge a fee of annas two for each vaccination operation performed in the houses. There are also free vaccination depots in each district, which are attended by the vaccinators on fixed days in a week and no fee is charged for carrying out vaccination at these depots. Besides these licensed vaccinators, paid vaccinators are also employed by the local bodies for short periods to deal with outbreaks of smallpox. During the time of epidemics, temporary vaccinators are also appointed by Government.

3. *Operations performed.*—654,959 vaccination operations were performed during the year as against 603,006 during the previous year. This shows an increase of 51,953 in the number of operations as compared with the figure for 1936-37.

646,910 operations were performed by the vaccination staff as against 597,378 done in the preceding year. Of these 230,113 were primary and 416,797 revaccinations as against 226,085 primary and 371,293 revaccinations in the preceding year. Although vaccination is generally recognised as the only preventive measure against smallpox, it has not yet become as popular as it should be with the masses in the province. When smallpox breaks out in an epidemic form the people show some degree of willingness to get their children vaccinated, but when the epidemic is absent, the incentive is much less and the number of vaccinations performed also fall.

There was, however, an increase of 4,928 in the number of primary operations and 45,504 in the number of revaccinations done during the year under report. Of the total operations performed 74·94 per cent were successful as against 77·72 in the previous year. The number of operations performed in the municipalities decreased by 5,367 as compared with the last year's returns. The total number of operations performed was 20,584 and the number of successful operations was 9,674, of which 5,225 were primary and 4,449 revaccinations as against 5,562 and 6,807 respectively in the previous year. The ratios of success in municipalities were 93·14 per cent for primary operations and 50·97 per cent for revaccinations as compared with 91·98 per cent and 54·45 per cent respectively of last year.

The number of operations performed in the rural areas was 626,326 as compared with 571,427 in the preceding year and the ratios of success were 94·84 per cent for primary operations and 60·72 per cent for revaccinations.

4. *Vaccination in districts.*—The districts of Cuttack, Puri and Balasore recorded increase of 12,633, 12,607 and 175 in the number of vaccination operations performed respectively and the persons successfully

vaccinated for 1,000 of population in those districts were 22·38, 39·99 and 41·35 respectively. In all these districts vaccination is controlled by the Health Officers of the district boards.

The districts of Sambalpur, Koraput and Angul recorded increase of 16,886, 1,117 and 654 respectively whilst Khondmals recorded a decrease of 1,222 and persons successfully vaccinated per 1,000 of population in those districts were 89·28, 39·21 40·15, and 85·24 respectively. The Civil Surgeons of the districts of Cuttack and Ganjam controlled the vaccination of Angul and Khondmals districts respectively. The Agency Surgeon, Koraput, supervised the vaccination of Koraput district and the Civil Surgeon, Sambalpur of Sambalpur district.

The district of Ganjam recorded an increase of 9,103 and 60·82 persons were successfully vaccinated per 1,000 of population of the district during the year under report. The vaccination in the Agency portion of the district is controlled by the Civil Surgeon of Ganjam and the plains portion of the district by the District Health Officer, Ganjam.

5. *Vaccination in towns.*—Statement V shows that during the year 1,762 children under one year of age out of an available number of 4,100 or 42·98 per cent were successfully vaccinated.

6. *Protection of infants.*—During the year under report the number of children under one year available for vaccination was 183,499 and the number of successful operations was 67,385 or 367 per thousand as against 67,845 or 317 per thousand successful operations out of 214,109 available children during the previous year. The protection of infants in municipalities is separately shown in statement V. It gives a ratio of 430 per thousand of the surviving infant population as compared with 399 per thousand in the previous year. These figures still remain unsatisfactory inasmuch as they show that nearly two-thirds of the total number of infants under one year were left unvaccinated in the rural areas and a little more than one-third in the municipal areas. This is attributed to the common prejudice of the people against vaccination at an early age. Though primary vaccination is compulsory in all the municipal towns and in two districts of the province, vaccination to the infants and children is avoided by many people.

7. *Incidence and mortality of smallpox.*—The total number of deaths that occurred from smallpox in the province during 1936-37 and 1937-38 was 3,331 and 2,633 respectively. Thus there has been a reduction in the number of cases during the year under report than the preceding year.

8. *Prevention of smallpox.*—The proportion of vaccinated persons in the province still remains far below the figures necessary to prevent epidemic outbreaks and although the total annual vaccination operations amounts to six lakhs or so, these are quite insufficient to ensure the immunity of the total population against smallpox. Hence the incidence of this fell disease continues to remain high. This state of affairs is not so much due to insufficiency or inefficiency of the existing arrangements for vaccination in the province, but is chiefly due to the inherent apathy of the public towards the simple and efficient method of protection. Smallpox is a preventable disease and vaccination can prevent it. In the light of this knowledge and in face of the unsatisfactory vaccination state of the people, there is a great necessity for a more vigorous and complete vaccination policy. Vaccination has been made compulsory for many years in all municipal towns but all the provisions of the Act do not appear to be rigidly enforced, with the result that a great proportion of the children does not get vaccination until they cross the first year of their lives. Besides a large number of unvaccinated persons are to be found in every municipal town.

The incidence of smallpox can be definitely prevented provided repeated vaccinations are practised, but revaccinations are always accepted with reluctance and people do not seem to realise that immunity conferred by primary vaccination wears out within 5 to 7 years. Thus during epidemics the percentage of protected persons is small and not untill the disease has had

its toll, the public realise the importance of revaccination. Prejudices born of ancient traditions die hard and appear to be the chief obstacle in the way of pushing vaccination among the masses. Much of the efforts of the Public Health staff has, therefore to be directed towards overcoming these obstacles. Vaccination operations are easily done and generally cause no complications. No case of encephalitis following vaccination has so far been recorded in this province.

Almost all the District Boards with health organisation scheme have now assumed the responsibility of the control of vaccination in the rural areas and the cost of running the vaccination scheme is insignificant.

The Bengal Vaccination Act is in force in Puri district only. Vaccination and revaccination are compulsory in the plains portion of Ganjam district under the Madras Local Boards Act of 1920. It is absolutely necessary that vaccination should be made compulsory throughout the province.

9. *Inspection of work.*—During the year under report as there was no Assistant Director of Public Health the Director of Health and Inspector-General of Prisons inspected 4,177 vaccinations (3,205 primary and 972 revaccinations) as against 373 in the previous year.

Superintendents of Vaccination of the province inspected 6,347 primary and 8,613 revaccinations against 6,832 primary and 10,253 revaccinations of the last year. As in the preceding year inspection work of the vaccination inspecting staff was satisfactory.

10. As no arrangement exists in this province for the manufacture of vaccine lymph the total requirement of vaccine lymph was purchased from the Bihar Government's Vaccine Depot at Namkum and was supplied free to the local bodies of the province. 429,498 doses of vaccine lymph at a cost of Rs. 5,591-14-8 were purchased during the year under report. The following is a statement showing the quantity of vaccine lymph supplied to the various districts of the province.

District.	Doses.
Puri	40,960
Cuttack including Angul	105,981
Balasore	38,085
Sambalpur	69,338
Ganjam including Khondmals	129,308
Koraput	45,826

11. *Method of Vaccination.*—Vaccination operations are performed with rotatary lancets in the districts of Ganjam and Koraput and with ordinary lancets in the rest of the province.

12. *Post-vaccination operations.*—As in the previous year no complaint of post vaccinal encephalitis or of any other complications after vaccination was received during the year under report.

13. *Cost of the Department.*—The total cost of the Vaccination Department excluding the cost of vaccine lymph during the year as noted in Statement I was Rs. 61,780-0-4 as against Rs. 69,766-1-3 of the previous year. The cost of each successful case of vaccination during the year was Re. 0-2-8 as opposed to Re. 0-3-1 of the previous year. If however the cost of vaccine lymph is included the cost per successful vaccination case stands at Re. 0-2-11 as opposed to Re. 0-3-3½ pies of the previous year.

14. *General remarks.*—In North Orissa the licensed system of vaccination under which people have to pay a small amount is most unpopular amongst all classes of people, particularly amongst the poor, with the result that vaccination which should be regarded as one of the greatest benefactions of science to humanity has to be pushed through under heavy odds. In

South Orissa in the district of Ganjam (Plain portion) it is both compulsory and free. People in the North Orissa invariably are beginning to demand free vaccination which cannot evidently be given under the licensed system in vogue. As vaccination against smallpox is the only preventable and surest remedy against the disease, time has now come to consider whether it is not necessary to enforce compulsory vaccination amongst the people in order to save them from the appalling recurrence of this fell disease, practically year after year and month after month throughout North Orissa. The incidence of this preventable disease is not only high but also the toll of life taken away by this infection is comparatively high. The only satisfactory remedy is to make it both compulsory and free and Orissa will thus come in line with the most of the sister provinces in India in affording every satisfactory measure of protection to the people from this foul infection.

G. VERGHESE, Lt.-Col., I.M.S.,
Director of Health and
Inspector-General of Prisons, Orissa.

Summary of the activities of the Public Health Circle relating to sanitary improvements in rural and urban areas of Orissa during the calendar year 1937.

Puri water-supply has been maintained in good order during the year on behalf of the Joint Water Works Committee at a cost of Rs. 20,060, the average daily supply being 258,228 gallons. There is no indication that pumping from the headworks has adversely affected the conditions of the sub-soil water from which the supply is drawn.

Original work to the value of Rs. 13,867 and repair work to the value of Rs. 38,642 (including expenditure on Puri Water Works) have been carried out during the year.

W. G. CAME,

Superintending Engineer,
Public Health Circle, Bihar.

The 21st May 1938.

APPENDIX I.

Annual Form no. I.

ANNUAL FORM NO. I.—*Births registered in th*

1	2	3			4		
No.	Districts.	Population for which returns were received.			Number of births registered.		
		Male.	Female.	Total.	Male.	Female.	Total.
1	Cuttack	1,028,134	1,148,573	2,176,707	37,140	35,267	72,407
2	Balasore	480,518	510,082	990,600	15,991	14,729	30,720
3	Puri	500,214	534,940	1,035,154	19,138	18,148	37,286
4	Sambalpur	522,140	543,470	1,065,610	20,539	19,588	40,127
5	Angul	68,694	71,764	140,458	2,797	2,782	5,579
6	Khondmals	40,231	42,047	82,278	1,509	1,420	2,929
7	Ganjam Plains	581,070	707,404	1,288,474	25,542	24,258	49,800
	AGENCY DISTRICTS.						
8	Ganjam...	77,071	80,635	157,706	1,224	1,233	2,457
9	Koraput	9,670	9,940	19,610	249	192	441
	Total of Agency districts ...	86,741	90,575	177,316	1,473	1,425	2,898
	Total for the Province ...	3,307,742	3,648,855	6,956,597	124,129	117,617	241,746

DIX I.

districts of Orissa Province during the year 1937.

5			6			1
Ratio of births per 1,000 of population.			Mean ratio of births per 1,000 during previous five years.			No.
Male.	Female.	Total.	Male.	Female.	Total.	
17·1	16·2	33·3	18·9	17·7	36·6	1
16·1	14·9	31·0	16·5	15·6	32·1	2
18·5	17·5	36·0	19·5	18·5	38·0	3
19·3	18·4	37·7	...	...	...	4
19·9	19·8	39·7	...	...	...	5
18·3	17·3	35·6	...	...	...	6
19·8	18·8	38·6	...	...	...	7
7·8	7·8	15·6	...	...	...	8
12·7	9·8	22·5	...	...	...	9
8·3	8·0	16·3	...	...	...	
17·9	16·9	34·8	...	...	...	

ANNUAL FORM NO. I-A.—*Births registered according to class in each town*

1	2			3		
Registering circle.	Christians.			Hindus.		
	Male.	Female.	Total.	Male.	Female.	Total.
CUTTACK.						
Cuttack town ...	20	29	49	353	309	662
Kendrapara town ...	...	...	...	154	145	299
Jajpur town ...	...	...	...	84	86	170
Total of towns ...	20	29	49	591	540	1,131
Total of rural ...	2	...	2	35,608	33,913	69,521
Total of district ...	22	29	51	36,199	34,453	70,652
BALASORE.						
Balasore town ...	3	1	4	113	99	212
Total of rural ...	22	24	46	15,030	13,881	28,911
Total of district ...	25	25	50	15,143	13,980	29,123
PURI.						
Puri town	1	2	3	423	396	819
Total of rural ...	19	23	42	18,295	17,369	35,664
Total of district ...	20	25	45	18,718	17,765	36,483
SAMBALPUR.						
Sambalpur town ...	...	...	...	165	211	376
Total of rural ...	...	...	...	20,370	19,374	39,744
Total of district ...	...	...	...	20,535	19,585	40,120
ANGUL.						
Total of rural ...	...	...	...	2,797	2,782	5,579
Total of district ...	...	...	...	2,797	2,782	5,579
KHONDMALS.						
Total of rural ...	...	...	...	424	412	836
Total of district ...	...	...	...	424	412	836
[GANJAM PLAINS.						
Berhampur town ...	9	8	17	673	651	1,324
Parlakemidi town ...	1	1	2	354	353	707
Total of towns ...	10	9	19	1,027	1,004	2,031
Total of rural ...	36	28	64	24,301	23,048	47,349
Total of district ...	46	37	83	25,328	24,052	49,380
AGENCY DISTRICTS.						
Ganjam ...	35	34	69	1,143	1,175	2,318
Koraput ...	12	14	26	226	165	391
Total of Agency districts ...	47	48	95	1,369	1,340	2,709
Towns ...	34	41	75	2,319	2,250	4,569
Total for the Province { Rural ...	126	123	249	118,194	112,119	230,313
Districts ...	160	164	324	120,513	114,369	234,882

DIX I—*contd.*

and rural areas in the districts of Orissa Province during the year 1937.

4			5			6					
Muhammadans.			Buddhists.			Other classes.			Total.		
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
72	50	122	...	...	...	...	...	...	445	388	833
43	40	83	...	...	...	...	...	...	197	185	382
2	3	5	...	...	...	...	...	...	85	89	175
117	93	210	...	...	...	...	...	...	728	662	1,390
802	692	1,494	...	...	...	...	...	...	36,412	34,605	71,017
919	785	1,704	...	...	...	...	...	...	37,140	35,267	72,407
42	39	81	...	...	...	...	...	...	158	139	297
449	339	788	...	...	...	332	346	678	15,823	14,590	30,423
491	378	869	...	...	...	332	346	678	15,991	14,729	30,720
12	12	24	...	...	...	...	...	...	436	410	846
370	3 4	684	...	...	...	18	22	40	18,702	17,738	36,440
382	336	718	...	...	...	18	22	40	19,138	18,148	37,286
...	...	...	...	...	...	...	...	...	165	211	376
4	3	7	...	...	...	...	...	...	20,374	19,877	39,751
4	3	7	...	...	...	...	...	...	20,539	19,588	40,127
...	...	...	...	...	...	...	...	...	2,797	2,782	5,579
...	...	...	...	...	...	...	...	...	2,797	2,782	5,579
...	...	...	...	...	...	1,085	1,038	2,093	1,503	1,420	2,929
...	...	...	...	...	...	1,085	1,038	2,093	1,503	1,420	2,929
22	21	43	...	...	...	51	57	108	755	737	1,492
5	2	7	...	...	...	...	...	...	360	356	716
27	23	50	...	...	...	51	57	108	1,115	1,093	2,208
33	41	77	...	...	...	54	48	102	24,427	23,165	47,592
63	64	127	...	...	...	105	105	210	25,542	24,258	49,800
4	2	6	...	...	...	42	22	64	1,224	1,233	2,457
11	13	24	...	...	...	...	...	...	249	192	441
15	15	30	...	...	...	42	22	64	1,473	1 425	2,898
198	167	365	...	...	...	51	57	108	2,692	2,515	5,117
1,676	1,414	3,090	...	...	...	1,581	1,446	2,977	121,527	115,102	236,629
1,874	1,581	3,455	...	...	...	1,582	1,503	3,085	124,159	117,617	241,746

ANNUAL FORM NO. I-B.—*Still births registered according to class in each town*

1	2			3		
Registering circle.	Christians.			Hindus.		
	Male.	Female.	Total.	Male.	Female.	Total.
CUTTACK.						
Cuttack town	1	...	1	17	9	26
Kendrapara town	...	...	...	2	2	4
Jajpur town	...	...	...	...	...	...
Total of towns ...	1	...	1	19	11	30
Total of rural ...	...	...	...	3,224	2,501	5,725
Total of district ...	1	...	1	3,243	2,512	5,755
BALASORE.						
Balasore town	...	...	...	3	...	3
Total of rural ...	2	...	2	1,454	1,322	2,776
Total of district ...	2	...	2	1,457	1,322	2,779
PURI.						
Puri town	...	...	...	17	26	43
Total of rural ...	...	...	...	1,732	1,500	3,232
Total of district ...	...	...	...	1,749	1,526	3,275
SAMBALPUR.						
Sambalpur town	...	...	...	...	1	1
Total of rural ...	...	...	...	126	105	231
Total of district ...	...	...	...	126	106	232
ANGUL.						
Total of rural ...	...	...	...	42	28	70
Total of district ...	...	...	...	42	28	70
KHONDMALS.						
Total of rural ...	...	...	...	10	10	20
Total of district ...	...	...	...	10	10	20
GANJAM PLAINS.						
Berhampur town	...	1	1	18	19	37
Parlakimedi town	...	...	...	9	14	23
Total of towns ...	...	1	1	27	33	60
Total of rural ...	4	3	7	256	207	463
Total of district ...	4	4	8	283	240	523
AGENCY DISTRICTS.						
Ganjam	...	...	...	11	9	20
Koraput	...	...	...	4	...	4
Total of Agency districts ...	...	...	...	15	9	24
Total for the Province — Towns ...	1	1	2	66	71	137
Total for the Province — Rural ...	6	3	9	6,859	5,682	12,541
Total for the Province — Districts ...	7	4	11	6,925	5,753	12,678

DIX I—*contd.*

and rural areas in the districts of Orissa Province during the year 1937.

4			5			6			7		
Muhammadans.			Buddhists.			Other classes.			Total.		
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1	2	3	...	...	...	...	...	...	19	11	30
...	...	...	...	...	...	...	...	...	2	2	4
...	...	...	...	...	...	...	...	...	...	...	...
1	2	3	...	...	...	...	...	...	21	13	34
59	44	103	...	...	...	...	...	...	3,283	2,545	5,828
60	46	106	...	...	...	...	...	...	3,304	2,558	5,862
...	1	1	...	...	...	...	...	...	3	1	4
28	24	52	...	...	...	18	18	36	1,402	1,864	2,866
28	25	53	...	...	...	18	18	36	1,505	1,865	2,870
...	1	1	...	...	...	...	...	...	17	27	44
33	20	53	...	...	...	1	2	3	1,766	1,522	3,288
33	21	54	...	...	...	1	2	3	1,783	1,549	3,332
...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	...	...	...	...	...	...	126	105	231
...	...	...	...	...	...	...	...	...	126	106	232
...	...	...	...	...	...	...	...	...	42	28	70
...	...	...	...	...	...	...	...	...	42	28	70
...	...	...	...	...	...	20	24	44	30	34	64
...	...	...	...	...	...	20	24	44	30	34	64
...	...	...	...	...	...	...	...	...	18	20	38
...	...	...	...	...	...	...	...	...	9	14	23
...	...	...	...	...	...	...	...	...	27	34	61
7	4	11	...	...	...	5	4	9	272	218	490
7	4	11	...	...	...	5	4	9	299	252	551
...	...	...	...	...	...	...	...	...	11	9	20
...	...	...	...	...	...	...	...	...	4	...	4
...	...	...	...	...	...	...	...	...	15	9	24
1	4	5	...	...	...	...	...	...	68	76	144
127	92	219	...	...	...	44	48	92	7,036	5,825	12,861
128	96	224	...	...	...	44	48	92	7,104	5,901	13,005

ANNUL FORM NO. II.—*Statement of deaths registered*

1	2	3	4	5		
				Number of deaths registered.		
No.	Districts.	Area in square miles.	Average population per square mile.	Male.	Female.	Total.
1	Cuttack	3,654	595	33,029	34,182	67,211
2	Balasore	2,055	482	15,303	16,720	32,023
3	Puri	2,492	415	15,408	15,571	30,979
4	Sambalpur	5,394	198	14,349	13,065	27,414
5	Angul	881	159	1,846	1,840	3,686
6	Khondmals	800	103	1,399	1,353	2,752
7	Ganjam Plains	3,469	371	16,541	16,447	32,988
	AGENCY DISTRICTS.					
8	Ganjam	961	164	1,017	799	1,816
9	Koraput	70	280	151	145	296
	Total of Agency districts ...	1,031	172	1,168	944	2,112
	Total for the Province ...	19,776	352	99,043	100,122	199,165

DIX I—*contd.*

in the districts of Orissa Province during the year 1937.

6											7		
Death rate per 1,000 of population from—											Mean ratio of deaths per 1,000 during previous five years.		
								All causes.					
Cholera.	Smallpox.	Plague.	Fever.	Dysentery and diarrhœa.	Respiratory diseases.	Injuries.	All other causes.	Male.	Female.	Total.	Male.	Female.	Total.
1·4	0·6	...	15·0	4·1	0·6	0·5	8·7	32·1	29·8	30·9	32·4	30·2	31·3
1·5	0·2	...	19·5	0·5	0·1	0·5	10·0	31·8	32·8	32·3	32·5	32·6	32·5
0·3	0·1	...	13·0	3·6	1·1	0·5	11·3	30·8	29·1	29·9	29·7	28·7	29·2
0·1	0·03	...	14·1	1·7	1·2	0·3	8·3	27·5	24·0	25·7	...	...	...
0·4	...	...	21·9	0·2	0·1	0·7	2·9	26·9	25·6	26·2	...	...	...
0·03	1·6	...	27·7	0·2	0·1	0·7	3·1	34·8	32·2	33·4	...	...	...
0·02	0·4	...	14·4	1·6	0·7	0·2	8·3	28·5	23·2	25·6	...	...	...
...	0·2	...	8·7	0·3	0·5	0·1	1·6	13·2	9·9	11·5	...	...	...
...	...	...	9·5	0·6	0·7	0·5	3·8	15·6	14·6	15·1	...	...	...
...	0·2	...	8·8	0·3	0·6	0·2	1·8	13·5	10·4	11·9	...	...	...
0·7	0·3	...	15·2	2·5	0·7	0·4	8·8	29·9	27·4	28·6	...	...	...

ANNUAL FORM NO. III.—*Deaths registered in the districts of*

1	2		3	4	5	6	7	8
No.	Districts.		Population according to census 1931.	January.	February.	March.	April.	May.
1	Cuttack district ...	Urban ...	88,556	130	102	86	109	83
		Rural ...	2,088,151	9,510	6,864	6,410	5,650	4,170
		Total ...	2,176,707	9,640	6,966	6,496	5,759	4,253
2	Balasore district ...	Urban ...	17,843	33	25	33	28	26
		Rural ...	9,72,757	3,485	2,784	2,952	2,501	2,211
		Total ...	9,90,600	3,521	2,809	2,985	2,529	2,237
3	Puri district ...	Urban ...	37,568	140	108	119	94	87
		Rural ...	997,586	3,775	2,501	2,538	2,493	2,345
		Total ...	1,035,154	3,915	2,609	2,657	2,592	2,432
4	Sambalpur district ...	Urban ...	15,017	42	30	29	25	39
		Rural ...	1,050,593	2,782	1,924	2,399	2,291	2,279
		Total ...	1,065,610	2,824	1,954	2,428	2,316	2,318
5	Angul district ...	Rural ...	140,458	406	319	461	451	354
		Total ...	140,458	406	319	461	451	354
6	Khondmals district ...	Rural ...	82,278	288	240	275	278	297
		Total ...	82,278	288	240	275	278	297
7	Ganjam district (Plains) ...	Urban ...	57,822	127	127	108	110	85
		Rural ...	1,230,652	2,737	1,994	2,499	2,681	2,653
		Total ...	1,288,474	2,864	2,121	2,607	2,791	2,738
	AGENCY DISTRICTS.							
8	Ganjam		157,706	101	186	180	210	169
9	Koraput		19,610	21	16	21	20	30
	Total of Agency districts		177,316	122	202	201	230	199
	Total for the Province	Urban ...	216,806	475	392	375	363	320
		Rural ...	6,739,791	23,105	16,828	17,735	16,580	14,508
		Total ...	6,956,597	23,580	17,220	18,110	16,946	14,828
	Ratio per 1,000 of population.	Urban ...	..	2·2	1·8	1·7	1·7	1·5
		Rural ...	...	3·4	2·5	2·6	2·5	2·2
		Total ...	...	3·4	2·5	2·6	2·4	2·1

DIX I—*contd.*

Orissa Province during each month of the year 1937.

9	10	11	12	13	14	15	16	1
June.	July.	August.	September.	October.	November.	December.	Total deaths registered during the year.	No.
78	85	118	92	104	127	156	1,265	
3,520	3,454	4,313	4,283	4,586	5,278	7,308	65,946	1
3,593	3,539	4,431	4,375	4,690	5,405	8,064	67,211	
18	21	35	45	30	53	56	403	
1,629	1,724	2,652	2,137	2,529	3,400	3,613	31,617	2
1,647	1,745	2,687	2,182	2,559	3,453	3,669	32,023	
95	122	117	87	122	141	138	1,370	
1,868	2,071	2,259	1,914	2,108	2,403	3,329	29,609	3
1,963	2,193	2,376	2,001	2,230	2,544	3,467	30,979	
32	14	26	37	31	29	23	357	
2,050	1,844	2,391	2,446	2,306	2,037	2,308	27,057	4
2,082	1,858	2,417	2,483	2,337	2,066	2,331	27,414	
255	221	277	269	239	193	243	3,686	
256	221	277	269	239	190	243	3,686	5
231	180	220	180	208	189	166	2,752	
231	180	220	180	208	189	166	2,752	6
88	98	116	99	94	87	107	1,246	
2,453	2,735	2,983	2,714	2,475	2,570	3,248	31,742	7
2,541	2,833	3,099	2,813	2,569	2,657	3,355	32,988	
140	121	124	140	151	143	151	1,516	8
12	11	22	41	30	31	41	296	9
152	132	146	181	181	174	192	2,112	
305	340	412	360	381	437	480	4,644	
12,159	12,361	15,241	14,124	14,632	16,241	21,007	194,521	
12,465	12,701	15,653	14,484	15,013	16,678	21,487	199,165	
1·4	1·6	1·9	1·7	1·7	2·0	2·2	21·4	
1·8	1·8	2·3	2·1	2·2	2·4	3·1	28·9	
1·8	1·8	2·2	2·1	2·2	2·4	3·1	28·6	

ANNUAL FORM NO. IV.—*Deaths registered according to age in the*

1	2								
No.	District.		Death under						
			Not exceeding one month.						
			Male.			Female.			Total of columns 3 and 6.
			Under one week.	Over one week.	Total.	Under one week.	Over one week.	Total.	
			1	2	3	4	5	6	7
1	Cuttack district ...	Urban ...	50	25	75	37	23	60	135
		Rural ...	2,661	1,731	4,392	2,158	1,433	3,591	7,983
		Total ...	2,711	1,756	4,467	2,195	1,456	3,651	8,118
2	Balasore district ...	Urban ...	11	6	17	11	3	14	31
		Rural ...	1,327	860	2,187	1,144	700	1,844	4,031
		Total ...	1,338	866	2,204	1,155	703	1,858	4,062
3	Puri district ...	Urban ...	38	18	56	20	23	43	99
		Rural ...	1,254	989	2,243	1,077	820	1,897	4,140
		Total ...	1,292	1,007	2,299	1,097	843	1,940	4,239
4	Sambalpur district ...	Urban ...	12	5	17	7	10	17	34
		Rural ...	1,341	1,002	2,343	1,155	889	2,044	4,387
		Total ...	1,353	1,007	2,360	1,162	899	2,061	4,421
5	Angul district ...	Rural ...	89	122	211	70	82	152	363
		Total ...	89	122	211	70	82	152	363
6	Khondmals district ...	Rural ...	79	80	159	93	70	163	322
		Total ...	79	80	159	93	70	163	322
7	Ganjam district (Plains) ...	Urban ...	39	24	63	39	21	60	123
		Rural ...	1,398	1,133	2,531	1,137	924	2,061	4,592
		Total ...	1,437	1,157	2,594	1,176	945	2,121	4,715
	AGENCY DISTRICTS.								
8	Ganjam		47	31	78	40	29	69	147
9	Koraput		3	2	5	...	1	1	6
10	Total of Agency districts		50	33	83	40	30	70	153
11	Total for the Province	Urban ...	150	78	228	114	80	194	422
		Rural ...	8,199	5,950	14,149	6,874	4,948	11,822	25,971
		Total ...	8,349	6,028	14,377	6,988	5,028	12,016	26,393

DIX I—*contd.*

districts of Orissa Province during the year 1937.

						3				
one year.										
Over one month and not exceeding six months.			Over six months and not exceeding twelve months.			Total male columns 3 8, and 11.	Total female columns 6, 9 and 12.	Total.	No.
Male.	Female.	Total.	Male.	Female.	Total.				
8	9	10	11	12	13	14	15	16	
32	31	63	26	14	40	133	105	238	1
2,895	2,663	5,558	1,248	1,157	2,405	8,535	7,411	15,946	
2,927	2,694	5,621	1,274	1,171	2,445	8,668	7,516	16,184	
11	11	22	5	6	11	33	31	64	2
1,268	1,373	2,641	465	472	937	3,920	3,689	7,609	
1,279	1,384	2,663	470	478	948	3,953	3,720	7,673	
38	33	71	4	12	16	98	88	186	3
1,284	1,153	2,437	592	496	1,088	4,119	3,546	7,665	
1,322	1,186	2,508	596	508	1,104	4,217	3,634	7,851	
12	5	17	4	3	7	33	25	58	4
1,045	932	1,977	552	515	1,067	3,940	3,491	7,431	
1,057	937	1,994	556	518	1,074	3,973	3,516	7,489	
146	135	281	104	100	204	461	387	848	5
146	135	281	104	100	204	461	387	848	
176	154	330	83	85	168	418	402	820	6
176	154	330	83	85	168	418	402	820	
60	55	115	45	37	82	168	152	320	7
1,525	1,303	2,828	1,526	1,354	2,880	5,582	4,718	10,300	
1,585	1,358	2,943	1,571	1,391	2,962	5,750	4,870	10,620	
59	63	122	63	56	119	200	188	388	8
6	1	7	4	3	7	15	5	20	9
65	64	129	67	59	126	215	193	408	10
153	135	288	84	72	156	465	401	866	11
8,404	7,777	16,181	4,637	4,238	8,875	27,190	23,837	51,027	
8,557	7,912	16,469	4,721	4,310	9,031	27,655	24,238	51,893	

ANNUAL FORM No. IV.—*Deaths registered according to age in the*

1	2		3		4		5		6	
No.	Districts.		1 year and under 5 years.		5 years and under 10 years.		10 years and under 15 years.		15 years and under 20 years.	
			Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
			17	18	19	20	21	22	23	24
1	Cuttack district ...	Urban ...	48	45	16	26	21	21	21	80
		Rural ...	4,485	4,662	1,531	1,344	772	686	942	1,963
		Total ...	4,528	4,707	1,547	1,370	793	707	973	1,993
2	Balasore district ...	Urban ...	10	14	7	6	8	3	8	12
		Rural ...	1,697	1,766	590	565	365	394	489	739
		Total ...	1,707	1,780	597	571	373	397	497	751
3	Puri district ...	Urban ...	39	48	13	19	16	10	15	24
		Rural ...	1,984	2,066	574	568	290	227	347	556
		Total ...	2,043	2,119	587	587	306	237	362	580
4	Sambalpur district ...	Urban ...	23	30	9	10	3	5	14	12
		Rural ...	2,263	2,140	840	687	441	375	447	475
		Total ...	2,286	2,170	849	697	444	380	461	487
5	Angul district ...	Rural ...	387	370	124	121	50	48	39	63
		Total ...	387	370	124	121	50	48	39	63
6	Khondmals district ...	Rural ...	209	200	63	46	28	20	44	52
		Total ...	209	200	63	46	28	20	44	52
7	Ganjam district (plains) ...	Urban ...	72	57	27	18	11	17	21	16
		Rural ...	2,378	2,515	715	697	355	321	367	461
		Total ...	2,450	2,572	742	715	366	338	388	477
	AGENCY DISTRICTS.									
8	Ganjam		102	90	47	38	44	35	51	32
9	Koraput		13	10	8	6	7	6	9	15
10	Total of Agency districts		115	100	55	44	51	41	64	47
11	Total for the Province ...	Urban ...	207	189	72	79	59	56	89	94
		Rural ...	13,518	13,839	4,492	4,072	2,352	2,122	2,789	3,756
		Total ...	13,725	14,028	4,564	4,151	2,411	2,178	2,878	3,850

DIX I—*contd.*

districts of Orissa Province during the year 1937—contd.

7		8		9		10		11		12
20 years and under 30 years.		30 years and under 40 years.		40 years and under 50 years.		50 years and under 60 years.		60 years and upwards.		
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	No.
25	26	27	28	29	30	31	32	33	34	
101	92	91	55	97	44	75	39	101	99	1
2,900	4,231	2,897	3,071	2,627	2,290	3,280	3,375	4,401	5,193	1
3,001	4,323	2,988	3,126	2,724	2,334	3,305	3,414	4,502	5,292	1
36	43	29	21	31	11	24	22	29	28	2
1,463	2,326	1,684	1,899	1,682	1,577	1,618	1,715	1,580	1,859	2
1,499	2,369	1,713	1,920	1,713	1,588	1,642	1,737	1,609	1,887	2
62	59	61	78	88	56	140	74	161	211	3
1,113	1,719	1,095	1,223	1,376	1,060	1,668	1,573	2,089	2,326	3
1,215	1,808	1,156	1,296	1,461	1,116	1,808	1,647	2,250	2,537	3
21	22	24	14	28	10	19	25	19	11	4
934	1,208	1,216	957	1,062	743	1,117	976	1,596	1,849	4
955	1,230	1,240	971	1,090	753	1,136	1,001	1,915	1,860	4
131	138	156	153	131	110	143	189	224	261	5
131	138	156	153	131	110	143	189	224	261	5
107	140	150	116	130	110	129	123	121	134	6
107	140	150	116	130	110	129	123	121	134	6
43	60	61	35	59	33	53	34	137	172	7
849	1,055	895	842	1,040	832	1,395	1,502	2,313	3,110	7
892	1,115	956	877	1,099	865	1,448	1,336	2,450	3,282	7
57	61	111	73	126	72	124	94	121	116	8
17	20	14	15	19	13	11	8	38	47	9
101	81	125	88	145	85	135	102	159	163	10
263	276	266	198	303	154	311	194	447	521	11
7,641	10,928	8,218	8,349	8,193	6,807	9,435	9,355	12,783	14,895	11
7,904	11,204	8,484	8,547	8,496	6,961	9,746	9,549	13,230	15,416	11

ANNUAL FORM NO. IV-A.—*Deaths under one year registered according to class in each town*

1	2			3		
Registering circle.	Christians.			Hindus.		
	Male.	Female.	Total.	Male.	Female.	Total.
CUTTACK.						
Cuttack town	2	...	2	51	37	88
Kendrapara town	...	...	...	46	43	89
Jajpur town	...	...	...	12	12	24
Total of towns ...	2	...	2	109	92	201
Total of rural ...	...	...	...	8,410	7,304	15,714
Total of district ...	2	...	2	8,519	7,396	15,915
BALASORE.						
Balasore town	...	...	...	22	25	47
Total of rural ...	...	...	...	3,827	3,610	7,437
Total of district ...	...	...	...	3,849	3,635	7,484
PURI.						
Puri town	...	1	1	97	86	183
Total of rural ...	1	...	1	4,005	3,466	7,471
Total of district ...	1	1	2	4,102	3,552	7,654
SAMBALPUR.						
Sambalpur town	...	...	...	33	25	58
Total of rural ...	...	...	...	3,939	3,490	7,429
Total of district ...	...	...	...	3,972	3,515	7,487
ANGUL.						
Total of rural ...	...	...	...	461	387	848
Total of district ...	...	...	...	461	387	848

DIX I—*contd.*

and rural areas in the districts of Orissa Province during the year 1937.

4			5			6			7		
Muhammadans.			Buddhists.			Other classes.			Total.		
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
5	3	8	...	...	...	...	...	...	58	40	98
17	10	27	...	...	..	...	...	...	63	53	116
...	...	...	...	...	...	...	...	...	12	12	24
22	13	35	...	...	...	...	...	...	133	105	238
125	107	232	...	...	...	...	...	...	8,535	7,411	15,946
147	120	267	...	...	...	...	...	...	8,668	7,516	16,184
11	6	17	...	...	...	...	...	...	33	31	64
72	66	138	...	...	...	21	13	34	3,920	3,689	7,609
83	72	155	...	...	...	21	13	34	3,953	3,720	7,673
1	1	2	...	...	...	...	...	...	98	88	186
113	80	193	...	...	...	...	...	...	4,119	3,546	7,665
114	81	195	...	...	...	...	...	...	4,217	3,634	7,851
...	...	...	...	...	...	...	...	...	33	25	58
1	1	2	...	...	...	...	...	...	3,940	3,491	7,431
1	1	2	...	...	...	...	...	...	3,973	3,516	7,489
...	...	...	...	...	...	...	...	...	461	387	848
...	...	...	...	...	...	...	...	...	461	387	848

ANNUAL FORM NO. IV-A.—*Deaths under one year registered according to class in each town*

1	2			3		
Registering circle.	Christians.			Hindus		
	Male.	Female.	Total.	Male.	Female.	Total.
KHONDMALS.						
Total of rural ...	...	...	...	147	142	289
Total of district ...	...	...	...	147	142	289
GANJAM PLAINS.						
Berhampur town	...	1	1	106	96	202
Par'akimedi town	...	1	1	58	51	109
Total of towns ...	...	2	2	164	147	311
Total of rural ...	6	13	19	5,549	4,675	10,224
Total of district ...	6	15	21	5,713	4,822	10,535
AGENCY DISTRICTS.						
Ganjam	7	6	13	190	181	371
Koraput	...	...	...	15	4	19
Total of Agency districts ...	7	6	13	205	185	390
PROVINCE.						
Total for the Province ... Towns ...	2	3	5	425	375	800
Total for the Province ... Rural ...	14	19	33	26,543	23,259	49,802
Total for the Province ... District ...	16	22	38	26,968	23,634	50,602

DIX I—*contd.*

and rural areas in the districts of Orissa Province during the year 1937—concld.

4			5			6			7		
Muhammadans.			Buddhists.			Other classes.			Total.		
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
...	1	1	...	...	...	271	259	530	418	402	820
...	1	1	...	...	...	271	259	530	418	402	820
3	2	5	...	...	...	...	...	...	109	99	208
1	1	2	...	...	...	...	...	...	59	53	112
4	3	7	...	...	...	...	...	...	168	152	320
14	18	32	...	...	...	13	12	25	5,582	4,718	10,300
18	21	39	...	...	...	13	12	25	5,750	4,870	10,620
1	...	1	...	...	...	2	1	3	200	188	388
...	...	...	...	...	...	...	1	1	15	5	20
1	...	1	...	...	...	2	2	4	215	193	408
88	23	61	...	...	...	...	...	...	465	401	866
326	273	599	...	...	...	307	286	593	27,190	23,837	51,027
364	296	660	...	...	...	307	286	593	27,655	24,238	51,893

ANNUAL FORM NO. V.—*Deaths registered according to class*

1	2	3											
		Number of deaths											
No.	District.	Christians.			Hindus.			Muhammadans.			Buddhists.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1	Cuttack ...	23	9	32	32,131	33,277	65,408	875	896	1,771	...	...	...
2	Balasore ...	10	12	22	14,608	16,005	30,613	487	523	1,010	...	...	...
3	Puri ...	6	12	18	15,097	15,282	30,379	305	277	582	...	...	...
4	Sambalpur ...	11	8	19	14,315	13,041	27,356	22	15	37	...	...	...
5	Angul ...	...	...	...	1,845	1,840	3,685	1	...	1	...	...	...
6	Khondmals ...	...	...	...	415	414	829	1	1	2	...	...	...
7	Ganjam Plains ...	19	33	52	16,417	16,310	32,727	62	68	130	...	...	...
	AGENCY DISTRICTS.												
8	Ganjam ...	22	18	40	954	754	1,708	4	...	4	...	...	...
9	Koraput	5	5	10	142	132	274	...	...	...	...	...	...
	Total of Agency districts	27	23	50	1,096	886	1,982	4	...	4	...	...	...
	Total for the province ...	96	97	193	95,924	97,055	192,979	1,757	1,780	3,537	...	...	...

DIX I—*contd.*

in the districts of Orissa Province during the year 1937.

			4														
registered.			Ratio of deaths per 1,000 of population.														
Other classes.			Christians.			Hindus.			Muhammadans.			Buddhists.			Other classes.			No.
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
...	...	...	18·8	5·5	11·1	32·2	30·0	31·0	29·2	24·8	26·8	...	...	...	...	...	...	1
198	180	378	14·6	17·4	16·0	31·9	32·9	32·4	31·1	32·5	31·8	...	...	...	31·8	27·3	29·5	2
...	...	...	7·8	15·6	11·7	30·9	29·2	30·0	28·0	23·8	25·8	...	...	...	...	...	...	3
1	1	2	5·8	4·1	4·9	28·0	24·4	26·2	8·7	6·4	7·6	...	...	...	0·2	0·2	0·2	4
...	...	...	...	...	...	27·0	25·8	26·4	0·6	...	0·4	...	...	...	...	...	...	5
983	938	1,921	...	...	...	34·6	34·8	34·7	62·5	83·3	71·4	...	...	...	34·9	31·2	33·0	6
43	36	79	21·9	37·6	29·8	28·7	23·3	25·7	30·1	36·0	32·9	...	...	...	8·2	9·4	8·7	7
37	27	64	14·5	12·8	13·7	28·0	21·3	24·6	87·0	...	50·6	...	...	...	0·9	0·6	0·8	8
4	8	12	15·0	14·7	14·8	15·7	14·2	14·9	...	...	...	...	...	...	13·8	27·3	20·6	9
41	35	76	14·6	13·1	13·9	25·4	19·8	22·5	87·0	...	50·6	...	...	...	1·0	0·8	0·9	
1,266	1,190	2,456	12·9	12·3	12·6	30·4	27·9	29·1	28·6	26·1	27·3	...	...	...	14·4	13·1	13·8	

APPENDIX I—*contd.*

ANNUAL FORM NO. V-A.—*Death rates according to class, urban and rural areas separately in each district of Orissa Province during the year 1937.*

Number.	District.		Christians.	Hindus.	Muhammadans.	Buddhists.	Other classes.	Total.
1	2		3	4	5	6	7	8
1	Cuttack	Urban	12·0	14·8	11·9	...	...	14·8
		Rural	6·6	31·6	30·5	...	...	31·6
2	Balasore	Urban	22·6	22·9	23·0	...	7·6	22·7
		Rural	12·4	32·5	33·0	...	29·7	32·5
3	Puri	Urban	20·0	36·9	8·4	...	...	36·5
		Rural	10·5	29·8	26·2	...	...	29·7
4	Sambalpur	Urban	...	26·0	2·6	...	...	23·8
		Rural	5·2	26·2	9·2	...	0·2	25·8
5	Angul	Urban	...	...	...	...	...	...
		Rural	...	26·4	0·4	...	...	26·2
6	Khondmals	Urban	...	...	...	...	...	...
		Rural	...	34·7	71·4	...	33·0	33·4
7	Ganjam Plains	Urban	18·2	21·4	27·9	...	...	21·5
		Rural	37·9	25·9	36·3	...	8·8	25·8
	AGENCY DISTRICTS.							
8	Ganjam	Urban	...	...	...	...	...	...
		Rural	13·7	24·6	50·6	...	0·8	11·5
9	Koraput	Urban	...	...	...	...	...	...
		Rural	14·8	14·9	...	...	20·6	1·51
	Total of Agency districts.	Urban	...	...	...	...	...	...
		Rural	13·9	22·5	50·6	...	0·9	11·9
	Total for the province.	Urban	14·0	22·3	14·5	...	3·3	21·4
		Rural	12·1	29·3	29·6	...	15·8	25·9

APPENDIX I

Annual Form No. VI.

APPEN-

ANNUAL FORM NO. VI.—*Deaths registered from different causes in the*

1	2	3			4			5			6	7	8	9	10	11
		Population for which returns were received.			Births.			Birth rate.								
No.	Districts and towns.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Cholera.	Smallpox.	Plague.	Fever.	Dysentery and Diarrhœa.	Respiratory diseases.
	DISTRICTS EXCLUDING TOWNS.															
1	Cuttack ...	980,266	1,107,885	2,088,151	36,412	34,605	71,017	17·4	16·6	34·0	3,054	1,163	...	32,112	8,833	1,272
2	Balasore ...	470,385	502,372	972,757	15,833	14,590	30,423	16·3	15·0	31·3	1,495	253	...	19,081	426	76
3	Puri ...	479,511	518,075	997,586	18,702	17,738	36,440	18·7	17·8	36·5	271	85	...	13,012	3,554	1,053
4	Sambalpur ...	514,424	536,169	1,050,593	20,374	19,377	39,751	19·4	18·4	37·8	95	30	...	14,884	1,708	1,286
5	Angul ...	68,694	71,764	140,458	2,797	2,782	5,579	19·9	19·8	39·7	52	...	...	3,082	29	20
6	Khondmals ...	40,231	42,047	82,278	1,509	1,420	2,929	18·3	17·3	35·6	3	131	...	2,265	14	8
7	Ganjam plains ...	552,976	677,676	1,230,652	24,427	23,165	47,592	19·9	18·8	38·7	29	567	...	18,235	1,868	694
	AGENCY DISTRICTS.															
8	Ganjam ...	77,071	80,635	157,706	1,224	1,233	2,457	7·8	7·8	15·6	...	30	...	1,380	47	83
9	Koraput ...	9,670	9,940	19,610	249	192	441	12·7	9·8	22·5	...	...	...	187	12	14
	Total of Agency districts.	86,741	90,575	177,316	1,473	1,425	2,898	8·5	8·0	16·3	...	30	...	1,567	59	97
	Total for the Province.	3,113,228	3,546,563	6,739,791	121,527	115,102	236,629	18·0	17·1	35·1	4,999	2,259	...	104,253	16,521	4,506
	TOWNS.															
	CUTTACK DISTRICT.															
1	Cuttack ...	36,357	28,906	65,263	445	388	833	6·8	5·9	12·7	28	...	...	258	100	48
2	Kendrapara ...	6,237	6,383	12,620	197	185	382	15·6	14·7	30·3	18	...	...	204	29	11
3	Jajpur ...	5,274	5,399	10,673	86	89	175	8·1	8·3	16·4	3	4	...	126	17	2
	BALASORE DISTRICT															
4	Balasore ...	10,133	7,710	17,843	158	139	297	8·8	7·8	16·6	4	2	...	204	32	25
	PURI DISTRICT.															
5	Puri ...	20,703	16,865	37,568	436	410	846	11·6	10·9	22·5	18	1	...	480	250	55
	SAMBALPUR DISTRICT															
6	Sambalpur ...	7,716	7,301	15,017	165	211	376	11·0	14·0	25·0	5	1	...	132	67	29
	GANJAM DISTRICT.															
7	Berhampur ...	18,490	19,260	37,750	755	737	1,492	20·0	19·5	39·5	1	...	...	206	127	158
8	Parlakimedi ...	9,604	10,468	20,072	360	356	716	17·9	17·8	35·7	...	2	...	63	51	51
	Total for all towns.	114,514	102,292	216,806	2,602	2,515	5,117	12·0	11·6	23·6	77	10	...	1,673	673	379
	Total for the whole Province.	3,207,742	3,648,855	6,956,597	124,129	117,617	241,746	17·9	16·9	34·8	5,076	2,269	...	105,931	17,194	4,885

DIX I.—*contd.*

districts and towns of Orissa Province during the year 1937.

12						13	14			15													
Injuries.							Total deaths from all causes.			Ratio of deaths per 1,000 of population.													
Suicide.		Wounds or accidents.	Snake bite or killed by wild animals.	Rabies.	Total.	All other Causes.	Male.	Female.	Total.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhœa.	Respiratory diseases.	Injuries.	All other causes.	From all causes.				No.
Male.	Female.																	Male.	Female.	Total.	Mean of previous five year.	
99	292	436	235	38	1,100	18,412	32,320	33,626	65,946	1·5	0·6	...	15·4	4·2	0·6	0·5	8·8	33·0	30·4	31·6	32·0	1
47	93	218	144	11	516	9,770	15,088	16,529	31,617	1·5	0·3	...	19·6	0·5	0·1	0·5	10·0	32·1	32·9	32·5	32·7	2
55	68	203	124	2	452	11,182	14,695	14,914	29,609	0·3	0·1	...	13·0	3·6	1·1	0·4	11·2	30·6	28·8	29·7	29·1	3
27	19	187	81	...	314	8,740	14,155	12,901	27,057	0·1	0·03	...	14·2	1·6	1·3	0·3	8·3	27·5	24·1	25·8	...	4
9	18	33	32	1	93	419	1,846	1,840	3,686	0·4	...	...	21·9	0·2	0·1	0·7	2·9	26·9	25·6	26·2	...	5
4	4	12	26	8	54	257	1,399	1,353	2,752	0·03	1·6	...	27·7	0·2	0·1	0·7	3·1	34·8	32·2	33·4	...	6
13	23	91	69	39	235	10,093	15,889	15,853	31,742	0·02	0·5	...	14·8	1·5	0·6	0·2	8·2	28·7	23·4	25·8	...	7
2	3	14	6	...	25	251	1,017	799	1,816	...	0·2	...	8·7	0·3	0·5	0·7	1·6	13·2	9·9	11·5	...	8
...	...	8	...	1	9	74	151	145	296	...	...	...	9·5	0·6	0·7	0·5	3·8	15·6	14·6	15·1	...	9
2	3	22	6	1	34	325	1,168	944	2,112	...	0·2	...	8·8	0·3	0·6	0·2	1·8	13·5	10·4	11·9	...	
256	523	1,302	717	91	2,789	59,189	96,561	97,960	194,521	0·7	0·3	...	15·5	2·5	0·7	0·4	8·8	30·2	27·6	28·9	...	
7	2	8	3	1	21	235	446	244	690	0·4	...	...	4·0	1·5	0·8	0·3	3·6	12·3	8·4	10·6	9·3	1
2	...	2	...	...	4	141	178	229	407	1·4	...	...	16·2	2·3	0·9	0·3	11·2	28·5	35·0	32·3	30·0	2
...	...	...	...	...	...	16	85	83	168	0·3	0·3	...	11·8	1·6	0·2	...	1·5	16·1	15·4	15·7	15·1	
1	1	7	...	...	9	130	215	191	406	0·2	0·1	...	11·4	1·8	1·4	0·5	7·3	21·2	24·7	22·7	21·9	4
6		24	3	...	36	530	713	657	1,370	0·5	0·03	...	12·8	6·6	1·5	1·0	14·1	34·4	39·0	36·5	32·8	
...	2	1	1	...	4	119	193	164	357	0·3	0·1	...	8·8	4·5	1·9	0·3	7·9	25·0	22·5	23·8	22·6	6
2	...	9	5	...	16	367	459	416	875	0·03	...	...	5·5	3·4	4·2	0·4	9·7	24·8	21·6	23·2	...	7
...	...	2	...	1	3	211	193	178	371	...	0·1	...	3·1	2·5	2·6	0·2	10·0	20·1	17·0	18·5	...	8
18	8	53	12	2	93	1,739	2,482	2,162	4,644	0·4	0·1	...	7·7	3·1	1·7	0·4	8·0	21·7	21·1	21·4	...	
274	531	1,355	729	93	2,882	60,928	99,043	100,122	199,165	0·7	0·3	...	15·2	2·5	0·7	0·4	8·8	29·9	27·4	28·6	...	

ANNUAL FORM NO. VI (*a*).—*Deaths registered from different kinds*

Municipalities.	Malaria.	Enteric fever.	Measles.	Relapsing fever (spiroe-hoetal).	Kala-azar.	Influenza.	Cerebro-spinal fever.	Typhus fever.	Blackwater fever.	Other fevers.	Dysentery.	Diarrhoea.
1	2	3	4	5	6	7	8	9	10	11	12	13
CUTTACK DISTRICT.												
Cuttack ...	208	...	...	...	...	21	...	24	...	3	100	...
Kendrapara ...	204	...	...	...	...	...	...	...	...	...	29	...
Jajpur ...	126	...	...	...	...	...	...	...	...	...	17	...
BALASORE DISTICT.												
Balasore ...	129	...	...	...	...	4	...	...	...	71	28	4
PURI DISTRICT.												
Puri ...	...	...	...	...	...	...	...	...	...	480	250	...
SAMBALPUR DISTRICT.												
Sambalpur ...	113	...	...	...	...	...	...	...	...	19	67	...
GANJAM DISTRICT.												
Berhampur ...	44	12	...	...	...	11	...	...	...	139	42	85
Parlakimedi ...	10	7	2	...	...	...	...	...	...	46	21	30

DIX I—*contd.*

of fevers, dysentery, diarrhoea, respiratory diseases and other cases.

Pneumonia	Pulmonary tuberculosis.	Hooping-cough.	Other respiratory diseases.	Beri-beri.	Acute poliomyelitis.	Diphtheria.	Chicken-pox.	Mumps.	Tuberculosis of joints.	Other tubercular diseases.	Leprosy.	Cancer.	Deaths from child-birth.	Deaths under one year.	Infantile mortality rate per 1,000 births.
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
7	...	...	41	...	1	1	...	...	1	41	1	4	19	98	117·6
...	...	...	11	...	...	...	...	...	...	...	...	...	4	116	303·7
...	...	...	2	...	...	...	...	...	...	...	...	...	...	24	137·1
5	...	1	19	...	...	...	1	...	...	30	...	...	4	64	215·5
...	...	...	55	...	...	...	...	...	...	10	44	...	9	186	219·9
...	...	...	29	...	...	...	...	...	...	...	...	...	47	58	154·3
67	...	...	73	2	1	...	...	...	...	18	2	1	25	208	139·4
20	6	...	23	3	...	1	...	...	...	2	1	...	8	112	156·4

ANNUAL FORM NO. VII.—*Deaths registered from cholera in the*

1	2	3		4		5						
No.	District.	Circles of registration.		Villages.		January.	February.	March.	April.	May.	June.	July.
		Number in each district.	Number from which deaths from cholera were reported.	Number in each district.	Number from which deaths from cholera were reported.							
1	Cuttack ...	13	13	5,506	773	902	725	679	396	88	33	71
2	Balasore ...	10	10	3,479	386	277	235	240	151	52	28	113
3	Puri ...	6	5	2,987	102	60	27	61	11	12	20	24
4	Sambalpur ...	27	12	3,094	53	1	...	...	...	...	79	1
5	Angul ...	5	4	467	18	...	4	43	4	...	...	...
6	Khondmals ...	4	1	1,141	3	...	...	...	...	...	...	3
7	Ganjam plains ...	9	7	2,642	19	3	8	3	5	1	1	2
	AGENCY DISTRICTS.											
8	Ganjam ...	3	...	116	...	...	...	...	...	...	...	...
9	Koraput ...	3	...	3	...	...	...	...	...	...	...	...
	Total of Agency districts...	6	...	119	...	...	...	...	...	...	...	...
	Total for the Province ...	80	52	19,435	1,354	1,243	999	1,026	567	153	161	214

DIX I—*contd.*

districts of Orissa Province during each month of the year 1937.

					6			7			8	1
					Total.			Ratio of deaths per 1,000 of population.				
August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.	Mean ratio per 1,000 of previous five years.	No.
86	82	20	20	1	1,565	1,538	3,103	1·5	1·3	1·4	2·2	1
198	108	51	32	14	726	773	1,499	1·5	1·5	1·5	1·8	2
11	4	5	52	2	151	138	289	0·3	0·3	0·3	1·0	3
...	...	13	6	...	50	50	100	0·1	0·1	0·1	...	4
1	...	...	...	...	26	26	52	0·4	0·4	0·4	...	5
...	...	...	...	...	2	1	3	0·05	0·02	0·05	...	6
4	1	...	1	1	18	12	30	0·03	0·02	0·02	...	7
...	...	...	...	...	...	...	...	...	...	...	...	8
...	...	...	...	...	...	...	...	...	...	...	...	9
...	...	...	...	...	...	...	...	...	...	...	...	
300	195	89	111	18	2,538	2,538	5,076	0·8	0·7	0·7	...	

ANNUAL FORM NO. VIII.—*Deaths registered from smallpox in the districts*

1	2	3		4		5					
No.	District.	Circles of registration.		Villages.		January.	February.	March.	April.	May.	June.
		Number in each district.	Number from which deaths from smallpox were reported.	Number in each district.	Number from which deaths from smallpox were reported.						
1	Cuttack ...	18	12	5,506	519	172	197	182	158	118	76
2	Balasore ...	10	10	3,479	164	14	29	35	32	32	17
3	Puri	6	3	2,987	54	8	13	11	17	10	10
4	Sambalpur ...	27	16	3,094	61	10	...	...	...	18	2
5	Angul	5	...	467	...	...	...	...	...	...	...
6	Khondmals ...	4	4	1,141	33	10	7	2	...	1	19
7	Ganjam Plains ...	9	8	2,642	249	49	51	46	89	107	62
	AGENCY DISTRICTS.										
8	Ganjam ...	3	3	116	19	...	4	4	3	7	3
9	Koraput ...	3	...	3	...	...	...	...	...	...	...
	Total of Agency districts.	6	3	119	19	...	4	4	3	7	3
	Total for the Province	80	56	19,435	1,099	263	301	280	299	293	189

DIX I—*contd.*

of Orissa Province during each month of the year 1937.

						6			7		8			9	
						Total.			Number of deaths among children.		Ratio of deaths per 1,000 of population.				
July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Under one year.	One year and under 10 years.	Male.	Female.	Total.	Mean ratio per 1,000 of previous five years.	No.
26	38	46	27	45	82	587	580	1,167	36	135	0·6	0·5	0·6	1·7	1
13	7	6	7	17	46	122	133	255	8	6	0·2	0·3	0·2	0·5	2
8	2	1	2	5	4	33	53	86	24	34	0·1	0·1	0·1	1·9	3
...	...	1	...	...	...	12	19	31	7	...	0·02	0·04	0·03	...	4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
13	21	16	31	6	5	74	57	131	14	24	1·9	1·4	1·6	...	6
45	24	26	15	15	40	248	321	569	173	187	0·4	0·4	0·4	...	7
2	2	2	...	2	1	20	10	30	5	5	0·3	0·1	0·2	...	8
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9
2	2	2	...	2	1	20	10	30	5	5	0·2	0·1	0·2	...	
102	94	98	82	90	178	1,096	1,173	2,269	267	391	0·3	0·3	0·3	...	

ANNUAL FORM NO. IX.—*Deaths registered from fevers in the districts*

1	2	3		4		5						
No.	Districts.	Circles of registration.		Villages.		January.	February.	March.	April.	May.	June.	July.
		Number in each district.	Number from which deaths from fever were reported.	Number in each district.	Number from which deaths from fever were reported.							
1	Cuttack	13	13	5,506	5,371	4,411	3,076	2,806	2,638	2,070	1,709	1,644
2	Balasore	10	10	3,479	3,176	1,969	1,730	1,740	1,509	1,358	938	916
3	Puri	6	6	2,987	2,659	1,679	1,105	1,146	1,166	1,070	720	736
4	Sambalpur	27	27	3,094	2,978	1,682	1,025	1,213	1,217	1,270	1,040	890
5	Angul	5	5	467	387	351	273	348	391	301	196	156
6	Khondmals	4	4	1,141	967	286	212	238	241	262	179	143
7	Ganjam plains	9	9	2,642	2,338	1,698	1,288	1,568	1,624	1,517	1,357	1,410
	AGENCY DISTRICTS.											
8	Ganjam	3	3	116	102	80	158	155	165	128	108	88
9	Koraput	3	3	3	3	17	14	13	12	16	8	6
	Total of Agency districts ...	6	6	119	105	97	172	168	178	144	116	94
	Total for the Province ...	80	80	19,425	17,411	12,123	8,831	9,267	8,974	7,992	6,255	5,989

DIX I—*contd.*

of Orissa Province during each month of the year 1937.

August.	September.	October.	November.	December.	6 Total. Male.	Female.	Total.	7 Ratio of deaths per 1,000 of population. Male.	Female.	Total.	8 Mean ratio per 1,000 of previous five years.	1 No.
2,075	2,231	2,604	3,005	4,431	15,528	17,172	32,700	15·1	15·0	15·0	12·1	1
1,537	1,332	1,630	2,293	2,333	9,178	10,107	19,285	19·1	19·8	19·5	18·5	2
984	867	1,032	1,276	1,761	6,471	7,021	13,492	12·9	13·1	13·0	9·5	3
1,291	1,388	1,427	1,171	1,352	7,622	7,394	15,016	14·6	13·6	14·1	...	4
230	228	217	167	224	1,514	1,568	3,082	22·0	21·8	21·9	...	5
179	143	149	164	139	1,148	1,137	2,285	26·5	27·0	27·7	...	6
1,600	1,570	1,405	1,499	2,018	9,168	9,336	18,504	15·8	13·2	14·4	...	7
88	101	98	103	107	783	597	1,380	10·1	7·4	8·7	...	8
15	20	22	20	24	96	91	187	9·9	9·2	9·5	...	9
103	121	120	123	131	879	688	1,567	10·1	7·6	8·8	...	
7,949	7,880	8,584	9,698	12,389	51,508	54,423	105,931	15·6	14·9	15·2	...	

ANNUAL FORM NO. X.—*Deaths registered from dysentery and diarrhœa in the districts*

1	2	3		4		5						
No.	Districts.	Circles of registration.		Villages.		January.	February.	March.	April.	May.	June.	July.
		Number in each district.	Number from which deaths from dysentery and diarrhœa were reported.	Number in each district.	Number from which deaths from Dysentery and Diarrhœa were reported.							
1	Cuttack ...	18	13	5,506	2,857	1,031	888	840	781	607	485	555
2	Balasore ...	10	10	3,479	244	29	39	35	35	22	32	23
3	Puri ...	6	6	2,987	1,568	428	300	342	259	246	236	366
4	Sambalpur ...	27	27	3,094	826	99	92	140	148	122	160	147
5	Angul ...	5	4	467	18	1	1	6	5	2	1	5
6	Khondmals ...	4	3	1,141	7	1	...	1	1	2	4	...
7	Ganjam Plains ...	9	9	2,642	1,099	132	84	122	156	147	165	196
	AGENCY DISTRICTS.											
8	Ganjam ...	3	3	116	39	2	2	4	3	1	3	6
9	Koraput ...	3	3	3	3	1	...	1	...	...	1	1
	Total of Agency districts	6	6	119	42	3	2	5	3	1	4	7
	Total for the Province.—	80	78	19,425	6,661	1,727	1,406	1,491	1,388	1,149	1,087	1,299

DIX I--*contd.*

of Orissa Province during each month of the year 1937.

					6			7			8	
August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
					Male.	Female.	Total.	Male.	Female.	Total.		
773	696	674	729	917	4,603	4,370	8,979	4·5	3·8	4·1	4·1	1
57	44	56	46	40	233	225	458	0·5	0·4	0·5	0·6	2
437	320	300	272	298	1,926	1,878	3,804	3·8	3·5	3·6	3·7	3
194	238	161	142	132	977	798	1,775	1·9	1·5	1·7	...	4
6	1	1	...	...	17	12	29	0·3	0·2	0·2	...	5
...	1		...	1	11	3	14	0·3	0·1	0·2	...	6
296	238	190	174	176	1,074	1,002	2,076	1·9	1·4	1·6	...	7
6	3	7	3	7	29	18	47	0·4	0·2	0·3	...	8
1	4	1	...	2	8	4	12	0·9	0·4	0·6	...	9
7	7	8	3	9	37	22	59	0·4	0·2	0·3	...	
1,770	1,545	1,393	1,366	1,573	8,884	8,310	17,194	2·7	2·3	2·5	...	

ANNUAL FORM NO. XI.—*Deaths registered from respiratory diseases in the*

1	2	3		4		5						
No.	District.	Circles of registration.		Villages.		January.	February.	March.	April.	May.	June.	July.
		Number in each district.	Number from which deaths from respiratory diseases were reported.	Number in each district.	Number from which deaths from respiratory diseases were reported.							
1	Cuttack	13	13	5,506	922	140	121	124	130	101	80	76
2	Balasore	10	10	3,479	35	5	7	9	4	6	5	6
3	Puri	6	6	2,987	764	120	91	103	94	90	78	65
4	Sambalpur	27	27	3,094	801	110	85	115	99	135	97	115
5	Angul	5	4	467	13	1	3	2	2	3	1	5
6	Khondmals	4	2	1,141	5	...	1	2	...	1	2	...
7	Ganjam Plains	9	9	2,642	659	77	58	63	53	51	71	81
	AGENCY DISTRICTS.											
8	Ganjam	3	3	116	53	11	5	8	10	5	4	4
9	Koraput	3	2	3	2	...	...	1	2	2	...	1
	Total of Agency districts ...	6	5	119	55	11	5	9	12	7	4	5
	Total for the Province ...	80	76	19,435	3,254	464	371	427	394	394	388	353

DIX I—*concld.*

districts of Orissa Province during each month of the year 1937.

					6			7			8	1
					Total.			Ratio of deaths per 1,000 of population.				
August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.	Mean ratio per 1,000 of previous five years.	No.
99	86	107	97	172	748	585	1,333	0·7	0·5	0·6	0·6	1
11	2	7	30	9	57	44	101	0·1	0·1	0·1	0·1	2
91	68	75	105	128	551	557	1,108	1·1	1·0	1·1	1·1	3
118	118	111	105	107	869	446	1,315	1·7	0·8	1·2	...	4
1	...	1	...	1	11	9	20	0·2	0·1	0·1	...	5
1	...	1	...	...	5	3	8	0·1	0·1	0·1	...	6
73	90	82	101	103	499	404	903	0·9	0·6	0·7	...	7
7	8	9	7	5	52	31	83	0·7	0·4	0·5	...	8
...	1	1	3	3	5	9	14	0·5	0·9	0·7	...	9
7	9	10	10	8	57	40	97	0·7	0·5	0·6	...	
401	373	394	448	528	2,797	2,088	4,885	0·8	0·6	0·7	...	

ANNUAL FORM NO. XII.—*Deaths registered from plague in the*

1	2	3		4		5					
No.	District.	Circle of registration.		Villagers.							
		Number in each district.	Number from which deaths from plague were reported.	Number in each district.	Number from which deaths from plague were reported.	January.	February.	March.	April.	May.	June.
					Nil.						

DIX I—*contd.*

districts of Orissa Province during each month of the year 1937.

July.	August.	September.	October.	November.	December.	6 Total. Male.	6 Total. Female.	6 Total. Total.	7 Ratio of deaths per 1,000 of population. Male.	7 Ratio of deaths per 1,000 of population. Female.	7 Ratio of deaths per 1,000 of population. Total.	8 Mean ratio per 1,000 of previous five years.	1 No.

Nil.

APPENDIX II.

PROVINCIAL.

Statement showing details of registration in areas in which it is compulsory.

Compulsory registration area.	Population according to census of 1901.	Probable number of births at the rate of 286 per 1,000 married women between the ages of 15 and 40.	Actual number of births registered during the year.	Probable birth-rate per mille (columns 2 and 3).	Registered birth-rate per mille during the year.	Number of deaths registered during the year.		Death-rate per mille.		Number of persons prosecuted under Act IV (B. C.) of 1873.	Number of persons convicted.
						Including deaths in dispensary.	Excluding deaths in dispensary.	Including deaths in dispensary.	Excluding deaths in dispensary.		
1	2	3	4	5	6	7	8	9	10	11	12
Cuttack	65,263	Not available.	833	Not available.	12·7	1,021	690	15·6	10·6	...	...
Kendrapara	12,620		382		30·3	433	407	34·3	32·3	...	...
Jajpur	10,673		175		16·4	180	168	16·9	15·7	...	...
Balasore	17,843		297		16·6	473	406	26·5	22·7	...	...
Puri	37,568		846		22·5	1,629	1,370	43·4	36·5	32	31
Sambalpur	15,017		376		25·0	407	357	27·1	23·8	8	3
Berhampur	37,750		1,492		39·5	945	875	25·0	23·2	...	...
Parlakimedi	20,072		716		35·7	388	371	19·3	18·5	...	...
Total ...	216,806	...	5,117	...	23·6	5,476	4,644	25·3	21·4	...	...

APPENDIX III.

APPEN

Table showing health services in rural and urban areas of

Rural areas.

District Board.	Medical officers of Health.				Epidemic staff.	Sanitary and Health Inspectors.	Vaccinators.		School Medical officer.	Other Health staff.
	Holding D. P. H.		Licentiates L. P. Hs.				Male.	Female.		
	Whole time.	Part time.	Whole time.	Part time.						
1	2	3	4	5	6	7	8	9	10	11
Cuttack ...	1	...	...	...	8	8	84	...	...	3
Balasore ...	1	...	1	...	...	6	46	...	...	9
Puri ...	1	...	...	...	12	8	84	...	...	1
Sambalpur ...	...	...	...	...	...	...	63	...	...	8
Ganjam ...	1	...	...	...	...	9	19	4	...	...
Koraput ..	...	...	1	...	...	8	24	1	...	...
Orissa Province ...	...	...	...	...	...	...	...	...	2	...

DIX III.

Orissa Province during the year 1937.

Urban areas.

Municipalities.	Medical officers of Health.				Sanitary and Health Inspectors.	Vaccinators.		Inspector of Vaccination.	School Medical officers.	Other Health staff.
	Holding D. P. H.		Licentiates L. M. P's.			Male.	Female.			
	Whole time.	Part time.	Whole time.	Part time.						
12	13	14	15	16	17	18	19	20	21	22
Cuttack ...	1	...	...	...	4	3	...	1	...	1
Kendrapara ...	...	...	...	1	...	1	...	...	...	2
Jajpur ...	...	...	...	...	...	1	...	...	...	...
Balasore ...	...	...	...	...	1	2	...	...	...	...
Puri ...	1	...	...	...	2	1	1	...	...	6
Sambalpur ...	...	...	...	...	1	1	...	1	...	...
Berhampur ...	...	...	1	...	3	1	...	...	...	...
Parlakimedi ...	...	...	...	...	1	1	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...

APPENDIX IV.

Table showing maternity and child welfare centres, health visitors and trained midwives in rural and urban areas in Orissa during 1937.

District.	Maternity and child welfare.												Remarks.
	Centres maintained by—						Trained visitors.		Trained midwives.		Trained dais.		
	Government.		Local and municipal bodies.		Other agencies.								
	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Cuttack ...	...	...	...	...	...	1	...	1	...	...	5	5	
Balasore ...	...	...	...	1	...	...	...	1	...	4	2	...	
Puri	...	...	1	1	...	...	...	...	1	1	...	1	
Sambalpur ...	...	...	...	1	...	...	...	...	1	1	...	1	
Ganjam ...	...	...	1	1	...	1	...	1	3	4	...	...	
Koraput ...	...	...	...	...	...	...	...	...	8	...	3	...	
Total ...	...	...	2	4	...	2	...	3	13	10	10	7	

STATEMENT No. I.

STATEMENT NO. I.—*Showing particulars of vaccination in the*

Number.	District.	Population of district according to the census of 1931.	Average number of vaccinators employed throughout the season.	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Primary
				Male.	Female.	Total.		Total.
1	2	3	4	5	6	7	8	9
1	Cuttack ... { District excluding towns ... / Towns ... }	2,176,707	{ 40 / 5	54,206 / 5,366	30,741 / 2,052	84,947 / 7,418	2,123 / 1,483	46,610 / 2,338
2	Balasore ... { District excluding towns ... / Towns ... }	990,600	{ 24 / 2	27,663 / 724	19,790 / 553	47,453 / 1,277	1,977 / 638	28,681 / 262
3	Puri ... { District excluding towns ... / Towns ... }	1,035,154	{ 39 / 2	40,848 / 2,549	21,140 / 1,795	61,988 / 4,344	1,589 / 2,172	36,723 / 1,235
4	Sambalpur ... { District excluding towns ... / Towns ... }	1,065,610	{ 78 / 1	121,125 / 808	45,720 / 300	166,845 / 1,108	2,139 / 1,108	24,376 / 350
5	Angul	140,458	7	3,636	2,573	6,209	887	4,852
6	Khondmals ...	82,278	3	6,005	4,374	10,379	3,460	2,106
7	Ganjam ... { District excluding towns ... / Towns ... }	1,553,135	{ 37 / 2	99,840 / 3,879	82,676 / 2,558	182,516 / 6,437	4,933 / 3,219	52,435 / 1,751
8	Koraput	963,617	25	36,042	29,947	65,989	2,640	28,994
	Total of Vaccine Department. { District excluding towns ... / Towns ... / Total ... }	8,009,559	{ 253 / 12 / 265	389,365 / 13,326 / 402,691	236,961 / 7,258 / 244,219	626,326 / 20,584 / 646,910	2,476 / 1,715 / 2,441	224,177 / 5,936 / 230,113
	Jails ...	...	...	4,529	246	4,775	...	83
	Cooly Depot ...	...	...	2,171	1,103	3,274	...	...
	Grand Total ...	...	...	409,391	245,568	654,959	...	230,196

districts of Orissa during the yaer 1937-38.

Vaccination.				Re-vaccination.			Percentage of successful cases in which the results were known.		Person successfully vaccinated per 1,000 of population.	Total cost of Vaccination Department.	Number of all successful vaccinations and re-vaccinations performed by the vaccination staff only.	Average cost of each successful cases performed by the vaccination staff.
Successful.												
Under one year.	One year and under six years.	Total of all ages.	Unknown.	Total.	Successful.	Unknown.	Primary.	Re-vaccination.				
10	11	12	13	14	15	16	17	18	19	20	21	22
										Rs. a. p.		Rs. a. p.
16,599	24,276	43,805	2,952	33,537	2,532	34,807	99·42	71·73	22·38	2,266 11 3	48,765	0 0 9
114	1,718	2,042	204	5,080	581	3464	95·69	35·15				
3 792	21,299	26,945	1,017	19,372	13,496	4,387	99·56	90·06	41·25	664 5 0	40,958	0 0 2
130	132	262	...	1,015	218	797	100·00	100·00				
2,690	21,113	28,793	6,299	25,265	10,310	10,619	94 64	70·39	39·19	413 15 0	41,397	0 0 2
193	782	1,065	99	3,109	992	939	95·75	43·87				
19,456	4,526	24,376	...	142,469	69,456	58,462	100·00	82·69	89·28	5,627 0 3	95,140	0 0 11
98	247	350	...	758	442	99	100·00	67·07				
2,699	2,089	4,799	10	1,357	840	21	99·11	62·87	40·15	1,040 12 0	5,639	0 2 11
613	1,176	1,791	245	8,273	5,222	1,962	96·24	82·74	85·24	977 4 0	7,013	0 2 3
14,872	26,290	42,005	4,389	130,081	48,544	16,204	87·43	42·63	60·82	28,118 2 2	94,586	0 4 9
1,227	272	1,506	23	4,686	2,256	621	87·15	55·69				
4,809	17,550	24,040	2,436	36,995	13,647	5,519	90·52	43·45	39·21	22,681 14 8	37,787	0 9 7
65,620	118,319	196,154	17,348	402,149	164,037	131,981	91·84	60·72	46·35	61,780 0 4	371,225	0 2 8
1,762	3,151	5,225	326	14,648	4,449	5 920	93·14	50·97				
67,382	121,470	201,379	17,674	416,797	168,486	137,901	94·79	60·42				
3	9	62	7	4,692	1,278	739	81·58	32·33	...	...	...	...
...	...	...	...	3,271	...	3,274	...	...	...	...	...	...
67,385	121,479	201.441	17,681	424,762	169,764	141,914	94·79	60·03	46·35	61,780 0 4	371,225	0 2 8

SUMMARY.

	Total number of persons vaccinated.		Total number of operations performed.		Percentage of successful cases in which the results were known.		Average number of persons vaccinated by each vaccinator.		Number of children successfully vaccinated.		Ratio of successful vaccinations per 1,000 of population.	Total cost of vaccination department.	Average cost of each successful case.
	Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Re-vaccination	Vaccinators employed.	Persons vaccinated by each vaccinator.	Under one year.	One year and under six years.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14
												Rs. a. p.	Rs. a. p.
BY SPECIAL STAFF.													
Statement (I)	230,113	416,597	230,113	416,597	94·79	60·42	165	2,441	67,392	121,479	46·35	61,780 0 4	0 2 8
BY OTHER AGENCIES.													
Jails and coolie depot ...	83	7,966	83	7,966	81·58	32·53	...	...	3	9			
Total ...	230,196	424,563	230,196	424,563	94·79	60·03	165	2,441	67,395	121,479	46·35	61,780 0 4	0 2 8

Comparative Statement no. II.—Showing the percentage of persons primarily vaccinated to the total number of vaccinations performed in the Province of Orissa in each of the undermentioned official years.

Establishments.	Years.									
	1928-29.	1929-30.	1930-31.	1931-32.	1132-33.	1933-34.	1934-35.	1935-36.	1936-37.	1937-38.
1	2	3	4	5	6	7	8	9	10	11
Government staff	62·02	73·52	55·04	83·90	88·53	66·18	44·57	47·84	48·89	37·61
Municipal	74·92	66·74	62·21	66·46	38·24	19·81	19·01	22·10	25·42	28·84
District Board	83·93	87·98	82·84	77·91	71·35	34·06	37·22	31·01	23·78	24·28
Licensed vaccinators ...	90·90	91·63	88·20	93·27	79·78	76·30	66·82	65·78	62·24	65·79
Jails	...	...	...	...	0·44	0·99	0·44	...	1·31	1·74
Cooly depot	...	...	...	...	...	...	8·12	...	3·70	...

Statement no. III.—Showing particulars of vaccination

District.	Total number of persons vaccinated.		Total number inspected—								Percentage of	
			By Assistant Directors of Public Health or Superintendents of Vaccination.				By native Superintendents or other Inspecting officers.				By Assistant Direc Health or of vacci-	
			Assistant Directors of Public Health.		Superintendents of Vaccination.		District Inspectors and Health Inspectors.		Sub-Inspectors.		Assistant Directors of Public Health.	
	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.
1	2	3	4	5	6	7	8	9	10	11	12	13
Cuttack ...	48,995	45,006	772	372	818	400	1,533	352	4,898	820	1·58	0·72
Balasore ...	28,343	20,729	...	...	51	...	670	237	3,805	630	...	...
Puri ...	37,982	29,039	180	...	1,303	393	288	...	10,983	2,975	0·47	...
Sambalpur ...	24,738	144,306	255	271	933	2,456	1,720	3,973	2,713	9,127	1·03	0·19
Angul ...	4,852	1,357	300	50	240	28	1,548	311	...	...	6·18	3·68
Khondmals ...	2,106	8,27[illegible]	...	...	73	546	...	...	1,036	5,667	...	...
Ganjam ...	51,186	135,633	1,698	329	1,335	3,535	36,796	80,973	30	600	3·13	0·24
Koraput ...	23,994	40,429	...	...	1,594	1,165	18,601	22,787	...	...	...	...
Total ...	2,30,116	424,763	3,205	972	6,347	8,613	61,156	108,233	23,375	19,879	1·39	0·22

verified by Inspecting Officers during the year 1937-38.

inspection to total number vaccinated.						Percentage of cases found successful to total number inspected—								Percentage of successful cases reported by Vaccinators.	
tors of Public Superintendents nation.		By native Superintendents or other Inspecting Officers.				By Assistant Directors of Public Health or Superintendents of Vaccination.				By native Superintendents or other Inspecting Officers.					
Superintendents of vaccination.		District Inspectors and Health Inspectors.		Sub-Inspectors.		Assistant Directors of Public Health.		Superintendents of Vaccination.		District Inspectors and Health Inspectors.		Sub-Inspectors.			
Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1·07	1·09	3·13	0·78	9·81	1·82	88·47	27·33	89·49	21·63	65·82	19·72	92·85	36·15	19·22	48·70
0·18	...	2·36	1·14	13·42	3·04	...	...	100·00	...	98·06	86·92	100·00	100·00	59·56	89·03
8·43	1·35	0·76	...	28·92	10·24	100·00	...	97·31	77·10	96·18	...	75·00	69·24	91·61	66·20
3·77	1·70	6·95	2·75	10·97	6·79	59·61	73·43	96·57	79·76	15·03	85·40	86·40	93·29	100·00	82·21
4·95	2·06	31·90	22·92	..	...	100·00	100·00	100·00	100·00	57·48	67·20	...	...	99·11	62·57
3·47	6·60	...	...	49·19	68·50	...	...	97·26	56·96	...	...	57·90	52·62	96·24	88·74
2·46	2·61	67·91	59·70	0·06	0·49	26·87	21·00	47·57	42·20	88·10	42·13	100·00	81·52	87·42	43·07
5·30	2·88	64·15	53·37	...	...	...	...	59·84	38·71	89·05	41·06	...	...	10·52	43·45
2·76	2·03	26·57	25·48	10·15	4·68	80·73	45·16	85·98	54·01	88·02	44·13	84·65	12·60	94·71	63·01

STATEMENT NO. IV.—*Showing side by side the ratios per mille of population of deaths from smallpox*

District.	1928-29.		1929-30.		1930-31.		1931-32.	
	Ratio of deaths from small-pox.	Ratio of successfull vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successfull vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.
1	2	3	4	5	6	7	8	9
Cuttack ...	0·18	20·00	0·09	23·20	0·50	19·61	0·44	27·64
Balasore ...	0.43	36·65	0·09	44·98	0·29	40·12	0·18	40·02
Puri ...	0·08	39·80	0·02	44·85	0·05	45·27	0·26	44·41
Sambalpur ...	0·22	26·66	0·17	24·82	0·76	29·37	1·40	30·28
Angul ...	0·03	45·80	...	47·64	...	41·10	...	39·90
Khondmals ...	0·02	58·62	...	44·39	...	33·59	...	39·50
Ganjam ...	0·08	26·01	0·06	35·15	0·07	30·27	0·06	31·75
Koraput ...	0·06	29·62	0·26	24·25	0·28	30·44	0·05	33·48
Total ...	0·18	27·01	0·08	30·59	0·17	27·56	0·21	32·68

and the ratios of successful vaccinations per mille of population during the ten years ending 1937-38.

1932-33.		1933-34.		1934-35.		1935-36.		1936-37.		1937-38.	
Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.
10	11	12	13	14	15	16	17	18	19	20	21
1·14	21·24	3·30	20·76	2·20	28·55	1·12	24·13	0·27	22·33	0·16	22·38
0·40	44·92	1·09	35·10	0·54	41·46	0·29	48·96	0·41	39·92	0·55	41·35
1·87	47·29	4·88	57·07	2·06	59·88	0·66	24·25	0·17	32·97	0·06	39·99
1·31	23·60	0·72	24·84	1·18	26·26	1·34	27·30	0·25	88·94	0·01	89·28
0·007	36·22	0·01	56·76	0·28	57·24	0·05	61·73	...	35·22	...	40·15
...	36·56	0·01	63·89	0·24	56·59	0·06	27·99	1·22	86·52	0·66	85·24
0·06	41·43	0·06	52·30	0·04	42·24	0·09	41·25	0·29	58·66	0·26	60,·92
0·04	36·44	0·03	36·69	0·12	30·98	0·26	40· 0	0·33	45·56	0·10	39·21
0·72	33·46	1·23	36·12	1·11	34·64	0·64	32·89	0·29	45·45	0·19	46·35

STATEMENT NO. V.—*Showing the protection afforded to infants in each town in the Province of Orissa during the year 1937-38.*

District.	Towns.	Number of births during the year ending 31st March 1938.	Number of deaths amongst infants under one year during the year ending 31st March 1938.	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1938.	Date of extension of vaccination Act to town.
1	2	3	4	5	6
Cuttack ...	Cuttack ...	811	100	52	1st September 1884.
	Kendrapara ...	352	108	57	7th February 1888.
	Jajpur ...	144	17	5	Ditto.
	Total ...	1,307	225	114	
Balasore ...	Balasore ...	305	67	130	7th February 1888
Puri ...	Puri ...	805	161	193	Ditto.
Sambalpur ...	Sambalpur ...	355	53	98	7th March 1895.
Ganjam ...	Berhampur ...	1,469	260	610	24th June 1921.
	Parlakimedi ...	729	104	617	Ditto.
	Total ...	2,198	364	1,227	
	Total for the Province	4,970	879	1,762	

ANNEXURE II.

ANNEXURE

Provincial statement showing the different kinds of lymph

District.	Primary vaccination.											
	Direct from calf.					With lanoline or glycerine lymph.					Arm-to-arm	
	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.
1	2	3	4	5	6	7	8	9	10	11	12	13
Cuttack	...	...	...	...	...	48,995	45,480	359	3,156	99·22	...	...
Balasore	...	...	...	...	...	28,343	27,207	119	1,017	99·56	...	...
Puri	...	...	...	...	...	37,982	29,875	1,702	6,405	94·61	...	...
Sambalpur	...	...	...	...	...	24,738	24,738	...	...	100·00	...	...
Angul	...	...	...	...	...	4,852	4,799	43	10	99·11	...	...
Khondmals	...	...	...	...	...	2,106	1,791	70	245	96·24	...	...
Ganjam	...	...	...	...	...	54,186	48,511	6,263	4,412	87·42	...	...
Koraput	...	...	...	...	...	28,994	24,040	2,518	2,436	90·52	...	...
Total ...	...	...	...	...	...	230,196	201,441	11,074	17,681	94·79	...	...

II.

used and their rates of success during the year 1937-38.

			Re-vaccination.													
vaccination.			Direct from calf.					With lanoline or glycerine lymph.					Arm-to-arm vaccination.				
Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
...	...	...	...	...	...	...	...	45,006	3,225	3,264	38,517	49·70	...	...	...	...	...
...	...	...	...	...	...	...	...	20,720	13,751	1,694	5,275	89·03	...	...	...	...	...
...	..	...	...	...	...	...	...	29,089	11,522	5,882	11,685	66·20	...	...	...	...	...
...	...	...	...	...	...	...	...	144,306	70,402	15,230	58,674	82·21	...	...	...	...	...
...	...	...	...	...	...	...	...	1,357	840	496	21	62·87	...	...	...	...	...
...	...	...	...	...	...	...	...	8,273	5,222	1,089	1,962	82·74	...	...	...	...	...
...	...	...	...	...	...	...	...	135,633	51,075	67,522	17,036	43·07	...	...	...	...	...
...	...	...	...	...	...	...	...	40,429	13,747	17,888	8,794	43·45	...	...	...	...	...
...	...	...	...	...	...	...	...	424,763	169,784	113,065	141,914	60·03	...	...	...	...	...

No. 1639-L.S.-G.

GOVERNMENT OF ORISSA.

HEALTH AND LOCAL SELF-GOVERNMENT DEPARTMENT.

RESOLUTION.

Dated the 22nd March 1939.

READ—

The Public Health Report for the year 1937 and the Vaccination Report for the year 1937-38.

The total number of births during the year under report as compared with the previous year fell from 254,697 to 241,746 and of deaths rose from 193,588 to 199,165. A somewhat heavier mortality from fever, dysentery and diarrhoea and general causes contributed towards the slight rise in the death-rate during the year under review. While recording with satisfaction that the mortality from cholera and smallpox as compared with the previous year has decreased from 1·1 and 0·5 to 0·7 and 0·3 per thousand of population, Government also note with regret that the province has recorded a higher death-rate than all other provinces except the Central Provinces. The highest birth-rate of 39·7 was recorded in the Angul subdivision and the lowest rate of 16·3 in the Agency districts of Ganjam and Koraput. The death-rate in the rural areas was greater than in the urban. The highest death-rate of 33·4 was recorded in the Khondmals and the lowest of 11·9 in the Agency areas. The figures for the Agency areas however are not as complete as those for the rest of the Province, as there is no proper system of registering births and deaths in a large part of the Agency. Amongst the towns in the province the highest death-rates were recorded in Puri and Kendrapara and the lowest in Cuttack and Jajpur.

Registration of vital occurrences is compulsory in all the 8 municipalities of the province. Such registration is not compulsory in the rural areas except in plains portion of the Ganjam district in villages which have a population of 2,000 and over.

The verification of the records of vital statistics both in the rural and urban areas is attended to by the Public Health Department. The accuracy of 50,838 vital occurrences were investigated in the compulsory areas and verified by officers of the Public Health and the Vaccination Department as compared with 5,269 cases in the previous year. The large increase is commendable. 1,467 omissions were detected, 126 prosecutions were instituted and 51 convictions were obtained during the year under report as compared with the respective figures of 143, 40, and 18 in the previous year. In the rural areas where such registration is not compulsory 98,421 vital occurrences were verified against 73,037 in the previous year. Verification of vital statistics continues to be difficult in those areas where there is not an adequate health organisation.

2. *Infant mortality.*—Government notice with regret that there was an increase in the rate of infant mortality as compared with the previous year from 198·8 to 214·7 per mille on the basis of actual births recorded. This indicates the urgent need of maternity work being taken up in greater earnest by local bodies throughout the province. There were five centres at work at Balasore, Cuttack, Sambalpur, Berhampur and Parlakimedi which rendered useful aid to the public. The Bihar and Orissa Maternity and Child Welfare Society continued to work through its Managing Committee in so far as the North Orissa districts were concerned; as Orissa has not yet been able to form a society of its own.

3. *Malaria.*—The bulk of deaths from fever is attributed to malaria, the existence of which is particularly high in this province. A beginning was made during the year to improve the antemalarial measures in the neighbourhood of the Chilka Lake. The campaign is being continued on a larger scale this year. Special ante-malarial measures are also being taken in Koraput, and schemes for other areas are under consideration.

4. *Cholera.*—The death-rate from cholera decreased from 1·1 in 1936 to 0·7 per mille in 1937. The districts of Cuttack and Balasore and amongst the towns Kendrapara recorded the highest incidence of death due to cholera. The disease was prevalent throughout the year in a somewhat mild form. The intensity of the disease was at its maximum in the districts of Cuttack and Balasore from January to April and from July to September. Extensive public health propaganda work has been carried out through the local public health staff and the Government School Medical Staff, with magic lantern demonstrations and the distributions of leaflets and pamphlets. All the districts except one have now got a fairly well equipped public health organisation with a properly trained staff. Facilities afforded to district boards to combat the disease remained the same as in previous years, viz., Government doctors were deputed for anti-cholera work, and disinfectants and cholera vaccine were issued free of cost. Preventive measures against the disease were successfully carried on in the Ratha and Snan Jatra festivals and also in other important festivals in the province.

In addition to the anti-cholera inoculation, cholera Bacteriophage was also used as a prophylactic measure against cholera. This was also purchased for free supply in the province.

5. *Smallpox.*—The total number of deaths during the year was 2,269 as against 3,789 in 1936, giving a mortality of 0·3 as against 0·5 in the previous year. The rural areas as usual suffered more than the urban areas. The highest death-rate was registered in the district of Cuttack and in the Khondmals. Amongst towns Jajpur recorded the highest death-rate. The low death-rate during the year is attributable to the immunity conferred by the extensive vaccination and revaccination carried out during the previous years. The comparatively high mortality in the rural areas is due to the fact that a large number of people, particularly children, still escape even primary vaccination and thus remain entirely unprotected, as vaccination in the rural areas except in the district of Puri and the Ganjam plains is not compulsory, while the importance of revaccination is not sufficiently appreciated. Government are at present considering the extension of compulsory vaccination throughout the Province.

During the year under report vaccine-lymph was purchased from the Vaccine Depot, Namkum, Ranchi, by Government and was supplied free of cost throughout the province. Control of vaccination was the same as in the previous years.

6. *Plague.*—No case of plague was reported in the province during the year.

7. *Leprosy.*—Leprosy continues to be a problem of the first magnitude in the province. During the year under review 71 outdoor clinics were working and the number of patients who attended these clinics was 7,659. In addition to these clinics there is one Leprosy Asylum at Cuttack and a Leprosy Colony at Puri, having accommodation for indoor patients. Seventy-five lepers in Sambalpur and 14 leper families in Balasore have isolated themselves by building huts or houses at sufficient distance from the towns.

The Orissa branch of the British Empire Leper Relief Association was inaugurated in April 1937 with His Excellency the Governor as president and the activities of the Association have been embodied in a separate report.

8. *Yaws.*—This disease is widely prevalent in the Koraput Agency and the question of establishing an itinerant dispensary for its treatment in the rural areas is under the consideration of Government.

9. *Venerial disease.*—Its incidence is very high amongst the Khonds in the Agency areas of the Province. Indoor and outdoor treatment is given in almost all the dispensaries of the Agency area.

10. *Nutrition.*—The Report shows that there is a lack of vegetables, cereals other than rice, milk and milk products in the province which together with the ignorance of the people results in an unbalanced diet. Generally speaking nutritional deficiencies and deficiency diseases are most widespread amongst the ruralpopulation, especially in the coastal and deltaic portions of the province. The importance of improving the diet of the people is fully realised.

11. *Rural Water-supply.*—The supply is generally inadequate and special steps are being taken by Government to improve it.

12. *School Medical Inspection.*—Four thousand and eighty-seven students were examined, of whom 2,509 or 61 per cent were found defective as against 82 per cent and 70 per cent in the years 1935 and 1936 respectively. The question of the appointment of a whole-time lady School Medical Officer for the province is still under the consideration of Government. As there was no such officer, the medical inspection of girl students could not be carried out.

13. *Public Health Department* (*Engineering Branch*).—A summary of the activities of the departments relating to sanitary work in the areas under the jurisdiction of local bodies during the year is appended to the report.

14. The office of the Director of Health was held by Lt.-Col. G. Verghese, M. D., Ch. B., D.P.H., D.T.M., D.T.H., I.M.S., throughout the year. The thanks of Government are due to him for the continued energetic and efficient manner in which he discharged his duties and for the very interesting report he has submitted for the year. Government are glad to note the good work done by the officers and staff of the Public Health Department and the co-operation which was received from the various local bodies in the Province.

By order of the Governor,

S. DAS,

Secretary to Government.

OGP (DH&PS) 16—270—25-4-1939.