PART I

GENERAL REVIEW OF ACTIVITIES
1. COMMUNICABLE DISEASES

A great endeavour is under way in South-East Asia. Work has already started towards the eradication of malaric and yaws. There are also those who dare to think in terms of eradication of smallpox, trachoma and leprosy, and several national control programmes are directed towards this end.

Perhaps the most serious public health problem of all in South-East Asia and one which receives the least attention is that of the intestinal infections - typhoids, dysenteries, diarrhoca, worm infestations and cholera. The control of these diseases is dependent on improvements in water supplies and environmental sanitation, and so requires a long-term solution.

The following are the figures for the incidence of the so-called quarantineable diseases (the only ones for which notifications are required) from countries in the Region for 1958:

<table>
<thead>
<tr>
<th>Country</th>
<th>Cholera</th>
<th>Plague</th>
<th>Smallpox</th>
<th>Typhus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>nil</td>
<td>nil</td>
<td>287</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>nil</td>
<td>nil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burma</td>
<td>9</td>
<td>76</td>
<td>1,897</td>
<td>nil</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>33</td>
<td>381</td>
<td>nil</td>
</tr>
<tr>
<td>Ceylon</td>
<td>nil</td>
<td>nil</td>
<td>35</td>
<td>nil</td>
</tr>
<tr>
<td></td>
<td>nil</td>
<td>nil</td>
<td>2</td>
<td>nil</td>
</tr>
<tr>
<td>India</td>
<td>66,198</td>
<td>26</td>
<td>167,084</td>
<td>nil</td>
</tr>
<tr>
<td></td>
<td>28,380</td>
<td>10</td>
<td>45,612</td>
<td>nil</td>
</tr>
<tr>
<td>Indonesia</td>
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<td>2</td>
<td>5,718</td>
<td>nil</td>
</tr>
<tr>
<td></td>
<td>nil</td>
<td>1</td>
<td>620</td>
<td>nil</td>
</tr>
<tr>
<td>Portuguese</td>
<td>nil</td>
<td>nil</td>
<td>98</td>
<td>nil</td>
</tr>
<tr>
<td>India</td>
<td>nil</td>
<td>nil</td>
<td>11</td>
<td>nil</td>
</tr>
<tr>
<td>Nepal</td>
<td>2,706</td>
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<td>nil</td>
<td>nil</td>
</tr>
<tr>
<td></td>
<td>384</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
</tr>
<tr>
<td>Thailand</td>
<td>11,526</td>
<td>nil</td>
<td>26</td>
<td>nil</td>
</tr>
<tr>
<td></td>
<td>1,733</td>
<td>nil</td>
<td>7</td>
<td>nil</td>
</tr>
</tbody>
</table>

Comparing these figures with those of 1957, which were reported in the Tenth Annual Report, it is evident that there is little cause for satisfaction. The prevalence of smallpox and cholera has been higher than for some years.

1.1 Malaric Eradication

During the year steps have been taken by most national administrations either to initiate eradication programmes or to reorient the existing programmes for achieving the objective of eradication. In this effort WHO, in collaboration with UNICEF and the United States International Co-operation Administration, has continued to make an effective contribution to the planning
and launching of the programmes. Efforts are being made by all countries to augment their training facilities. In order to meet the increasing commitments of the Organization, the WHO technical staff in this field was increased from 27 in July 1958 to 87 in July 1959.

One of the important functions of WHO has been to stimulate inter-country and inter-regional co-ordination in anti-malaria activities. For example, WHO has taken part in the following meetings:

(i) The Third Anti-Malaria Co-ordination Board Meeting of Burma, Cambodia, Laos, Malaya, Thailand and Viet Nam, held in Rangoon from 1 to 4 December 1958.

(ii) The Borneo Inter-Territorial Malaria Conference, held in Kuching from 12 to 14 December 1958.

(iii) The Indo-Burma Border Anti-Malaria Co-ordination Conference, held in Myitkyina on 8 and 9 December 1958.

The Regional Office was also represented at the ICA-WHO joint conference held in Manila from 24 to 29 November 1958.

One of the outstanding events of the year was the Third Asian Malaria Conference, sponsored by WHO and held in New Delhi from 16 to 21 March 1959. This conference was attended by 120 participants from 20 countries and territories in the South-East Asia and Western Pacific Regions. The Conference emphasized primarily the organizational and administrative requirements of eradication programmes. Its report has been distributed.

The following is a brief description of the status of plans for malaria eradication in the different countries of the Region:

**Afghanistan:** A detailed plan of operations for 1959 providing for increased assistance from WHO's MESA funds and from UNICEF was signed by the Afghan Government, UNICEF and WHO.

Two WHO teams, each consisting of a malariologist and a laboratory technician, have been working in the northern and eastern provinces, assisting in the assessment of the programme and in establishing surveillance procedures.

A Malaria Eradication Advisory Team (No.3) was assigned to Afghanistan for a period of three months from September 1958. The findings of this team showed that, contrary to earlier expectations, transmission had not been fully interrupted. Consequent on these findings, the Government has planned to augment the staff at all levels with a view to securing more effective supervision and achieving total coverage of all malarious areas in the country during the ensuing year. WHO is also providing a malariologist, an entomologist and a sanitarian to assist in strengthening the central organization. The programme is expected to be completed by 1965.

**Burma:** The Burmese Government's malaria eradication programme, assisted by UNICEF and WHO, continued to make satisfactory progress. During the year the assessment of the programme has been improved. Malarial indices in most areas under spraying have dropped to very low levels, and transmission
has been largely interrupted over a considerable part of the country. A special feature of the Burma programme is the limitation of the spraying to three months in every year and the use of the supervisory personnel for active case-finding and treatment for the rest of the year, from the second year of the attack phase of the programme.

Ceylon: The Government's malaria eradication programme assisted by ICA is progressing satisfactorily. A five-year plan of action for malaria eradication has been formulated. This plan provides for resumption of spraying over a large part of the island and for the institution of effective surveillance measures.

India: The eradication programme in India, which was launched in April 1957, aims at protecting 390 million people, and in magnitude and importance it is the largest single public health undertaking of any government. Although there have been some initial delays in the recruitment of personnel, satisfactory progress was made during the year. Six regional organizations have been formed; out of the 230 units planned, 225.5 have been established, and work has been in progress according to plan. With generous assistance from the ICA, the supply position has been very satisfactory. Arrangements for the training and recruitment of personnel to staff 160 additional units for hypo-endemic areas for the next year have also been completed.

Two WHO malaria eradication advisory teams to assist in the assessment of the programme were assigned to Coonoor and Baroda respectively.

Indonesia: The plan of operations for malaria eradication was signed in February 1959. This programme is to protect 75 million people; in magnitude it is second only to that of India. The plan covers eleven years. It envisages the development of the programme in stages, starting with a population of about ten million in 1959. The total cost is estimated at $100 million, the government share of which aggregates to the equivalent of $60 million. A Malaria Eradication Board has been created under a special decree issued by the Prime Minister and, functioning under the Ministry of Health, has authority to implement the programme. A Malaria Eradication Service has also been formed under a special decree. The training of personnel required for the project is in progress.

WHO commitments to the programme include the provision of 28 international staff members, with vehicles and equipment for their use, and also, in view of the complexity of the technical problems in Indonesia, the provision of four study teams to carry out research on problems having a direct bearing on the eradication of malaria. ICA's assistance to this programme is very substantial and includes supplies of insecticides, vehicles and technical and administrative advisory personnel.

Nepal: The Government of Nepal has signed plans of operations with WHO and ICA for malaria eradication in Nepal. The country has been divided into three zones - eastern, central and western. It is planned during the first year to operate the central zone, and in subsequent years, as more trained personnel become available, to extend the programme to the other two zones. WHO's assistance consists of three teams, each with a malariologist, an entomologist and a sanitary with the necessary secretarial assistance, equipment and transport.
During the year the Rapti Valley project made satisfactory progress. The WHO team has now been moved to Kathmandu to fit in with the new eradication plan.

Thailand: The Thai Government's malaria eradication programme receives substantial assistance from ICA. This programme has reached such an advanced stage in its development that it is considered that in some of the areas eradication has already been achieved. As a result of discussions, it was decided that a WHO Advisory Team on Malaria Eradication (No.3) should be assigned to Thailand in the last week of May 1959.

Inter-country: Two malaria surveillance study teams have been set up in Mysore (India) and Kurunegala (Ceylon) respectively, in order to determine the surveillance techniques and procedures most suitable under local conditions for achieving the objective of malaria eradication. These teams have already started their preliminary surveys.

1.2 Tuberculosis

The main events in this field have been the movement of the Indian National Tuberculosis Programme into the beginning of its operational stage, the planning of a new type of tuberculosis project in Thailand and the completion of the first report of the tuberculosis chemotherapy project at Madras.

The Indian National Tuberculosis Institute is now located at Bangalore, and the urban and rural programmes of the field arms are to be located in the adjacent portions of three States, namely Madras, Andhra Pradesh and Mysore. Two members of the WHO field staff attached to the project arrived in the field early in 1959; in consultation with the national authorities, they have made detailed plans and have prepared work manuals, etc., on the spot. The remainder of the WHO team will follow. The project is the largest and most ambitious one for the control of tuberculosis with which WHO has been associated; in this project there will be a serious attempt to put into practice the new knowledge which is resulting from the tuberculosis chemotherapy project at Madras and from pilot projects in Africa.

Some of this knowledge has already been used in planning a project for assisting the Government of Thailand with the expansion of a national tuberculosis control programme, and this project is an example of a new trend. Briefly, the project commences with a pilot mass case-finding scheme in a carefully delineated and densely populated area of Bangkok. This will be followed by an intensive chemotherapy treatment programme. It is hoped also to derive experience and epidemiological information from the case-finding programme in Bangkok and to use this information to guide the training of personnel for the second stage of the project. This will consist, in the first instance, of a prevalence survey of an entire province of Thailand and the use of the information derived therefrom in setting up a model provincial tuberculosis control service. It is hoped that the programme in Bangkok will move into its operational stage in the latter part of 1959.

As underlined in the Introduction to this report, the first report from the Tuberculosis Chemotherapy Project at Madras on a comparison of the results of chemotherapeutic treatment in home and hospital patients,
which is being published in the WHO Bulletin, will have a decisive influence on the shape of tuberculosis control projects in various countries for some time to come. The Tuberculosis Chemotherapy Centre is also providing special training facilities for clinical and laboratory workers engaged in tuberculosis control in the South-East Asia Region. In the laboratory sphere it can act as a reference laboratory for WHO-assisted or formerly assisted tuberculosis control projects; at this Centre the bacteriologist will be prepared to receive atypical or otherwise unusual strains of mycobacteria for identification.

1.3 Venereal Diseases and Treponematoses

In the control of venereal diseases, international assistance for the training of personnel and for the provision of supplies and equipment has continued, and in 1958-1959 consultants were provided to Burma and to Ceylon. Generally speaking, no great progress has been achieved in controlling venereal diseases in South-East Asia; the problem admittedly is very difficult in spite of the efficacy of modern treatment. The Regional Office is still of the opinion that the most practicable approach is concentration of major effort on maternal and child health services and on special areas of high endemicity.

The yaws control programmes in India and Indonesia are being carried out satisfactorily by the national health services with assistance in supplies and transport from UNICEF; during the year WHO exported from the Regional Office and Headquarters visited these projects. In Thailand, where WHO and UNICEF have augmented their assistance, further progress has been made. WHO is providing a team of two medical officers, a statistician and a laboratory technician. The Government has revised the administrative arrangements to facilitate a more efficient organization of the treponematosis control programme and is undertaking special training of new health personnel to relieve campaign-weary workers and to provide for further expansion.

In April 1959 a WHO inter-regional meeting on yaws was held in Kuala Lumpur, attended by representatives from Burma, Indonesia and Thailand, from South-East Asia.

1.4 Leprosy

In November 1958 a WHO inter-regional conference on leprosy control was held in Tokyo. From the South-East Asia Region, Burma, Ceylon, India, Indonesia and Thailand sent representatives.

In Burma, the leprosy control service has made good progress during the last year. The case-finding and treatment units in the pilot areas have revealed that prevalence of the disease is far greater than had been estimated, and WHO has offered the services of two experienced workers to assist with organization and training.

In Ceylon, control measures are being undertaken successfully by the national health services, and WHO has provided assistance through fellowships.
In India the Regional Office has been taking great interest in the consideration of revised plans for a country-wide control programme and has participated in conferences and field tours to study the situation. It is expected that all this planning will lead to a new effort and to international assistance in the control measures to be undertaken against this huge problem, created by the existence of not less than two million leprosy patients in the country.

In Indonesia and Thailand the WHO/UNICEF-assisted control projects have been extended to new provinces. In Thailand, the original pilot leprosy control project, covering Khon Kaen Province and 8,809 patients, is near the end of its third year of operation and next year will be integrated with the general health services. To provide for a country-wide leprosy control service the Thai Government has started a leprosy training centre, to which WHO has supplied a leprologist to arrange special training for the staff engaged in leprosy control for all categories of workers in the general health services and for medical students and doctors. In Indonesia, in two medical schools, students not only have didactic and clinical classes in leprosy but are also given practical field experience in control work.

1.5 Other Communicable Diseases

(1) Cholera

The severe epidemics of cholera in India and Thailand, which were referred to in the Annual Report to the eleventh session of the Regional Committee in 1958, were followed in the latter part of the year by an epidemic in Nepal. Cholera control will continue to be a grave problem until safe water supplies with better standards of environmental sanitation can be provided.

(2) Plague

The incidence of human plague continues to be very low, mostly due to the widespread effects of anti-malaria programmes; nevertheless, in January 1959 there was reported an epidemic in India with 20 cases and 9 deaths. It would be a mistake to forget about this once serious problem; the findings of WHO workers in India and Indonesia of a reservoir of infection in wild rodents distant from human habitations have been substantiated by workers in other countries and were endorsed by the WHO Expert Committee on Plague in September 1958. Further work on the investigation and control of such a reservoir is urgent; malaria eradication plans envisage the withdrawal of residual insecticide spraying, and it should be considered now whether such a development may not lead to a recrudescence of epidemic human plague.

(3) Smallpox

A resolution of the Eleventh World Health Assembly in June 1958 and the reported prevalence of the disease during 1958 have focussed renewed interest in South-East Asia on planning for eradication of smallpox through widespread vaccination coverage. The administrative problem is enormous, as shown by replies to a questionnaire issued by the Regional Office in 1958. From the information thus made available it may tentatively be suggested that the best programme so far developed in a highly endemic area is failing...
to protect against severe epidemics. The figures from this programme suggest that the total of primary vaccination at all ages reaches 100% of current estimated live births, but vaccination of infants under one year appears to cover only about 30% of such live births. Therefore, any campaign for smallpox eradication should be closely linked with intensive efforts for more complete birth registration.

In India urgent consideration is being given to undertaking a country-wide smallpox eradication campaign, and it is hoped that other countries in the Region will find it possible to take similar measures. In Indonesia, for example, preliminary investigations by the WHO epidemiologist suggest that in several centres the situation is such that there is a grave risk of smallpox in epidemic form.

(4) Trachoma

In India the WHO/UNICEF-assisted trachoma control project will end its pilot phase in the autumn of 1959. The epidemiology of the disease has been studied, and various methods of mass treatment and prevention have been tried out in Uttar Pradesh, Punjab and Rajasthan. In the remaining States of India prevalence surveys have been undertaken in the preparation of a first-hand topographical map of trachoma. Plans have been made for further expansion of trachoma control in five States at the end of 1959.

The WHO/UNICEF-assisted pilot project in Indonesia was completed towards the end of 1958. It revealed a trachoma prevalence of 52% at all ages and 21% of moderate and active trachoma at the age of two years. The findings in general suggest that adequate control could be achieved by covering the age-groups of up to ten years only and by concentrating on the treatment of conjunctivitis in children under ten.

A short-term consultant is visiting Thailand in July 1959.

(5) Other Virus Diseases

The importance of the need for further research on virus diseases and their epidemiology is widely recognized, and WHO is taking steps to assist more widely with research programmes, the development of virus laboratories and training facilities.

In December 1958 a WHO-sponsored inter-regional training course on public health laboratory techniques for virus and rickettsial diseases was arranged in Coonoor (India), for seventeen participants from sixteen countries - nine from South-East Asia, five from the Western Pacific, and three from the Eastern Mediterranean Region. The Pasteur Institute in Coonoor also co-operated in giving this course, which should contribute to the development of virus work in the countries represented.

(6) Filarisis

A one-month study tour of filariasis research and control units in India and Ceylon was arranged, with eight participants from five countries. It succeeded in stimulating a critical preliminary assessment of filariasis and the problem it presents in each country, as well as the continuation of further studies on a national and international basis.
Zoonoses

A preliminary study of the problem of zoonoses, made in the Regional Office, has shown the need for stimulating closer co-ordination between the work of Veterinary and health departments. One means of obtaining this aim will be to offer fellowships for the study of veterinary public health.

2. EPIDEMIOLOGY

At the eleventh session of the Regional Committee in 1958 a resolution was adopted stressing the importance of establishing epidemiological units in public directorates.

Towards this end WHO policy is to provide consultant experts and, through its fellowship programme, training facilities for national personnel.

In Ceylon the WHO epidemiologist completed his assignment in the middle of 1959. An epidemiological unit has been set up under a fully trained national officer. Another expert has been supplied for one year to assist with the organization and upgrading of hospital accommodation and treatment for infectious diseases.

In Indonesia a WHO epidemiologist was assigned in December 1958. It is expected that, in order to ensure that this international assistance is put to good use, there will soon be provided a suitable national counterpart, who will have the opportunity to work with the expert and undertake special training overseas.

3. HEALTH STATISTICS

As in previous years, assistance has been mainly directed to helping countries to improve the collection and processing of basic statistical data. The Regional Seminar on the Certification and Classification of Mortality and Morbidity, held in October, was concerned with the methodology of cause-of-death certification and of morbidity reporting. A programme is being developed to stimulate the teaching of death certification in all medical colleges and their associated teaching hospitals by the provision of teaching materials and in other ways. Much interest was also shown in hospital statistics.

Good national or state-wide vital statistics will take very many years to achieve; yet some progress is being made. A complete detailed plan for the new Burmese system has been submitted for final approval. It is hoped to set up a working model of the new system in Rangoon city and perhaps in a rural area. The Nagpur project in India has demonstrated on a small scale that international rules and procedures are both practical and productive. Also West Bengal is initiating new developments and has received some small assistance from the Regional Office. Progress continues in Indonesia and Thailand.

A very welcome new development during the year has been the appearance of epidemiological studies from some of the field projects. In Ceylon the partnership between the epidemiological and statistical units has produced a series of papers, largely based on ad hoc field work and leading up to a detailed programme for reorganization of notifiable disease reporting, which has been submitted to the Government. In Nagpur the former WHO statistician introduced some improvements in notifiable disease reporting, and the new death notification forms are beginning to yield a wealth of useful information.