WORLD HEALTH ORGANIZATION
REGIONAL OFFICE FOR THE WESTERN PACIFIC

EIGHTEENTH ANNUAL REPORT
(1 July 1967 - 30 June 1968)
OF
THE REGIONAL DIRECTOR
TO THE
REGIONAL COMMITTEE FOR THE WESTERN PACIFIC
NINETEENTH SESSION
THE WORK OF WHO
IN THE WESTERN PACIFIC REGION

EIGHTEENTH ANNUAL REPORT
OF THE
REGIONAL DIRECTOR
TO THE
REGIONAL COMMITTEE FOR THE WESTERN PACIFIC
Covering the period, 1 July 1967 - 30 June 1968

World Health Organization
Regional Office for the Western Pacific
Manila, Philippines
July 1968
The following abbreviations are used in this report:

<table>
<thead>
<tr>
<th>Abbreviation</th>
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<tr>
<td>ECAFE</td>
<td>Economic Commission for Asia and the Far East</td>
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<td>FAO</td>
<td>Food and Agriculture Organization of the United Nations</td>
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<td>IAEA</td>
<td>International Atomic Energy Agency</td>
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<td>ILO</td>
<td>International Labour Organisation</td>
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<td>OIE</td>
<td>Office International des Epizooties</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
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<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
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<td>UNICEF</td>
<td>United Nations Children's Fund</td>
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<td>WFP</td>
<td>World Food Programme</td>
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OBLIGATIONS INCURRED BY THE WORLD HEALTH ORGANIZATION
INTRODUCTION

The Regional Office has continued to direct a great deal of its attention and assistance towards meeting the health needs and demands of the developing countries where, under the influence of almost constant ecological factors, health conditions have changed but little. The seriousness of this situation is even better appreciated when one considers that even in the well-developed countries, where many health problems still being encountered in the developing countries no longer exist, the demands for adequate health and medical care continue to increase.

In view of the range and extent of health problems in the Region and WHO's limited resources, certain priorities have to be set by the Organization in formulating its programme of assistance. When determining such priorities, the relative magnitude, vulnerability and social importance of the problems encountered, the technical knowledge available, its applicability and effectiveness under local conditions, and government interest and support have all to be taken into consideration. The ultimate objective is to produce the maximum benefits from the limited resources available.

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Unfavourable environmental conditions, the difficulty of changing the habits, customs and mores of the people, plus other complex factors, have favoured the continuous presence or the introduction of communicable diseases in many countries in the Region. Cholera has remained endemic in the Philippines and the Republic of Viet-Nam; new outbreaks of the disease have occurred in Cambodia, Malaysia and Singapore. Plague continues to be present in the Republic of Viet-Nam and the threat of its potential spread remains a source of apprehension in nearby countries. A severe typhoid fever epidemic occurred in Western Samoa. Although the mortality of this infection is low, its incidence still appears to be quite high in a number of countries. The mosquito-borne viral infections, Japanese encephalitis and haemorrhagic fever (dengue
type), still represent important causes of morbidity among children in some countries. Filariasis remains a problem in the South Pacific and in other areas, such as Malaysia and the Philippines. The venereal diseases are reported to have reached epidemic proportion in areas where there are many military personnel and disturbed social conditions. Malaria still represents a major health and socio-economic problem in a number of countries.

A substantial proportion of WHO’s programme of assistance in the Region has, therefore, been directed towards the prevention and control of communicable diseases. The regional communicable diseases advisory team, consisting of an epidemiologist and a microbiologist, became operational during the year. The team assists governments in assessing the general situation regarding the communicable diseases, in planning epidemiological surveys, in organizing control and preventive measures and in strengthening epidemiological and laboratory services. Visits have already been made to eight countries and territories. It is hoped that Member governments will continue to take advantage of this service.

To help minimize the danger of the spread of plague from the Republic of Viet-Nam, WHO has assisted the Government to strengthen its quarantine services and to improve sanitation, particularly in the major ports.

Although there were no outbreaks of smallpox during the period under review, the fear of its introduction in the Region in the face of its reported presence in a nearby country has spurred governments to intensify their anti-smallpox vaccination programmes. WHO consultant services and equipment and supplies were provided to Cambodia and Laos. Other countries are being encouraged to change over to the production of freeze-dried smallpox vaccine.

A great deal of attention is being given to the control of tuberculosis and national budgets are being increased for this purpose in almost every country. Trained auxiliaries are assisting the programme, thus relieving the staff in the peripheral health agencies of some of their ever-increasing workloads. The practice of
simultaneous BCG and smallpox vaccination in early infancy to ensure better coverage, first successfully applied on a mass scale in China (Taiwan), is now being used in other countries where there is a high degree of transmission of infection.

Governments are fully conscious of the deterrent effects malaria can have on economic development and the support they are giving to antimalaria activities has prevented malaria epidemics and reduced its incidence drastically. The emphasis given to antimalaria measures in the Mekong River development scheme is a good example of this awareness. The assignment of independent assessment teams to study in depth the factors underlying the phasing of certain malaria eradication programmes has proved most useful. Recommendations have been made regarding the administrative and operational changes required and the need to expedite the development of the basic health services so that they can give full support to these campaigns. The danger of the spread of chloroquine-resistant strains of *P. falciparum*, previously reported, is being watched carefully. The use of quinine, or the combination of long-acting sulfa drugs and pyrimethamine, in the treatment of these cases, has been successful.

* * *

The year saw the appointment of a regional adviser in the organization of medical care. Once he has become familiar with the multiple problems related to the organization of medical care in the Region, the Regional Office will be in a better position to render assistance in this important field which usually utilizes a large proportion of the health ministry's budget.

* * *

The expanding health services have created new demands for nursing services and this has resulted in a proliferation of the various categories of nursing personnel. To meet this need and to ensure the quality of nursing services, nurse educators and administrators are placing emphasis on the strengthening of basic nursing education programmes, providing for continuing education.
through in-service and post-basic nursing programmes, and establishing a national nursing supervisory network. As nursing is an integral part of national health services, nursing leaders are becoming increasingly involved in health manpower studies. They are being prepared in research methodology through regional seminars and fellowships abroad so they may effectively define nursing functions and interpret these functions and nursing responsibilities to the other members of the health team.

* * *

As qualified health education leadership becomes available there will be less need in a number of countries for WHO advisory and fellowship assistance. In the early 1970's some of the less developed states and territories in the Region can be expected to seek technical and fellowship support in their efforts to establish health education as an important and integral part of their local health services and specialized health programmes. Increasing attention is being given to health education in the training of medical and health personnel, school-teachers and other community workers. There is a need for closer, more effective collaboration with UNESCO and UNICEF in strengthening school health education through teacher-training, and school curriculum development. Improved inter-ministerial collaboration between health and education authorities is also required.

* * *

The high birth and infant mortality rates, and the high incidence of the common childhood infections such as measles, pertussis, diarrhoea, and enteritis, are all indicative of the need to strengthen the maternal and child health services in developing countries in the Region. This is particularly evident in the rural areas where most of the population is concentrated and where the health problems are severe because there is a dearth of health services. WHO efforts are, therefore, directed towards the further development of local health services with a strong maternal and child
health component. This is particularly important because of the extensive family planning programmes in operation or planned in many countries. If such programmes are to have a lasting effect, they should be integrated thoroughly into the maternal and child health component of the local health services. A number of regional advisers attended a briefing meeting on the health aspects of family planning organized by WHO Headquarters in anticipation of an increasing number of requests for assistance in this field.

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The first WHO-assisted cancer control project in the Region started in the Philippines during the year. The Organization provided the services of two short-term consultants. Plans are being made to set up a pilot area for purposes of demonstration and training in cancer control measures and techniques.

***

Nutrition programmes are developing in several countries. The accent is on improved nutrition education through maternal and child health services, co-ordinated applied nutrition programmes (assisted also by FAO and UNICEF) and the training of health personnel. With the assignment of WHO nutrition staff to most of the developing countries by next year and the formulation of nutrition manpower and training needs for the coming decade, foundations for nutritional improvement in the Region have been laid, but the building will require patience and persistence.

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In the field of environmental health, the importance of developing central public health engineering units, with functions of planning, administering and supervising sanitation programmes and of effecting liaison with the appropriate government agencies, continues to be emphasized. The need of co-ordinating environmental health programmes with public health activities is receiving more attention as countries become aware of the role of the health authorities in physical development programmes. Although the
provision of community water supplies, with material assistance from UNICEF, remains one of the main undertakings, important strides have been made in planning for sewerage and the disposal of other wastes, in the control of environmental pollution and in setting environmental health standards. In some of the above activities, the Organization is either the executing or the participating agency in projects financed under the Special Fund component of the United Nations Development Programme. An inter-country adviser has been added to the staff to assist governments in identifying areas where environmental improvements are most urgent and in preparing bankable projects suitable for financing with domestic and international funds. The initial response has been favourable but it is hoped that more countries will take advantage of these services and that the Organization can assume a more definite role in assisting governments to obtain loans from development banks and other international lending institutions.

* * *

As health manpower requirements are continually increasing and existing educational and training facilities are inadequate to meet manpower needs, the Organization has stressed the importance of national manpower studies being undertaken as an integral component of national health planning. Two particular problems closely related to the manpower situation, especially in the developing countries, are the widespread shortage of qualified teaching staff and the constant loss of trained personnel through the "brain drain". A review has been made of medical education facilities in the Region and the information collected will be presented to the Regional Committee at its forthcoming session. I am sure the report will prove a useful reference document for governments as well as for the Organization.

A meeting of outstanding importance in the education and training field was the conference of directors of schools of public health held in Manila in November, with participants coming from the African, Eastern Mediterranean, South-East Asia and the Western Pacific Regions. The recommendation to set up an association of schools of public health for the four regions is expected to have far-reaching significance
for the teaching of public health and to result in closer co-operation between the schools in the areas concerned.

The fellowships programme remains a major activity of the Organization's education and training programme; 23.2% of the regional budget in 1968 was allocated to fellowships.

* * *

Planning is an essential attribute of public health administration and in this context all countries and territories in the Region are planning for health. Some governments incorporate health plans in their national, social and economic development plans while others undertake them as an independent sectoral exercise. Until recently, health planning employed the empirical approach but the progress made in developing health planning methodologies has permitted a systematic approach which, it is felt, can now be applied to many country situations in the Region. There has been an increase in the number of countries requesting technical assistance in planning. Beginning in 1969 an inter-country post of advisor on national health planning will be established to supplement the services now being given by the Regional Office. Courses will start for national health administrators in 1969 and it is hoped that the people thus trained will carry out similar activities in their own countries.

Throughout the years, WHO has given priority to assistance in the field of public health administration. Under this programme, emphasis was placed on the organization of the general health services at different levels and on improving the administration of their various activities. At the same time, attention has always been given to the training needs of the staff and the importance of supervision.

Renewed attention is now being given to the integrated content and purpose of the community health service in the hierarchy of the general health services, a topic which has been the subject of comments and recommendations in reports of the WHO Expert Committee on Public Health Administration.
Single-purpose programmes elaborated at the local level were perhaps justified in the past by the urgency and magnitude of the problems they were intended to control, but they are expensive, tend to become independent, administratively complicated, and to overlap.

The application of the concept of community health services provides a means of overcoming these problems. By assigning the essential or basic types of services (e.g., maternal and child health, communicable diseases control, health education, health records and statistics, environmental health, out-patient medical care, public health nursing) to the community health service and familiarizing its staff with their broad duties and the interdependence of the basic services, the desired impact of the specialized services (curative and preventive) may be achieved. The community health service would, of course, refer administratively and technically to higher levels in matters of policy, supervision, referrals and logistics.

Although the mechanism of the community health service is widely understood, its application has not to date been widely practised. Precise and detailed information is required on how a community health service should function based on prevailing conditions in a community. Such knowledge may be obtained through operational studies and this step may be required in each instance before the pattern of community health services is established in an area or country. The result of such a procedure will be useful in selecting the most efficient means of organizing and operating community health services, including the extent by which they can successfully integrate a given set of health activities under a given health condition in an area. This procedure would also be useful in the formulation of a national plan for health.

In the larger context and in terms of WHO assistance, progress is being made in the preparation of what may be liberally called "master plans of operation". This is an attempt to describe the general trends of development to be undertaken in
a country and to define the action required at various levels of health administration.

The current trend towards a more systematic approach to the organization, administration and integration of health services makes the need for well-trained staff more urgent. Their services are essential if programme objectives are to be realized and the effects of health activities on the welfare of the population are to be recognized and evaluated. In this moment of time in the Region, attention must also be given to programmes related to health hazards arising from industrialization, the consequences of urbanization, and the rapid growth rate of the population. All these programmes are dependent upon concerted community efforts.

I hope that a year from now, I shall be able to report rapid progress in this aspect of our programme.

[Signature]
Regional Director
PART I. GENERAL STATEMENT OF ACTIVITIES IN THE REGION
1. MALARIA

1.1 General

1.1.1 The malaria problem in the Western Pacific Region

The population living in areas that were originally under malaria risk is now estimated at seventy-five million, about twenty-four million of whom live in areas where malaria eradication has been achieved.* The latter include China (Taiwan) and the Ryukyu Islands as well as the malaria endemic areas that existed in Australia, urban Hong Kong, Japan, Macao and Singapore.

No re-establishment of malaria in the above-mentioned areas has been reported and malaria vigilance activities are being continued as part of the responsibilities of the general health services.

The status of the natural absence of malaria from the islands in the South Pacific, as listed in the Supplementary List of the WHO Official Register for Malaria-Free Areas (WHO Weekly Epidemiological Record), remained unchanged.

1.1.2 Progress made towards malaria eradication

The regional malaria eradication programming efforts have been strengthened as a result of the contributions made by the WHO independent assessment teams to the malaria eradication programmes in East Malaysia (Sabah and Sarawak) and the pre-eradication programme in Cambodia, the signing of the plan of operation for the malaria eradication programme in West Malaysia, the revival and convening of the Borneo Malaria Eradication Co-ordination Meeting, and the contributions of the Malaria Eradication Training Centre in Manila.

The administrative management and some operational practices in the malaria eradication programmes in the Philippines and East Malaysia have been strengthened and these programmes have now a sound operational basis which should result in further progress. Particular attention is being given to the development, co-ordination and participation of the rural health services in malaria surveillance work.

*Mainland China, North Korea and North Viet-Nam, on which very little information is available, are excluded.
1.2 The malaria situation in the northern area

The area north of latitude 20°N, comprising China (Taiwan), Japan, Hong Kong, Macao, the Republic of Korea and the Ryukyu Islands, is largely in malaria maintenance.

China (Taiwan), which now has an estimated population of 13.5 million, entered the maintenance phase in 1965 and was certified as having achieved malaria eradication in December 1965. Vigilance activities by the rural health services, assisted by five mobile malaria units of the Taiwan Malaria Research Institute, resulted in the screening of 267,661 persons for malaria during 1967. In addition to one cryptic P. vivax and four P. malariae infections (two relapsing and two induced), five imported cases were detected, four of which came from south-east Asian countries (P. vivax) and one from West Africa (P. falciparum). Although it was possible to prevent the occurrence of indigenous malaria through the timely detection, investigation and elimination of these sporadic cases, there is obviously a continuous need for an alert vigilance mechanism.

Japan

Malaria has been eradicated from the nearly four million population estimated to live in the originally malarious areas. During 1967, six cases were reported.

Macao and Hong Kong

The malaria-free status was maintained in Macao and the urban areas of Hong Kong, where anti-larval and anti-mosquito measures have been continued. In Hong Kong, a total of sixty-five malaria cases were detected during 1967, mostly from the "new territories" bordering mainland China.

Ryukyu Islands

In the Ryukyu Islands, where a population of 880,000 are living in originally malarious areas and which entered the maintenance phase in early 1966, nearly 3700 persons living in the potentially malarious areas were screened for malaria during 1967: no cases were found.
MALARIA — The malaria eradication efforts in East Malaysia (Sabah and Sarawak) have been strengthened as a result of the improvement of the administrative management and operational practices which will result in further progress. Particular attention is being given to the development, co-ordination and participation of the rural health services in malaria surveillance work, according to WHO latest emphasis in the practice of malaria eradication programmes.

Photo shows blood sampling of suspected cases in Sarawak, a regular surveillance activity.

QUARANTINE. Although plague has been reported solely from the Republic of Viet-Nam in the period under review, it remains a threat to neighbouring and other countries in the Region. Consequently, the disinsection of ships in Saigon harbour (photo), the strict enforcement of quarantine measures, and port sanitation including rat control, are essential pre-requisites in preventing the spread of the disease.
Republic of Korea

Endemic malaria in the northern area is confined to the Republic of Korea, where delimitation studies carried out during recent years have shown that the disease is endemic among an estimated population of 9.7 million living in the north-eastern part of the country. During 1967, about 1600 cases of malaria were detected. Transmission is limited to the period June to September. Although malaria is given a low priority in the national health plan because of its absence or low endemicity in the majority of the provinces, it is hoped that eradication can be ultimately realized through the development and extension of the basic health services in the malarious areas, case detection, and radical treatment of confirmed cases. The activities of the extended WHO-assisted pre-eradication programme during 1968 and 1969 will be directed towards studies on the feasibility of interrupting malaria transmission, using surveillance operations as the principal attack measure, and on the status and functions of the basic health services and their possible participation and collaboration in the future malaria eradication programme.

1.3 The malaria situation in the central area

This area comprises Brunei, Malaysia, the Philippines and Singapore, all covered by malaria eradication programmes with the exception of the latter, where malaria has been eliminated without a specific eradication programme, through the activities of the general health services.

Brunei

The malaria eradication programme entered the second year of the consolidation phase. Twenty-three infections were found among 23 194 persons screened for malaria during 1967. Twelve of these were due to *P. malariae* and four of them were listed as due to recent local transmission. The other cases of malaria (six *P. falciparum* and five *P. vivax*) were found to have been imported from West or East Malaysia. The epidemiological situation remained equally satisfactory during the first quarter of this year. Only two induced *P. vivax* were found...
among 3920 blood slides collected. Although there is excellent co-operation in passive case detection with the hospitals and semi-voluntary collaborators, the contribution by the clinics remained below expectations. The screening of labour immigrants, pilgrims and military personnel, as well as the co-ordination of activities along the borders with Sarawak, have diminished the chances of the disease being introduced. The Government's plans for the extension and the staffing of the rural health services, as well as for the establishment of a malaria eradication vigilance unit in the health directorate, will ensure that the maintenance phase runs smoothly.

**West Malaysia**

Following the signing of the plan of operation for a malaria eradication programme in September 1967, and the drafting of malaria legislation on the organizational pattern and lines of command of the national malaria eradication service, a malaria eradication board was formed, an orientation seminar conducted for chief medical and health officers and senior health officers, and field operations initiated. In conformity with the plan of operation for the programme, which will be implemented in stages over eleven years, the first zonal office was established in Alor Star. The budget for the 1968 operations was approved and the necessary staff released and trained at either the national Malaria Eradication Training Centre in Kuala Lumpur or the Malaria Eradication Training Centre in Manila. In the initial area of operations covering the state of Perlis and four districts of Kedah and Penang States, preparations for the spraying operations have been completed and preparatory phase operations in the remaining part of the first zone are in progress. Medical establishments and the local rural health services are being engaged in institutional case detection from the start of operations.

**East Malaysia (Sabah)**

The WHO recommendations, as laid down in the report of the independent assessment team that visited Sabah early in 1967, have been accepted by the Government and will be incorporated in the plans
of action for ensuing years. Action has already been taken on the main recommendations. The National Malaria Eradication Service has been strengthened as a result of the careful selection and training of supervisory staff, malaria eradication measures are being confined to the densely populated areas, and antimalaria measures continued in the sparsely populated areas - the hinterlands - where the activities are spearheading the development of basic health services. The epidemiological findings during 1967 reflected the operational difficulties encountered in some areas where insufficient attention was given to the epidemiological criteria governing the phasing of the programme and, on the withdrawal of spraying operations, the surveillance mechanism could not cope with the situation. A trend in the right direction, already visible during the last quarter of 1967, is continuing in 1968. The importation of malaria by immigrants as a factor in starting some local transmission is expected to decrease gradually as the malaria eradication programmes in the neighbouring countries gain momentum.

East Malaysia (Sarawak)

As in West Malaysia and Sabah, the malaria eradication programme in Sarawak has been accorded a high priority by the Government as a basic and integral part of the socio-economic development plan. The Sarawak programme was visited by a WHO independent assessment team during August/September 1967 and the 1968 plan of action, as well as the 1969 budget proposals, have been adjusted to meet its recommendations. These include the establishment of an effective surveillance mechanism in some coastal districts, which could then be considered in the consolidation phase provided the epidemiological findings continue to support this, and a total coverage spraying programme of the plain and hilly areas during 1968 and 1969, based on up-to-date geographical reconnaissance and strengthened supervision. This should allow the entire territory to enter the consolidation phase in 1970, with the exception of a narrow stretch along the border with Indonesian Kalimantan where spraying operations will have to be continued.

The participation of health establishments in malaria case detection
has been very satisfactory but they have a limited geographical coverage, and it has been shown that relying on them too heavily without an effective active case detection mechanism is incompatible with an undisturbed consolidation phase. The danger of malaria being introduced from Kalimantan through the border crossings is receiving full attention, and the recommendations adopted by the Malaysian and the Indonesian delegates to the Borneo Malaria Eradication Co-ordination Meeting, held in Kuching in December 1967, should strengthen the antimalaria efforts along both sides of the border.

**Philippines**

The administrative and operational aspects of the malaria eradication programme were meticulously analyzed and this has resulted in major changes. Malaria delimitation studies were conducted in areas designated previously as potentially malarious or non-malarious (estimated population around four million), geographical reconnaissance was extended and updated, and the supervision of field operations was considerably improved through the appointment of six area supervisors. Training of staff was given a high priority, manuals for the various operations developed or reviewed, and the reporting system adjusted. A health education section was created and the logistics and supply management substantially improved. WHO and the United States Public Health Service strengthened their services and are represented by five and four advisers, respectively. A planning committee was formed to assist in the direction of the project. Further assistance in field operations is given by the United States Peace Corps. The Government has made adequate provision for the various operations by allocating a total of nearly ten million pesos for the fiscal year 1967-1968. Preparations for spraying operations were completed during the first quarter of 1968 and the first spraying cycle was then started. The participation of the rural health services in case detection has been satisfactory but more concerted efforts are needed to ensure optimum support.

1.4 **The malaria situation in the western area**

In the countries of this area - Cambodia, Laos and the Republic of Viet-Nam - malaria poses a major health problem, aggravated in some
parts by the presence of a relatively elusive vector, *A. balabacensis*, and the occurrence of chloroquine-resistant *P. falciparum* strains.

**Cambodia**

The pre-eradication activities were assessed by a WHO independent assessment team in October 1967. Its recommendations included the abandoning of the pilot studies carried out in the Snoul area, where the peculiar habits of the sylvatic *A. balabacensis* and the housing conditions of the inhabitants living near the forested area - which permit the easy entrance and exit of this vector - have created a technical problem which did not yield to DDT residual spraying. The emphasis of the programme will be shifted to the development of the basic health structure - with a view to reaching and protecting the rural population in the malarious areas through the detection and treatment of malaria cases - and the establishment of antimalaria measures in areas where economic development is in progress or being planned, and where epidemics of malaria are likely to occur. Successful trials against chloroquine-resistant strains of *P. falciparum*, using a combination of long-acting sulfa drugs and pyrimethamine given in a single dose, have been reported.

**Laos**

No specific antimalaria programme was undertaken, but preparations are under way for the collection of baseline data.

**Republic of Viet-Nam**

The malaria programme is centralized in planning and evaluation and decentralized in implementation, which is the responsibility of the provincial and district health officers to whom the malaria workers are assigned. Antimalaria operations, including DDT residual spraying and drug administration, were maintained in such rural areas as security permitted and covered an estimated population of two million. No malaria epidemic occurred during 1967. Fellowships awarded to key personnel of the malaria service and staff of the general health services for attendance at courses organized by the Malaria Eradication Training Centre in Manila, have helped them to keep up-to-date with new
techniques so that they are well qualified to undertake a malaria eradication programme as soon as peace returns.

1.5 The South Pacific area

Australia

Cases of malaria recorded during 1967 were shown to have been imported, mainly from territories within the area, except for one introduced case in the southern part of the Northern Territory.

British Solomon Islands Protectorate

The pre-eradication programme is receiving the highest priority in the health plan of the Government as an essential activity in the socio-economic development envisaged for the Protectorate. The development of the rural health services and the strengthening of the staff of the national malaria service are receiving full attention and considerable progress has been made in both respects, despite a number of setbacks. One of the difficulties facing the establishment of a malaria eradication programme is the logistic support which the future programme will require to facilitate operations in the remote groups of islands. Eradication measures, including DDT spraying and surveillance operations, were maintained during 1967 in the original pilot project areas (estimated population: 47,500), where a drastic reduction in malaria incidence was obtained. The results were adversely affected by the proximity of the area to some unprotected islands from which there is a continuous influx of malaria carriers. Preparatory activities in all unprotected islands, including geographical reconnaissance and the collection of epidemiological and entomological baseline data, were intensified.

New Hebrides

No specific antimalaria programme is at the moment being undertaken. More detailed studies on the epidemiology of malaria are planned for 1969.

Papua and the Trust Territory of New Guinea

The expanding malaria programme protected during 1967 a population of nearly one million and preparatory operations to cover another
244,000 are under way. At the same time, the Government is expanding the basic health services under its five-year development plan. Antimalaria work effectively carried out is considered the only sound basis for health promotion and economic progress in this originally malarious environment. Studies conducted during 1967 have shown that the antimalaria measures have had a considerable impact on the people's health and expectation of life. Parasitological evaluation of the spraying operations is done on a sampling basis. A phasing into consolidation is not applicable in the concept of the programme at this stage.

**Portuguese Timor**

Antimalaria activities are restricted to the clinical treatment of malaria cases and limited drug distribution to special groups. This province, along with Papua and the Trust Territory of New Guinea, represents one of the major sources of malaria imported into the northern part of Australia.

1.6 **Inter-country activities**

The Malaria Eradication Training Centre in Manila, a joint project of WHO, the United States Public Health Service, the United States Agency for International Development and the Government of the Philippines, conducted six courses during 1967, which were attended by 149 participants, 82 on WHO fellowships. The centre is now training professional personnel as well as instructors. The group educational activity organized for public health administrators has become a regular feature and has contributed greatly to co-operation and co-ordination between the malaria eradication projects and the general health services.

The assignment of inter-country teams to make independent appraisals of the status of malaria eradication and of any special aspects of the malaria programmes in the Region has proved a most useful activity. It is hoped that this type of assistance will become a routine feature, particularly with regard to the crucial steps to be taken during malaria eradication programmes.

1.7 **Global strategy of malaria eradication**

The Twenty-first World Health Assembly, convened in Geneva in May 1968, approved unanimously the Director-General's proposals for
### Detailed Status of Malaria Eradication in the Western Pacific Region as at 31 December 1967

#### Population in thousands

<table>
<thead>
<tr>
<th>Country or territory</th>
<th>Total</th>
<th>Where malaria never indigenous or disappeared without specific antimalaria measures</th>
<th>Where malaria eradication claimed (maintenance phase)</th>
<th>Where eradication programmes in progress</th>
<th>Where eradication programme not yet started</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>Australia</td>
<td>11 890</td>
<td>11 657</td>
<td>233</td>
<td>233</td>
<td>-</td>
</tr>
<tr>
<td>British Solomon Islands</td>
<td>144</td>
<td>-</td>
<td>144</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Brunei</td>
<td>127</td>
<td>81</td>
<td>46</td>
<td>46</td>
<td>-</td>
</tr>
<tr>
<td>Cambodia</td>
<td>6 589</td>
<td>3 665</td>
<td>2 904</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>China (Taiwan)</td>
<td>13 431</td>
<td>-</td>
<td>13 431</td>
<td>13 431</td>
<td>-</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>3 908</td>
<td>-</td>
<td>3 908</td>
<td>3 204</td>
<td>-</td>
</tr>
<tr>
<td>Japan</td>
<td>100 353</td>
<td>96 682</td>
<td>3 771</td>
<td>3 771</td>
<td>-</td>
</tr>
<tr>
<td>Korea (Republic of)</td>
<td>29 942</td>
<td>20 287</td>
<td>9 655</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Laos</td>
<td>2 771</td>
<td>-</td>
<td>2 771</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Macau</td>
<td>297</td>
<td>7</td>
<td>290</td>
<td>290</td>
<td>-</td>
</tr>
<tr>
<td>Malaysia</td>
<td>8 687</td>
<td>8 687</td>
<td>-</td>
<td>-</td>
<td>400</td>
</tr>
<tr>
<td>West Malaysia</td>
<td>8 687</td>
<td>-</td>
<td>8 687</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sabah, East Malaysia</td>
<td>580</td>
<td>57</td>
<td>523</td>
<td>246</td>
<td>277</td>
</tr>
<tr>
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<td>895</td>
<td>147</td>
<td>748</td>
<td>309</td>
<td>325</td>
</tr>
<tr>
<td>New Hebrides</td>
<td>78</td>
<td>-</td>
<td>78</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Papua and New Guinea</td>
<td>2 259</td>
<td>-</td>
<td>2 259</td>
<td>-</td>
<td>938</td>
</tr>
<tr>
<td>Philippines</td>
<td>36 152</td>
<td>25 814</td>
<td>9 338</td>
<td>8 000</td>
<td>1 338</td>
</tr>
<tr>
<td>Portuguese Timor</td>
<td>573</td>
<td>116</td>
<td>457</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ryukyu Islands</td>
<td>964</td>
<td>85</td>
<td>879</td>
<td>879</td>
<td>-</td>
</tr>
<tr>
<td>Singapore</td>
<td>2 001</td>
<td>-</td>
<td>2 001</td>
<td>2 001</td>
<td>-</td>
</tr>
<tr>
<td>Viet-Nam</td>
<td>17 320</td>
<td>2 793</td>
<td>14 527</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total for countries with originally malarious areas</strong></td>
<td><strong>237 941</strong></td>
<td><strong>161 291</strong></td>
<td><strong>76 650</strong></td>
<td><strong>24 118</strong></td>
<td><strong>617</strong></td>
</tr>
<tr>
<td><strong>Twenty-two countries in which malaria was never indigenous or disappeared</strong></td>
<td><strong>3 971</strong></td>
<td><strong>3 971</strong></td>
<td><strong>3 971</strong></td>
<td><strong>3 971</strong></td>
<td><strong>3 971</strong></td>
</tr>
<tr>
<td><strong>Regional Total</strong></td>
<td><strong>241 912</strong></td>
<td><strong>165 262</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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*a* Excluding China (Mainland), North Korea and North Viet-Nam.

*b* Pending reclassification.
the re-examination of the global strategy of malaria eradication through a series of studies in depth of various aspects of the programme. The purpose of these studies is to identify and assess in selected malaria eradication programmes in various stages of progress the socio-economic impact of malaria and of the eradication programme; to evaluate the technical methodology used; and to investigate the problem of maintaining achieved eradication. For this purpose, WHO consultant teams consisting of economists, public health planners, malarialogists, and statisticians, will be assigned for two months to selected countries in the different regions. It is gratifying to note the acceptance by the Governments of Malaysia and the Philippines of such teams. Their reports will be studied by an advisory group which will be convened by the Director-General at the end of 1968, so that a comprehensive report on the results of the re-examination of the global strategy of malaria, together with recommendations for the future orientation of the programme, can be presented to the Twenty-second World Health Assembly.

2. COMMUNICABLE DISEASES

2.1 Epidemiological Services

The need of establishing an epidemiological unit responsible for studying and recording local epidemiological patterns of morbidity, especially those related to the communicable diseases, is still evident. In Cambodia, an epidemiological service project was initiated with the assistance of a WHO epidemiologist in 1966. A WHO consultant on medical statistics has since been assigned to strengthen its activities. A plan for an epidemiological service project in the Republic of Korea has been finalized. WHO will provide an epidemiologist and a statistician. A similar project is being planned for Malaysia.

2.2 International Quarantine

The threat of the spread of quarantinable diseases from one country to another has not diminished. The attention of governments has been drawn to the importance of applying adequate quarantinable measures and
undertaking immunization and surveillance programmes against cholera, plague and smallpox.

In the Republic of Viet-Nam, a WHO sanitarian is assisting the Government in its attempts to improve port sanitation and quarantine practices. Despite the prevailing difficult situation, a definite reduction in rat population and flea index was achieved in the port of Saigon during the past year. WHO also provided a short-term consultant to advise the Government on the strengthening of its national quarantine service, and a WHO entomologist has assisted in testing rat fleas for resistance against insecticides such as DDT, as this has been reported to be rather high.

2.3 Virus Diseases

2.3.1 Smallpox

No case of smallpox has been reported within the Region during the period under review. In May 1968, a suspected case was reported from Laos, but it was later stated that this had not been confirmed.

A staff member from WHO Headquarters visited Cambodia and Laos in the latter part of 1967. Intensive smallpox vaccination campaigns are now being carried out. WHO provided both countries with one million doses of freeze-dried vaccine and other supplies and equipment under the Special Account for Smallpox Eradication.

Almost all countries in the Region are carrying out mass smallpox vaccination campaigns. As freeze-dried vaccine is recommended, UNICEF is providing China (Taiwan), Malaysia, the Philippines, and the Republic of Korea with the necessary equipment. WHO has provided fellowships and consultants to advise on the maintenance and operation of the production units, and to ensure that the vaccine produced complies with international standards. Bifurcated needles, which not only ensure a satisfactory vaccination but which result in a considerable saving in the quantity of vaccine used, have been provided to a number of governments.

2.3.2 Poliomyelitis

The incidence of poliomyelitis remains low in countries where a mass vaccination campaign has been carried out. In China (Taiwan),
a mass immunization programme started in 1966. A WHO adviser is now assisting the Government in a study of the virus immunity produced and in the development of a virus laboratory service. UNICEF has provided equipment and supplies.

In the Philippines, a mass immunization campaign covering 500,000 children, using oral poliomyelitis vaccine donated by Japan, was completed during the last part of 1967. Plans are being made to continue the campaign. In the Republic of Viet-Nam, a mass immunization campaign using Sabin vaccine has been in progress for a number of years. In 1967 it was reported that the morbidity was 0.6 per 100,000.

2.3.3 Measles

Measles continued to be a very common disease in the Region. In some countries, the mortality under five years of age ranges from 2.0 to 13.7 per 100,000 population. In Hong Kong, a mass measles immunization programme, in which a subcutaneous injection of attenuated live vaccine is given, was started in December 1967. The aim is to cover 100,000 infants and children between the ages of nine and twenty-four months within one year. The results are awaited with great interest.

2.3.4 Japanese encephalitis

Japanese encephalitis continued to show an annual high incidence in the late summer and early autumn months in China (Taiwan), Japan, Republic of Korea and the Ryukyu Islands, corresponding to the period of highest mosquito density, and is still considered a health problem in all these countries. However, the incidence of the disease in Japan in 1967 (962 cases with 635 deaths) was considerably lower than that reported in 1966 (2138 cases with 1444 deaths).

A WHO Headquarters consultant on vector and biology control assisted the Government of the Republic of Korea in planning vector studies in connexion with the transmission of this infection. A WHO vector biology and control research unit will be set up in the early part of 1969.

In China (Taiwan), a WHO consultant is advising on the production of Japanese encephalitis vaccine and a national counterpart was awarded a fellowship to study production techniques.
2.3.5 Dengue-haemorrhagic Fever

There was a decrease in the number of cases of dengue-haemorrhagic fever reported in the Philippines, compared with the previous year, when there were 8604 cases and 149 deaths. About 200 cases with 10 deaths were reported between January and March 1967. The disease apparently subsided until June. Between June and August there were 178 cases with 6 deaths. A programme of vector control surveillance is now in progress.

Only a few cases were reported in Singapore and Malaysia. The Government of Singapore has recently set up a vector control unit which is engaged in the study and control of mosquito-borne diseases including dengue-haemorrhagic fever.

During the visit of a WHO Headquarters consultant to the Philippines, Singapore and West Malaysia, it was noted that the basis of differential diagnosis varied. It has been suggested that all countries should use the same criteria to determine the clinical signs and symptoms of the disease. The procedure for measuring mosquito density could also be employed in vector survey and control work.

Dengue-haemorrhagic fever has not been noted in China (Taiwan), Hong Kong, Japan, and the Republic of Korea.

2.3.6 Trachoma

The island-wide trachoma control project in China (Taiwan) was reviewed by a WHO consultant in the latter part of 1967. A satisfactory report was submitted on the way in which the project is being carried out. A WHO team, consisting of an epidemiologist and a trachomatologist, will review the project again later this year.

2.4 Parasitic Diseases

2.4.1 Schistosomiasis

The latest report available from Japan showed only 212 cases with 7 deaths in 1966 and the disease seems now to be well under control. In the Philippines, the problem is still immense despite the many efforts that have been directed to its control. In 1966-1967, 2050 cases were reported with 390 deaths.
The snail-host has not yet been found in Khong Island, Laos, where *Schistosoma japonicum* was detected by a WHO survey team last year. In addition, it has been reported that a girl patient in Kratie, Cambodia, was found to harbour *S. japonicum* in a mass which was surgically removed from the intestinal wall. *S. japonicum* eggs were also found in the intestines. Two other individuals from the same family were found to have similar eggs in their stools. The eggs were smaller in size than the normal *S. japonicum* and resembled those found in Khong Island. The snail-host has not yet been established. An interesting possibility arises that this might be a new species not yet identified and that the vector host might also be a different snail. A WHO team, consisting of a parasitologist and a malacologist, will undertake an intensive survey in Cambodia and Laos later in the year. It is important that the situation should be clarified and the disease controlled before the Lower Mekong Basin irrigation project is implemented.

2.4.2 *Filarisis*

Assistance in the field of filariasis has been limited to French Polynesia, where a WHO consultant assisted in the assessment of the control programme; Western Samoa, where a pilot project is in progress; and Malaysia, where a WHO consultant is assisting in the evaluation of the programme.

In Western Samoa, further results indicate that following mass drug therapy, the microfilarial rate has dropped from 19.06% to 1.63% for the whole country. The average microfilarial rate was also reduced from 57.9 to 13.3 per positive case. Entomological surveys revealed a drop in the infective rates from 2.5% to 0.082% following mass drug therapy. There are still problems related to drug distribution and the completion of treatment.

Work in connexion with the vector aspects of the project was started in earnest with the arrival of a WHO entomologist. To date, the presence of nine species of mosquitoes belonging to three genera has been confirmed. The most significant vectors appear to be *Ae. polynesiensis*, *Ae. upolensis* and *Ae. samoanus*. Studies on their
bionomics and their susceptibility to various insecticides preparatory to the determination of the best methods of controlling them are in progress.

Twelve countries and territories will send participants to the WHO/South Pacific Commission seminar on filariasis control which will be held in Apia in August 1968.

2.5 Venereal Diseases and Treponematoses

2.5.1 Endemic Treponematoses

The incidence of yaws appears to have remained low in the originally endemic areas. Cambodia and West Malaysia are the only countries still sending reports to WHO. In 1967, a total of 298,994 persons were examined in West Malaysia and 468 new and old cases were found and treated; in Cambodia, 103,224 persons were examined and 1,251 cases found and treated.

2.5.2 Venereal Infections

There are indications that the upward trend of gonorrhoea and syphilis in several countries has continued. It has been reported that gonococcal strains resistant to penicillin and some other antibiotics have been found in certain countries. WHO has arranged for a number of countries to send gonorrhoea cultures for testing to the WHO International Reference Centre for Gonococci, Copenhagen.

WHO consultants visited China (Taiwan) and the Republic of Viet-Nam to assess the problem and assist in organizing control programmes. A WHO nurse is working with the venereal disease project in the Republic of Viet-Nam and a WHO medical officer is expected to arrive shortly. Consultant services will be provided to Singapore in 1969 and a request for similar assistance in 1970 has been received from Laos.

The second regional seminar on venereal disease control will be held in Manila in December 1968.

2.6 Tuberculosis

Tuberculosis remains one of the major health problems in the Region in spite of a marked reduction in its death rate in many
countries during the past twenty years. It is estimated that no less than one million persons are today suffering from infectious tuberculosis which claims more than 60,000 lives each year. In a few countries, it is still one of the first three major causes of death and, with a few exceptions, most governments have to operate their control programmes on a stringent health budget. For these reasons, WHO has tried to develop control methods which can be applied in every developing country and which are not only effective and practical but also acceptable to the public. It is gratifying to note that there is an organized tuberculosis control programme in operation in almost every country and territory in the Region.

The extent of the problem must be known before a disease control programme can be formulated. Twenty years ago, no reliable data were available on the tuberculosis situation in many parts of the world and particularly in countries where the problem was greatest. Fifteen years ago, the Organization developed standard forms and procedures to be used in tuberculosis prevalence surveys based on randomly selected samples. Such surveys have been carried out with WHO assistance in seven countries in the Region. During the year under review, the investigations in New Hebrides and Western Samoa, both country-wide, were completed and those conducted in Cambodia and China (Taiwan), on a sampling basis, ended in March and June 1968, respectively.

Both for planning and international comparison, the best index of the extent of the tuberculosis problem in a community is the age-specific prevalence of persons infected by virulent tubercle bacilli. This information would not be obtainable in countries which have been covered by BCG vaccination campaigns. The results of tuberculin testing in New Hebrides and Western Samoa are, therefore, extremely valuable as BCG vaccination had never been applied to any great extent before the investigation was started. In other countries already covered by BCG vaccination campaigns, the most reliable index is the number of persons excreting tubercle bacilli, and the next would be the proportion of persons whose chest X-ray films show significant shadows considered tuberculous in origin.
Repeated prevalence surveys conducted in the same country and using the same techniques provide the most accurate information on the trend of the disease and, at the same time, on the effectiveness of the control programme. Those conducted during the year in Western Samoa and China (Taiwan) were the second and the third, respectively, in a five-year series. Those carried out in other countries will be followed up in due course.

There are, nowadays, two major control measures for tuberculosis, which can be applied on a nation-wide scale, namely: BCG vaccination and chemotherapy.

BCG vaccination, in view of its proved protective value, wide applicability and acceptability, is being adopted as the main preventive measure against tuberculosis in many countries and territories of the Region. In most countries where a health infrastructure is available, the activities are carried out by the staff of the peripheral health units. Specific BCG vaccination campaigns are only being conducted in a few territories where the rural health organization is still in an early stage of development.

In order to make an epidemiological impact on the reduction of tuberculosis morbidity, a reasonably high coverage is essential. WHO recommends that in countries where a BCG vaccination programme is indicated, at least 75% of the eligible population should be protected. This requirement has been met in the New Hebrides and Western Samoa. In the former, a total of 44,814 persons were vaccinated during the first round of the campaign (October 1964 to August 1967) among an estimated population of 73,400 (mid-1966). This represented a coverage of 61% of the population or of 90.0% of the susceptible population. In Western Samoa, 80,282 persons were vaccinated during the last campaign (June 1966 to March 1968). This also covered 61% of the population or 79.8% of the susceptible population.

In planning a long-term BCG vaccination programme, the number of births in the country is often taken as an annual target. In 1967, the number of vaccinations performed and the ratio in proportion to
the estimated population in some countries or territories were as follows:

<table>
<thead>
<tr>
<th>Country or territory</th>
<th>Number of persons vaccinated with BCG</th>
<th>Proportion to the estimated population</th>
</tr>
</thead>
<tbody>
<tr>
<td>British Solomon Islands Protectorate</td>
<td>22 539</td>
<td>16.6%</td>
</tr>
<tr>
<td>Cambodia</td>
<td>144 303</td>
<td>2.6%</td>
</tr>
<tr>
<td>China (Taiwan)</td>
<td>855 810</td>
<td>6.7%</td>
</tr>
<tr>
<td>Fiji</td>
<td>120 500*</td>
<td>2.6%</td>
</tr>
<tr>
<td>Gilbert and Ellice Islands</td>
<td>6 271</td>
<td>3.1%</td>
</tr>
<tr>
<td>Korea (Republic of)</td>
<td>2 163 151</td>
<td>7.2%</td>
</tr>
<tr>
<td>Malaysia (West)</td>
<td>387 471**</td>
<td>4.8%</td>
</tr>
<tr>
<td>Philippines</td>
<td>526 396</td>
<td>1.6%</td>
</tr>
<tr>
<td>Viet-Nam (Republic of)</td>
<td>212 360</td>
<td>2.6%</td>
</tr>
</tbody>
</table>

*Mid-1966 to November 1967
**First eleven months, 1967

In communities with a high level of transmission, BCG vaccination should be given as early in life as possible. As it is often difficult to approach this age group, the Organization recommends direct BCG vaccination without preliminary testing. This practice has been adopted since the beginning of 1967 in almost every programme in the Region receiving WHO and UNICEF assistance. Its effectiveness is demonstrated by the increased proportion of children under five years of age vaccinated in the following countries during 1967: Cambodia, 19.3%; China (Taiwan), 52.3%; Philippines, 19.3%; Republic of Korea, 68.7%; and Republic of Viet-Nam, 27.7%. BCG vaccination of infants immediately after birth has been carried out in Hong Kong and Singapore for many years and a very satisfactory coverage has been obtained.

The practice of simultaneous BCG and smallpox vaccination has the dual advantages of simplifying the procedure and of reaching the youngest age-group. This technique was first used on a mass scale in the age-group
three to nine months in China (Taiwan) in 1965. The coverage of the eligibles was reported as 56.6% in 1965, 72.2% in 1966 and 80.1% in 1967. This clearly demonstrates the practicability and acceptability of this method.

The qualitative control of a BCG vaccination service is ensured by using vaccine with a uniformly high potency and making a periodical assessment of field activities. Freeze-dried BCG vaccine produced in Japan and supplied by UNICEF is used by almost all BCG vaccination programmes in the Region. In China (Taiwan), Philippines, Republic of Korea and Republic of Viet-Nam, where liquid BCG vaccine is manufactured for local consumption in areas within reach of the laboratory, the seed-lots have been sent periodically since 1966 to the WHO International Reference Centre for BCG Seed-lots and Control of BCG Products, Paris. This service ensures that the products manufactured by different laboratories have a uniform potency. In the Philippines and the Republic of Korea, the operational and technical performance of the BCG programmes is periodically assessed by trained teams.

The standard drug regimen used in the treatment of infectious and/or cavitary cases of tuberculosis in WHO/UNICEF-assisted programmes is streptomycin (1 gm) and isoniazid (650 mgm) twice weekly. The daily administration of isoniazid (300 mgm) and thiacetazone (150 mgm) is gaining increasing acceptance. Following the introduction of an adjusted dosage of thiacetazone (approximately 3 mgm/kg/day) in late 1967, the incidence of severe exfoliative dermatitis reported by the Philippine pilot area project last year has been much reduced. The regimen is now being extended to more ambulatory cases in the pilot area. As the result of an increased budget provision for drug supplies in the Republic of Korea, a daily triple drug regimen (isoniazid, streptomycin and thiacetazone) has been introduced for the initial period of treatment of newly discovered cases. The effectiveness, practicability and acceptability of this treatment programme are being closely watched. At the end of 1967, the number of patients under treatment in national programmes was as follows:
<table>
<thead>
<tr>
<th>Country or territory</th>
<th>No. of patients treated in national programmes</th>
<th>No. of cases proved bacteriologically</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambodia</td>
<td>2 524</td>
<td>1 200</td>
</tr>
<tr>
<td>China (Taiwan)</td>
<td>17 557</td>
<td>17 500</td>
</tr>
<tr>
<td>Korea (Republic of)</td>
<td>125 701</td>
<td>65 000</td>
</tr>
<tr>
<td>Malaysia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sarawak, East Malaysia</td>
<td>2 000</td>
<td>1 000</td>
</tr>
<tr>
<td>Philippines</td>
<td>38 000</td>
<td>8 000</td>
</tr>
<tr>
<td>Viet-Nam (Republic of)</td>
<td>10 000</td>
<td>5 000</td>
</tr>
<tr>
<td>Western Samoa</td>
<td>1 300</td>
<td>250</td>
</tr>
</tbody>
</table>

These figures point to the urgent need of expanding the treatment service in all the tuberculosis programmes mentioned.

Efforts have been made to improve the tuberculosis case-finding activities in order to feed the chemotherapy programme. Photofluorography has been widely used for the early detection of tuberculosis in developed countries for a number of years. In the majority of the developing countries, this method can rarely be applied, not only because of its high cost but also because of limited treatment resources. In view of the tremendous gap between the actual need and available resources, the Organization maintains that first priority of treatment should be given to infectious cases and that a simple laboratory method, such as sputum microscopy, should be adopted as the primary means of case-detection, thus making the service available throughout the country. The productivity and practicability of this method have been successfully demonstrated in the pilot areas in the Philippines and the Republic of Korea. Its wider use is being tried out in every project in the Region receiving WHO/UNICEF assistance. Among 8174 positive cases discovered in China (Taiwan) during 1967, 2297 were detected by health station workers using sputum examination as the primary case-detection method. Ways and means to improve the yield and to extend activities are being sought by all project organizers.
As tuberculosis control activities are expanding in many countries, training of personnel, both of the newly-recruited and the existing, has become an important task. One of the main duties of the WHO staff assigned to country projects is to assist in the planning and conduct of such courses. The second regional training course on tuberculosis, which is a joint project with the Japanese Government, took place in Tokyo during the period 15 May to 8 September 1967 (see Part VI: Project List, for further details). The third course started in May 1968. Fellowships have also been awarded for participation in WHO inter-regional tuberculosis training courses and for observation study.

In most countries, the tuberculosis control service is operated as an integral part of the national health programme. For both administrative and economic considerations, this is mandatory. During the past year, health activities in the Republic of Korea have been further decentralized to myun\(^1\) level. A health worker is to be assigned to each of the 1334 health sub-centres which are to be organized over a three-year period. In addition to other health activities, their duties include supervision and follow-up of tuberculosis cases under treatment, BCG vaccination of pre-school children, and the collection of sputum specimens for examination at the parent health centre. Two hundred similar workers were also recruited, trained and assigned to health stations in China (Taiwan). Although in both countries their salaries are paid from the tuberculosis control budget, it has been agreed by all concerned that they should serve as multi-purpose health workers.

In areas where a health infrastructure is still under development, tuberculosis control activities have to be organized in the initial stages as a specialized service. As time goes on, a balanced and integrated health service will be stimulated and developed. The tuberculosis project in the New Hebrides is a good example of such a development. Following the first round of the tuberculosis campaign, immunization against other communicable diseases and simple maternal and child health activities were introduced. Now the Condominium Department of

\(^{1}\text{myun = district}\)
Hygiene and Public Health is functioning in Port-Vila with an independent budget and premises.

2.7 Leprosy

WHO consultants visited Cambodia, the Republic of Korea and Republic of Viet-Nam during the period under review. They assessed the nature and extent of the leprosy problem and assisted in planning expanded programmes for leprosy control. Emphasis has been placed on the importance of releasing the arrested and non-infectious patients from sanitaria and on the establishment of mobile teams and stationary skin clinics for detection and treatment.

2.8 Bacterial Diseases

2.8.1 Cholera

Cholera El Tor continued to be endemic in the Philippines and the Republic of Viet-Nam. Cases and deaths were also reported from Cambodia, West Malaysia and Singapore in 1968. These three countries seem to have sporadic outbreaks, the source of which is undetermined. The strains of V. cholerae isolated belong to the cholera El Tor Inaba type. In the Philippines and the Republic of Viet-Nam, cholera El Tor Ogawa strains have been isolated. It is interesting to note that the Inaba strains have also been found in India, Pakistan and Thailand.

A consultant from WHO Headquarters visited Cambodia, Laos and the Republic of Viet-Nam in the early part of 1968 to give advice on cholera vaccine production. WHO donated one million doses of cholera vaccine to West Malaysia, and a member of the regional communicable diseases advisory team visited Cambodia to assist the Government in its control work.

The inter-regional cholera team continued to participate in the bacteriological and epidemiological studies being carried out in the Philippines under the joint Philippines/Japan/WHO cholera study. A report on the findings of the team will be published shortly in the WHO Bulletin. An intensive cholera control programme covering the Manila area and its suburbs was started in April 1968.

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1 For work on tuberculosis and leprosy, see sections 2.6 and 2.7
2.8.2 Plague

Plague has been reported solely from the Republic of Viet-Nam. The number of cases reported rose from 2494 (350 confirmed with 25 deaths) in 1966 to 5169 (549 confirmed) in 1967. Between January and the middle of April 1968, 1934 cases were reported, 334 of which were confirmed. A WHO adviser on rat and vector control has been assisting the Government in the practical aspects of deratting and flea control and a mass immunization campaign is being carried out in certain areas. Insecticide dusting is being done in highly endemic areas such as Tay Ninh province, Vung-Tau peninsula. A WHO entomologist was also provided (see section 2.2).

A member of the regional communicable diseases advisory team visited Cambodia to advise the Government on the measures to be taken to control and to prevent this disease spreading from neighbouring countries.

2.8.3 Typhoid

Typhoid fever remained sporadic in most countries in the Region. An outbreak occurred in Western Samoa between January and September 1967; 596 cases were reported in a population of about 130,000. The regional communicable diseases advisory team visited the country in October and 20,000 doses of TAB vaccine and 40,000 doses of acetone-dried typhoid vaccine were provided and air-lifted by WHO to meet the emergency. Mass immunization started in October. A WHO laboratory adviser is assisting the Government to set up facilities for the routine detection of cases. Although the epidemic has apparently subsided, an average of seven cases per week occurred among those persons who had not been vaccinated.

2.8.4 Diphtheria, Pertussis and Tetanus

The DPT immunization programme is now in general a responsibility of the maternal and child health service. The difficulty of having a child receive three doses of vaccine has not yet been overcome. A WHO consultant is being recruited to assist the Governments of China (Taiwan), Philippines and the Republic of Korea to improve their production of DPT vaccine.
2.9 Zoonoses

Apart from rabies, the general problem of zoonoses has not received much attention. For this reason, a second regional seminar on veterinary public health is being proposed in 1970. The seminar will consider the problems of anthrax, brucellosis, leptospirosis, rabies, salmonellosis, parasitic diseases and tuberculosis.

3. HEALTH PROTECTION AND PROMOTION

3.1 Cancer

WHO provided consultants to advise the Government of the Philippines on its cancer control programme. This is the first WHO-assisted cancer control programme in the Region. It is hoped that a pilot area will be established in a province close to Manila, where staff can be trained in cancer control measures and various techniques can be conveniently demonstrated.

A staff member from Headquarters visited Japan in June in connexion with the proposed establishment of international reference centres for clinical trials and the setting up of an international research centre on stomach cancer in Tokyo. He also made a brief review of the programme in the Philippines.

A number of countries in the Region sent participants to the course on biostatistics and epidemiology in cancer research held in Lyons, France, from 24 June to 5 July 1968. This course was sponsored by the International Agency for Research on Cancer.

3.2 Dental Health

The analysis of information collected during recent epidemiological surveys was continued during the year. Contact was maintained with the consultant who served with this project.

The Asian Pacific Dental Federation is playing an increasingly important role in the field of dental health. The involvement of such a strong force of dental practitioners in dental health programmes in the Region is a healthy and encouraging sign.
Participants from China (Taiwan), Fiji, Hong Kong, Malaysia, the Philippines, the Republic of Korea and Singapore attended the inter-regional seminar on the training and utilization of dental personnel in developing countries, held in New Delhi, from 5 to 11 December 1967. A number of fellowships have also been awarded for training in dental health.

Plans for the UNICEF-assisted school dental health services in China (Taiwan) are progressing satisfactorily.

3.3 Mental Health

Increasing interest is being shown in the development of mental health programmes in many countries in the Region. Mental health consultants were provided to Japan and Malaysia during the past year.

In Japan, the consultant gave particular attention to the development of a plan for the integration of community mental health into the general health services and the setting up of preventive and treatment facilities, particularly for non-institutionalized patients.

A consultant who had visited Malaysia in 1962 undertook a further assignment during the period under review. He examined the present position of staffing and resources and provided advice in connexion with the further development and organization of mental health services and the training of medical, nursing and other staff. At the same time, he evaluated the progress made since his previous visit.

Following his visit to Malaysia, the consultant undertook an assignment in the Philippines where the mental health project, which has been in operation since 1949, is now being evaluated. A psychiatric nursing consultant completed a two-month assignment in the Philippines in August 1967.

In China (Taiwan), plans for the setting up of mental health clinics in a number of city and provincial hospitals throughout the country are an encouraging sign that mental health services will reach more into the community. WHO assistance will cease at the end of 1968.

3.4 Nutrition

The principal policies for nutrition, as indicated in the previous Annual Report, are to assist the governments of developing countries
in the establishment of applied nutrition projects (ANPs) with WHO, FAO and UNICEF assistance, and in strengthening the nutrition training of various personnel.

The planning and evolution of ANPs is necessarily slow, because several disciplines and agencies are involved. Initially, the principal nutrition problems in pilot areas have to be defined, and afterwards, the main accent is on nutrition education, with evaluation against established baselines.

The Philippine ANP has now passed the pilot phase. Key centres throughout the country, in particular all the government normal schools, are now involved in expansion of the project. A national training centre has been established at Baguio. Health personnel are involved in all these areas, together with other agencies. UNICEF continues to supply substantial assistance for the development of school gardens and water supplies, utensils for school and toddler feeding, and stipends for trainees. A comprehensive evaluation of the health impact and other aspects of this project has been recommended to the Government.

The ANP in Cambodia is being developed by a multi-disciplinary team in the Bureau of Nutrition, with the assistance of a WHO medical nutritionist. Baseline surveys have been conducted in the pilot area, and personnel of the Bureau have been trained. Nutrition extension work is to be implemented at the local level in the coming year.

The Malaysia ANP has barely commenced but is expected to gain momentum in the coming year with the provision of some international personnel. It is primarily under the Ministry of National and Rural Development, with the participation of agriculture and education personnel as well as health (Public Health Institute). The latter will be co-ordinated with nutrition activities of the University of Malaya and the Institute for Medical Research (study of child development).

The applied nutrition education and training programme in the South Pacific commenced with short courses in New Caledonia (May 1967) and Western Samoa (August/September 1967). Activities are now
to be centred mainly at Suva. The WHO staff members are stationed at the School of Nutrition and Dietetics (Fiji School of Medicine) where courses will be held for physicians and nurses and possibly other personnel in 1969 and 1970. Courses for French-speaking territories may be held in 1971 and 1972. A WHO public health nutritionist is also currently assigned to French Polynesia.

Nutrition documents have been prepared for use throughout the Region:

(a) Nutrition in maternal and child health (WPR/NUTR/26 Rev.2) - a short exposition of the main problems and principles, for the use of medium-level workers; this has been widely distributed.

(b) Health aspects of food and nutrition - a more comprehensive manual, now being printed with UNICEF assistance.

In the coming year, nutrition projects will be developed in Laos and Singapore. In both of these countries, the approach will be initially within the framework of maternal and child health activities, possibly leading on to a broader-based ANP. In Singapore, special emphasis will be on urban nutrition problems, dietary surveys of infants and toddlers, and elaboration of training programmes.

In the Republic of Korea, an ANP is already under way with FAO/UNICEF assistance. A WHO medical nutritionist consultant is to be provided in 1969.

Some special areas in which some activities are under way and further developments are planned are: endemic goitre, nutritional anaemias and protein-rich foods.

Some training facilities and activities are under development in the Philippines (ANP, Food and Nutrition Research Centre, and University of the Philippines), Suva (Fiji School of Medicine) and Sydney (Diploma Course in Nutrition, School of Public Health). Nutrition fellowships have been awarded for overseas study to a number of countries.

3.5 Radiation Health

The need still exists for the encouragement and development of units concerned with radiation health and radiation protection within
national government departments. An increasing number of radiation hazards emphasize the need for adequate national legislation and standards which so far are incomplete in many countries of the Region.

Assistance to a radiotherapy project in Singapore began in June 1968 when a consultant was provided.

3.6 Occupational Health

The successful joint ILO/WHO second regional seminar on occupational health, which was held in Manila in October 1967, was well attended by twenty-one participants and thirteen observers. The consultants had the opportunity of making pre-seminar visits to a number of countries and were thus able to obtain information which provided valuable background information for the discussions. An important point brought out during the meeting was the fact that in many countries it is difficult to find a means of bringing occupational health services to small industries, which employ a large proportion of workers in many countries.

WHO provided a consultant for two months to review the occupational health programme in the Republic of Viet-Nam. On the basis of his recommendations, it is hoped that a sound occupational health plan, jointly sponsored by ILO and WHO, can be developed in a co-ordinated fashion.

In Malaysia, it is gratifying to learn that the Ministry of Labour and Ministry of Health are co-operating fully in the development of an occupational health unit in the Ministry of Labour.

As it was found impossible to recruit a suitable full-time adviser in occupational health for China (Taiwan), a six-month consultant was provided instead. He will follow up the recommendations of WHO and ILO consultants who made a joint visit in 1967 after the regional seminar on occupational health. Plans were prepared for projects in the Philippines and the Republic of Korea. Information is awaited as to whether these will be included in the programme proposals submitted for financing under the Technical Assistance component of the United Nations Development Programme.
4. PHARMACOLOGY AND TOXICOLOGY

Pharmaceutical control measures are receiving increasing attention in many countries in the Region. The importance of this activity is highlighted by the marketing of more and more drugs, many of which are sold under similar brand names.

Fellows from Malaysia, the Philippines, the Republic of Korea and Singapore attended the WHO course for quality control of drugs held in Copenhagen from 17 March to 7 April 1968.

Plans are being made for a seminar on the quality control of pharmaceutical substances in the hope that this can be implemented under the Technical Assistance component of the United Nations Development Programme in 1969.

5. PUBLIC HEALTH SERVICES

5.1 National Health Planning

Planning is an essential attribute of public health administration and in this context, all countries and territories in the Region have some type of health plan. Sometimes it forms an integral part of a development programme, in other cases it is a separate plan. In some developed countries there are special semi-private or private schemes for personal health care to satisfy medical care demands not otherwise provided for by the government. The trend in recent years has been to replace the hitherto empirical approach to planning by a systematic and analytical approach, a technique in wide use in economic development planning. In recognition of this trend, the first regional seminar on national health planning was held in Manila in 1964. Since then, a number of similar meetings have been organized by WHO and country interest has been gradually stimulated. To date, the Regional
Office has provided consultants to three governments: Laos, the Republic of Korea and the Republic of Viet-Nam.

The National Health Planning Unit in the Ministry of Health and Social Affairs of the Republic of Korea is now being organized and after the return of the national health planning officer from a WHO fellowship in Latin America, WHO advisory services will be provided again. A WHO consultant will also assist the National Health Planning Unit to carry out a health manpower study in co-operation with the School of Public Health, Seoul National University. The results should be very useful in projecting the national health and manpower plan into succeeding plan periods.

In the Republic of Viet-Nam, health planning is envisaged in three stages: (1) to plan for the organization of resources to meet realistically the health demands during the current emergency; (2) to plan for meeting health demands during the post-emergency period; and (3) to develop a long-range national health plan after the country has returned to normal conditions. Although WHO assistance should have been provided in 1968, this has had to be deferred until such time as the work can start in earnest.

Arrangements are being made to send a health planning consultant to Cambodia later in 1968 to advise the malaria project on how it can best mobilize health infrastructure support for its activities. This assistance could well be broadened in the future so that it is inter-related with other activities, thus becoming the basis of national health planning under the Government's projected Second Five-Year Economic Development Plan.

The Governments of the Philippines and Tonga have requested assistance in health planning in 1970. In order to meet other requests which may arise, an inter-country adviser on health planning will be recruited in 1969. Additional consultant months will also be provided for associated disciplines.
In West Malaysia, an operational research activity will start later in 1968, the aim being to study general health services operation at the local level. If this activity proceeds rapidly, the information gathered will be useful to the Ministry when it prepares the health plan for West Malaysia under the Second Malaysian Economic Development Plan.

National health planning is not envisaged as an exclusive activity of the technical unit at the central level but as an exercise in which health staff at all levels are involved through all phases of the plan. WHO is consequently interested in the training of national health planners who will undertake the same responsibility in their own countries. A health planning course will be held later this year for senior WHO staff. Courses for national health planners will begin in 1969. It is hoped also to organize in 1970 or later, courses for health workers at the sub-professional level, particularly for those coming from the South Pacific area. The possibility of a school of public health in a university in the Region undertaking the training of health planners with WHO assistance is being discussed. An academic centre is required because the student has to be introduced to other disciplines, such as economics, sociology, demography, public administration, and to economic development and manpower resources planning before formally undertaking the health planning course. Another requirement is a field practice area for the trainees and this is also being negotiated. The duration of the course will be three months. The staff will be provided by the university and by secondment of the international staff of other institutes, such as the Asian Institute for Economic Development and Planning in Bangkok. WHO staff and consultants will also be provided.

5.2 Community Health Services

Increased attention is being given to the role of community health services in specialized health campaigns or programmes. Co-ordination
between the general health services and special programmes in malaria eradication, tuberculosis control, and leprosy control is being increasingly sought in countries where such programmes have reached a reasonable level. WHO is assisting governments to improve their community health services in this respect and to design adequate patterns of integrated services.

After a number of years during which a WHO team has assisted in working out a pattern for local health services in Chungchong Namdo in the Republic of Korea, it appears that the pattern which has evolved can be used in other provinces. The WHO team is now undertaking detailed studies of the operation of local health services in an area in Kyongsang Bukdo in order to determine the extent of the support they could give to the integration of antimalaria activities.

In West Malaysia, 40% of the rural health units originally scheduled for establishment have been completed. Integrated services are beginning to function in accordance with the pattern set up with the assistance of a WHO team. It seems timely to evaluate what has been done and a WHO team has been recruited for this purpose. The possibility of undertaking operational studies on local health services in a district-wide area is under consideration and a feasibility study has already been completed by a WHO consultant.

In the British Solomon Islands Protectorate, public health courses for medical assistants and public health post-basic courses for the personnel of the rural clinics are now in progress. The development of the rural health services and their co-ordination with the malaria pre-eradication campaign are receiving attention.

In Cambodia, steps are being taken to strengthen further the rural health services in order to prepare a suitable infrastructure for a malaria eradication programme. This is in accordance with the recommendations of the independent assessment team which visited the country in 1967.
In Laos, the Government has shown great interest in the recommendations of the WHO consultant in national health planning, who visited the country last year. Consequently, it has been decided to redefine and expand the coverage of assistance previously provided by WHO under the rural health development project. A plan of operation for the comprehensive development of the general health services has been drafted. The new project will lead to the strengthening of facilities for the training of health personnel and the development of health services at all levels, including the establishment of better co-ordination between special and general health programmes. It has also been agreed that, as soon as feasible, a public health development institute will be set up in Vientiane.

In the New Hebrides, where the tuberculosis control programme has been so successful, a project to develop the basic health services is under study so that the achievements of this mass campaign will be maintained.

In Western Samoa, the WHO public health team has already assessed the rural health services with particular attention to their actual activities. A reorganization of the Health Department is under way with a view to strengthening its role as the central, planning, supervisory and evaluation body for the local health services; the planning envisages stronger support to the health districts, particularly in public health work.

The WHO seminar on health planning in urban development was intended to stimulate the interest of countries in urban health planning, which would cover not only the geographical confines of the city itself but the satellite communities around it. Several important conclusions were reached and attention is drawn in particular to the following:

(a) the great need for the recognition of the health component in the planning process and for the more direct and effective participation of the health agencies with others involved in socio-economic planning;
(b) the importance of a scientific approach in health planning for urban development based on certain postulates and indices, specific procedures developed for pre-planning, planning, implementation and evaluation. By this approach, immediate problems can be isolated, future trends and priorities forecast, economic costs and personnel and physical facilities estimated. It will also enable concrete proposals understandable to the highest administrative and political authorities to be formulated, thereby facilitating the allocation of funds;

(c) the importance of WHO assistance in the training of technical staff for occupational health work and professional and paramedical staff for mental health programmes. Such personnel, when trained, should be capable of undertaking training programmes in their own countries;

(d) similar seminars in the future would benefit from the same collaborative approach by international agencies.

The health survey in the four riparian countries of the Lower Mekong Basin was completed at the end of 1967. A summary report on the findings and recommendations of the team was presented in January 1968 to the thirty-fourth session of the Committee for the Co-ordination of Investigations of the Lower Mekong Basin. These recommendations dealt with the inclusion of a health component in the cost estimates of projects related to the Mekong River development area, the creation of a public health desk in the Mekong Committee Secretariat, the re-establishment of a co-ordination board for antimalaria measures, the organization of health intelligence services within the riparian countries, and the involvement of institutes of health in planning the environmental sanitation aspects of the development projects. The Committee endorsed these proposals and steps are being taken to implement them.
5.3 Organization of Medical Care

The Regional Adviser in the Organization of Medical Care assumed his post in August 1967. He has the technical responsibility for the study, initiation, development and evaluation of regional programmes in the broad field of medical care administration and social security.

This is a field to which increasing attention is being given in other parts of the world as private and public, national and local authorities are making every effort to provide the community with preventive and curative care. Inversely, in many developing countries the gap between preventive and curative medicine seems to be still too wide and the concept of the community and its needs is ill-defined and needs clarification. The hospital has become an efficient institution that is greatly admired, but it has pre-occupied itself mostly with the curative aspect of its role and has not kept abreast with developments. It has not yet become a centre for personal health with a definite responsibility not only for curing the sick and preventing suffering but with the ultimate goal of providing the population with community health care, including the preventive and curative aspects. The hospital must minimize the gap between these two aspects of medicine and should mobilize all its resources, including the community resources, to provide a full and co-ordinated system of personal health in the community. Only then will it become a community institution and only then will the community be aware of its responsibilities towards the hospital.

Medical care administration is constantly in evolution but differs sharply according to the stage of development of the countries concerned. In industrialized countries, the medical administrator worries, for instance, about the slow and insidious process of an aging population and the misery of chronic diseases with the disabilities they leave in their wake. In the developing countries he is still almost totally absorbed by the number one problem of medicine: the treatment and prevention of acute communicable diseases.

Because of the scarcity of manpower and material resources, the majority of the governments in the Region have been unable to keep pace...
with the growing health needs of the population. In a number of countries, sporadic efforts have been attempted through national health planning but there has been no systematic planning in the field of medical care at the national, regional or local levels.

Little attention has been given so far to the co-ordination of medical resources in a particular region. The thinking has been that many hospital beds have to be provided, more diagnostic facilities are required (many of which have to be imported), and more personnel must be trained. Nevertheless, the rural areas, which have been neglected, must have simple but adequate health facilities. Unfortunately, most of the countries in the Region do not have the proper financial resources to cover even a part of such a costly but needed programme of medical care and hospital facilities.

WHO is definitely aware of the social and economic problems facing health planning in the Region. It favours a realistic approach to these problems and is willing to provide assistance in establishing flexible programmes aimed at the regionalization of medical care facilities, as only by this means can an acceptable quality of care be developed and provided to the majority of the population. Diagnostic facilities in the larger and specialized medical care institutions must be made readily available to the smaller hospitals and health centres at the periphery. Specialists from teaching hospitals should be encouraged to visit the smaller centres on a scheduled basis so that their knowledge is made available to a greater number of patients, thus preventing the costly and wasteful duplication of facilities in a given area or region.

In the field of medical rehabilitation, WHO takes a positive approach by putting emphasis on the prevention of further deterioration, atrophy and deformity, thus reducing the burden on the family and the community of supporting a helpless, disabled and psychologically maladjusted patient. It also visualizes the handicapped, not solely from the point of view of what is wrong with him, but mainly what is right in him. In other words, the emphasis is not
put on the 40% loss of function (which is more often than not irreversible), but on what could be built on the remaining 60%. The total capacity of the individual is evaluated to see where the start of a new integration of his ability could be. This is one of the major challenges facing health planners now and in the future, where the tendency to visualize chronic diseases as the natural accompaniment of age is slowly diminishing. Many chronic pathological processes are involving more and more younger persons and here a restoration of normal or near normal functions may be expected.

WHO has assisted in the training of physicians, physiotherapists, occupational therapists and rehabilitation technicians either through its fellowships programme or through assistance in the establishment of national training schools. Assistance to the School of Rehabilitation in Japan has continued with WHO providing two advisers, one in physiotherapy and another in occupational therapy. In China (Taiwan), a School of Physiotherapy has been started with WHO providing a physiotherapist. Courses in this discipline have also been given to the auxiliary staff at the Cheng Hsin Rehabilitation Centre.

WHO is assisting the rehabilitation centre in Laos in co-operation with the United Nations Bureau of Technical Assistance Operations by assigning a physiotherapist. A short-term consultant (medical officer) was assigned in January 1968 to demonstrate to surgeons and assistant surgeons of the country the proper techniques for amputation and corrective surgery needed for the making of suitable stumps for the fitting of prosthesis. The consultant's terms of reference also included reconstructive surgery for leprosy and poliomyelitis patients and for handicapped children.

The Government of the Republic of Viet-Nam requested WHO and UNICEF for emergency assistance to the civilian population in need of reconstructive surgery and rehabilitation. At the beginning of the year, WHO sent a short-term consultant to study the problems of rehabilitation of the civilian population handicapped by the war, by street accidents or disease and to make appropriate recommendations.
HEALTH EDUCATION of parents is as important as health education of children, although sometimes the parents can be reached through the children. This is one of the multiple aims of the WHO/UNICEF-assisted school health education project in the Philippines, which started seven years ago. As a result of interest and activities stimulated and guided by the project, the Philippine Government has taken a number of steps to tackle effectively the major health problems of 8 million schoolchildren and youth in the country.

REHABILITATION tends towards the restoration of normal or near normal functions and should thus be considered as an integral part of medical care. WHO is assisting the rehabilitation centre in Laos, in cooperation with UNDP. Former sufferers from leprosy and poliomyelitis (photo) and from various types of accidents can be returned to almost normal life thanks to reconstructive surgery, physiotherapy and suitable prosthesis. The WHO project mainly consists of assessing the extent of the problem of the physically handicapped, planning and operating rehabilitation facilities and training medical and paramedical staff.
5.4 Health Laboratory Services

During the year, assistance was provided to a number of countries in the development of health laboratory services, which are essential in the planning and implementation of communicable disease control programmes. One of the greatest, if not the greatest, obstacles to the development of activities in this field is the difficulty of recruiting trained personnel in adequate numbers. Emphasis continues to be placed, therefore, on the establishment and strengthening of training schools for laboratory workers. Advisory services have also been given in connexion with vaccine production and UNICEF has provided the equipment and supplies required.

In China (Taiwan), a WHO virologist is assisting in the organization of a virological laboratory service. A medical laboratory tutor will also be provided to assist in the training of laboratory technicians.

In Laos, the facilities of the central public health laboratory were expanded despite the problems faced as a result of the lack of adequate facilities and trained personnel. A WHO medical officer is training laboratory workers and arrangements are being made to recruit a laboratory technician to assist him in this work. A staff member from WHO Headquarters visited Laos early in the year to advise on the organization of central health laboratory services.

Notwithstanding the difficult situation in the Republic of Viet-Nam, the health laboratory services have continued to make progress and the training programmes for laboratory workers are proceeding satisfactorily.

In Western Samoa, a WHO medical officer (laboratory services) started a long-term assignment in February 1968. Assistance is being given in the reorganization and strengthening of the central laboratory and once this has been achieved, regional and peripheral laboratory services will be set up.

A WHO adviser is being recruited to assist in the strengthening of laboratory services in the Gilbert and Ellice Islands. Similar assistance will be provided to Fiji.
5.5 Nursing

How to provide enough nursing and midwifery personnel to meet the needs of a rapidly growing population and expanded health services has been one of the concerns of the nursing and allied health professions in most countries of the Region.

Demands for nurses in all fields of practice continue to exceed the supply and persistent shortages are reported everywhere. This shortage stems from many sources. The extent to which students are used to provide nursing services is in general declining as trained programmes become more academically oriented. The uneven distribution of the nursing and midwifery population makes the shortage felt more keenly in the rural areas. Misuse of training is another factor.

Different types of educational programmes - vocational, diploma and degree - produce practitioners with different levels and kinds of competence. However, in countries where these three types of programmes are being developed, employers use them interchangeably. Another kind of misuse of nursing skills, which is costly for the patient, is the utilization of nursing personnel for non-nursing functions or functions for which they have not been prepared.

The socio-economic aspects of nursing - poor working conditions, low salaries, etc. - have been a deterrent to attracting young, well-educated people into the profession and to keeping nurses and midwives in the field they have chosen and in their own country. Recruitment of candidates with a higher level of general education has been a problem in countries where there are few available candidates and more attractive professional opportunities are open to them. A heavy exodus of qualified nurses has been occurring in some countries where the number of nurses leaving the country every year almost equals the yearly number of new graduates.

The effectiveness of nursing and midwifery depends as much on the competence of their practitioners as on numbers. Competence is usually measured by the quality of educational preparation. The rapid growth of auxiliary personnel in the fields of nursing and midwifery
has created and is creating unprecedented demands for qualified nurses and midwives for teaching, administrative and supervisory positions. Many programmes for the preparation of teachers and supervisors are short of qualified nursing faculty. In many countries, basic nursing education programmes are mainly hospital-centred. Nurses working in the field of public health in many instances do not have adequate preparation in public health nursing at the time of their employment and lack the foundation on which to build public health nursing preparation at a really advanced level. In hospitals and related institutions, many of the directors of nursing and nurse-supervisors lack the minimal desirable qualifications for these positions. Yet, these are the people who have final responsibility for the kind of care patients receive.

In the light of the foregoing problems and trends, the goals of assistance in the field of nursing continued to be expressed in terms of the most urgent need to expand the number of nurses and midwives for leadership positions and to increase the numbers of the kind of nursing and midwifery personnel who will be engaged in direct patient care.

An analysis of WHO-assisted projects in the Region in the last year shows that nursing assistance was given to ten projects related to nursing per se, one on an inter-country basis, and to fourteen projects with nursing components, including two under education and training, five under development of public health services, one under maternal and child health, four under tuberculosis control, one under venereal disease control and two inter-country projects (tuberculosis and maternal and child health).

In addition, short-term consultants were provided to China (Taiwan), Philippines and the Republic of Korea.

WHO activities in nursing have included:
(a) Assistance at the national level
This has been accomplished through the provision of long-term nursing staff to work with national nurses at the ministry of health level toward the co-ordination of nursing services and education
programmes; the establishment of a nursing supervisory network at central, provincial and local levels; the formulation of standards for nursing and midwifery education and practice; and in studying and appraising health needs and facilities within the country as a basis for planning nursing programmes.

Among the countries receiving WHO assistance in establishing a nursing unit at national level were: Cambodia, Malaysia, Republic of Korea and Singapore.

In several other countries of the Region, WHO assistance at national level was given through the awarding of fellowships to nurses in leadership positions to attend nursing seminars and to undertake study tours and advanced studies (post-basic and graduate levels) in countries of this and other regions.

(b) Assistance to basic nursing and midwifery education

Basic nursing education has been developed at different levels. In countries where the level of general education is high, it has been possible to develop professional basic nursing education programmes, some of them at baccalaureate level. The latter exist in China (Taiwan), Japan, the Philippines, and the Republic of Korea. There is a trend in other countries - Australia, Malaysia and New Zealand - to upgrade the basic nursing education to degree level.

In countries where the level of general education is still low and/or where educational facilities for girls are limited - for example, British Solomon Islands Protectorate, Cambodia and Gilbert and Ellice Islands, basic nursing education programmes still remain at a vocational level.

Direct WHO assistance to basic nursing and midwifery education programmes continued to be given to the British Solomon Islands Protectorate, Gilbert and Ellice Islands, and Malaysia and are in the planning stage for New Hebrides, Tonga and the Trust Territory of the Pacific Islands. In the last year, emphasis was placed on the strengthening of the social and health aspects of the basic curriculum to enable the graduates of these programmes to function in a community setting.
(c) Assistance to post-basic nursing education

Post-basic nursing education programmes are firmly established in several countries and WHO assistance to these programmes is mainly in the form of long- and short-term fellowships.

In countries where basic nursing education has moved to the university setting, master's degree programmes in nursing have slowly emerged. At present, such programmes exist in Japan, Philippines and the Republic of Korea. A WHO short-term nurse consultant visited China (Taiwan) and the Republic of Korea in 1967 to study the feasibility of establishing master of science programmes with a major in public health nursing.

In Malaysia and the Republic of Korea, WHO is assisting in the development of post-basic education programmes for nurses affiliated with the university, and in Singapore, assistance has also been given in the development and implementation of courses in hospital nursing services administration and public health nursing administration and practice.

(d) Assistance in the preparation of auxiliary personnel in nursing and midwifery

This type of programme varies in length from nine months to two years. Two-year courses are being developed with WHO assistance in Laos. WHO assistance has also extended to the preparation of rural midwives and maternal and child health workers in this same country as well as in Cambodia and countries and territories of the South Pacific. Training programmes to prepare health aides started in 1966 in the Republic of Korea. A total of approximately 2030 health aides were trained in 1966 and 1967. These courses are carried on with WHO and UNICEF assistance and conducted in nine schools of nursing. Auxiliary programmes have, in general, developed satisfactorily in producing a health worker who will share in giving direct care to patients under the supervision of nurses and/or midwives. However, in many countries, the quantity and quality of supervision which should be provided for this type of personnel is still limited due to lack of qualified nurses.
In-service education

The expansion of knowledge in preventive and curative medicine and the increasing demands of people for more comprehensive health care require the nurse to have continuing upgrading of her knowledge and skills. Considering that initial educational programmes prepare for entry into nursing, WHO has stimulated and assisted in the development of in-service education programmes in nursing and midwifery. Cambodia, China (Taiwan), Laos, Malaysia, Republic of Korea and Singapore are some of the countries in which such programmes are being carried out with WHO assistance.

(e) Nursing research

The first regional seminar in nursing studies, which was held in 1965, has stimulated a number of countries to study available nursing resources and the utilization of nursing personnel. Studies along this line were developed in China (Taiwan), Philippines, and the Republic of Korea. In Malaysia, the nursing and midwifery services in hospitals were studied to determine the amount of service provided for patients, the distribution of staff between the in-patient and out-patient services and the ratio of professional to auxiliary staff.

The development of comprehensive health programmes has focused attention on the health manpower essential for the successful execution of these programmes. This has stimulated nurses to prepare themselves for this type of study in order to assist in the determination of: (a) the various levels of nursing functions; (b) the type of nursing personnel needed in their countries; and (c) what proportion in each category will best serve the needs of the country.

In conclusion, in the year under review, continued efforts were made to assist the nursing and midwifery professions to analyze and seek solutions for their major problems within the framework of their countries' resources. In hospitals and other community agencies, nurses are being called upon to lead a team of people consisting of other nurses and auxiliary nursing personnel. Many are still not
prepared for these new responsibilities. WHO assistance in the coming years will still be needed to develop nursing leadership, to increase the quantity and quality of nursing practitioners, to define their functions and to improve the practice of nursing through operational research.

5.6 Health Education

Health education advisers or short-term consultants were assigned to Fiji, Malaysia, Papua and the Trust Territory of New Guinea, the Philippines, the Republic of Korea and Singapore. Their terms of reference varied. Some provided assistance in improving health education work in the health services and teaching institutions, or in developing training, action-research and school health education programmes, others helped to evaluate health education services and training programmes.

Most Member States in the Region have taken steps to establish health education services. Health education posts have been created for the first time in the Cook Islands and East Malaysia, and current estimates indicate that about 320 persons in the Region now hold such posts. As a result of the activities of the WHO-assisted local health services project in the Republic of Korea, health education services have been developed in two additional provinces. Countries and territories without established health education service units or posts include American Samoa, Brunei, Laos, Macao, New Caledonia and Western Samoa.

Efforts have been increased to improve, strengthen and extend health education training. The School of Health Sciences, University of Tokyo, Japan, has inaugurated post-graduate health education specialist programmes at the master of public health and doctoral degree levels. A second professionally qualified health education faculty member was appointed to the School of Public Health, Seoul National University, and the new School of Health Sciences, University of Ryukyus, designated a faculty member for a WHO health education fellowship. The Health Education Institute of the
Department of Public Health in Papua and the Trust Territory of New Guinea concluded its first one-year post-basic diploma course in health education. WHO provided the services of a short-term consultant to assist in evaluating the results.

Plans were made to establish training for health education personnel, and courses in health education for other categories of health personnel, at the new Institute of Public Health in Malaysia and at the proposed Institute of Public Health in the Republic of Viet-Nam. A WHO adviser is assisting in the development of health education courses at the Schools of Medicine, Nursing and Teacher Training in Fiji.

Health education classes have been included in the activities of the Malaria Eradication Training Centre in Manila. A new manual on "Health Education and Malaria", recently published by the Organization, was distributed to malaria eradication programme officials and training centres throughout the Region.

A WHO consultant assisted the Philippine Government to plan and carry out a seminar on research and evaluation in health education.

**School health education**

Efforts are being made in a number of countries to include and improve health instruction in the curricula of the schools and in teacher-training institutions. The Department of Health in Papua and the Trust Territory of New Guinea seconded a health education officer to the Department of Education to work full-time on developing a health education programme in the schools. The office of the Prime Minister in the Republic of Korea is studying a proposed school health education programme prior to submitting it to the General Assembly for consideration later this year. WHO/UNICEF/UNESCO assistance was given to the development of school health textbooks in China (Taiwan) and Fiji. In July 1968, the seven-year WHO/UNICEF-assisted school health education training programme in the Philippines will be turned over completely to the Government.
The most significant development in this project during the year under review was the trial use of health education instruction guides for teachers. These are being prepared for use in all primary and secondary schools and colleges in the Philippines. The principals of all secondary public schools have attended regional health education conferences. Undergraduate and graduate school health education programmes have already been established at the Institute of Hygiene and School of Education, University of the Philippines, and at the Philippine Normal College. Similar programmes are now being given in the seven regional teacher-training normal colleges and in the teacher-training institutions of nine private schools.

* * *

There is an urgent need for the continued preparation of qualified health education personnel. The demand for this kind of staff is growing rapidly as the advantages of using them in national health programmes become more apparent. As requirements for health education services in basic health, malaria, tuberculosis, venereal disease, leprosy and other programmes increase, health administrators will have to determine their priorities carefully to prevent the over-extension of such activities.

A great deal of attention will have to be given to developing health education in schools, especially in terms of health content in the school curriculum and the preparation of teachers for such work.

With the increased attention being given to research and the evaluation of health education, better evaluation instruments will have to be developed so that the effectiveness of health education activities within the basic health services is realistically assessed, particular attention being given to the response of the public to such efforts.

A significant development took place in the local health services project in the Republic of Korea when the Ministry of Home Affairs reclassified the health education posts in the
demonstration province from administrative to technical. Professionally qualified personnel can now be assured for health education posts in this province and it is hoped this pattern will be followed on a nationwide basis.

The acceptance of health education services in Malaysia has been so extensive that the health education service cannot keep up with the demand. This seems to be associated with the success obtained from using community involvement techniques which the Ministry of Health initiated in connexion with the rural development programme.

The New South Wales Department of Health in Australia has developed its health education service along the lines recommended by the first regional seminar on health education. Scientific studies on the psycho-social and educational aspects of health problems serve as the basis for planning and developing health education programmes. This approach appears to receive enthusiastic acceptance by the health authorities and the community as additional programmes are being served and the service expanded. A similar development is under way in Papua and the Trust Territory of New Guinea and should be watched with interest as this pattern seems to assure results.

5.7 Maternal and Child Health

The provision of maternity care, particularly in remote rural areas, continues to be a problem, resulting in avoidable maternal and peri-natal morbidity and mortality. The incidence of neo-natal tetanus, one of the indices of the quality and quantity of midwifery services, is still high in some countries.

Considerable efforts are being made throughout the Region to provide more mothers with adequate antenatal, natal and post-natal care. Increasing numbers of midwives are being trained and multi-purpose auxiliary workers, who will have midwifery as one of their duties, are also being prepared. The network of health services to which these workers can be assigned is expanding. In some countries, for example, China (Taiwan) and the Republic of Korea, subsidies are being given to midwives who work in remote areas.
MCH IN THE SOUTH PACIFIC

A maternal and child health team, based in Fiji, is advising on the expansion of MCH services and conducting in-service and refresher courses for staff providing these services in territories of the South Pacific area. This project, which is supported by WHO, UNDP, UNICEF and the South Pacific Commission, is expected to last until 1974.

The team visited the Gilbert and Ellice Islands in February-March 1968. Photo shows Child Welfare Clinic at Bikenibeu, Tarawa.

PUBLIC HEALTH NURSING

Countries short of nurses (they all are!) are in dire need of organizing a system of public health nursing and midwifery to meet their health needs and resources.

Photo shows Cambodian midwives being trained in "home visiting" at the Takhmau demonstration and training centre.
Easily accessible domiciliary and/or institutional midwifery services would no doubt be the best method to reduce the well-meant but often disastrous activities of traditional birth attendants. In the meantime, training programmes are being arranged for them in areas where they cannot be immediately replaced in order to make them helpers of the health services instead of antagonists. In Fiji, where attendance at antenatal clinics is high, tetanus immunization of pregnant women has been introduced so as to protect their children.

It is considered that the interest of expectant mothers in antenatal care will be limited unless assistance at delivery is also available. Post-natal examinations are not yet a felt need among most mothers in the Region and are done relatively rarely. These are two aspects of the programme to which further attention must be given.

The nutrition of mothers and children continues to be a major problem causing amongst others: anaemia during pregnancy and in infancy, low birth weight (partly the result of undernutrition during pregnancy) and malnutrition, mainly between the age of one and four years. This problem can only be solved by a multi-disciplinary approach but should be a major subject for attention wherever maternal and child health services are provided. The tendency of mothers to have more faith in bottle-feeding than in breast-feeding is a disquieting fact. The practice of keeping newborn infants in maternity homes and hospitals in separate nurseries needs reconsideration because rooming-in contributes to the successful establishment of breast-feeding.

Pre-school children remain difficult to reach. It is still an open question whether with limited staff priority should be given to services for the healthy or for the sick children. The number of mothers and children who can be given meaningful care by means of home visits is at present very limited. Clinics could reach many more but are often under-attended because the demand of parents is for treatment of their children in the first place and for immunization in the second, a purely welfare-oriented clinic does not satisfy
their felt needs. The determination of priorities requires continuous attention. Increased integration of curative and preventive services in health centres and hospitals would improve the coverage of mothers and children.

The further upgrading of referral systems between hospitals and health centres would be very beneficial; those who need most care can be found more often in hospitals than in clinics.

School health services are often provided by the ministry of education, but there is an increasing and welcome tendency to establish co-ordinating committees for school health services with members of the ministry of health.

WHO has co-operated in social welfare programmes aiming at the promotion of family and child welfare, generally in collaboration with the United Nations Department of Economic and Social Affairs and UNICEF. With the increase in population, the numbers of handicapped children also rise, and there is need for services to help them develop their potentialities. The closely knit family structure in most countries in the Region is a redeeming feature because the responsibility felt in the families for those who cannot help themselves is great. Increasing industrialization and urbanization will heighten the demand for services for this group.

Orphans and deprived children need the care of the health as well as the welfare services. Infants are particularly vulnerable and unsuited for institutional care. The rapid development of social welfare services for the long-term alleviation of this situation is necessary.

Day-care nurseries for the youngest group of children, needing a high staff/children ratio, and nursery schools for the slightly older children are increasing in number in several countries in the Region. They are of particular interest to the health services because this is yet another area where mothers and children can be reached. Health education, immunizations, feeding, and nutrition education and treatment of those who need it could increasingly
be provided if there is a close co-operation between the health services and the authorities concerned, with a clear delineation of the functions of the respective staff.

The number of countries in the Region where family planning has been adopted as an official policy is increasing. The report of the technical discussions held in conjunction with the eighteenth session of the WHO Regional Committee for the Western Pacific stressed the importance of integrating family planning, as well as maternal and child health services, in the basic health services if family planning services were being provided. WHO has assigned a WHO adviser to the Republic of Korea where the Government has started a project with expressly this purpose.

To evaluate maternal and child health services and plan for the future, the continuous upgrading of vital and health statistics is essential. The reports on the maternal and child health activities within the basic health services can also contribute to planning and evaluation of the work done. It would be beneficial if a certain measure of uniformity in the records and reports in the Region could be achieved, so that information on maternal and child health (and other subjects) would be more comparable. It needs to be stressed, however, that the individual record is not only a tool of planning and evaluation. It is, in the first place, a useful document meant as a link between the individual and the members of the health team providing services.

There is a growing tendency in the Region to integrate maternal and child health services in the basic health services and to make maternal and child health services in the periphery part of the duties of multi-purpose health workers. This will lessen the fragmentation which sometimes exists and lead to care being given to the family as a unit.

As a complement to integrated maternal and child health services in the periphery, a strong representation of maternal and child health at the central level and - depending on the size of population and
health services - also at the intermediate level is essential. This is where the health needs of mothers and children are studied, plans made for the maternal and child health services, and activities implemented in co-operation with other disciplines represented at the central level (such as education, nursing, nutrition). And here also evaluation is done.

UNICEF has continued to give generous support to the maternal and child health programmes in many countries of the Region and this is much appreciated.

6. ENVIRONMENTAL HEALTH

The environmental health programmes have continued to focus attention on: the development and/or strengthening of environmental sanitation services; training of sanitation personnel; the development of an infrastructure of sanitary installations; demonstration rural sanitation and water supply projects; and, in co-ordination and co-operation with other units, integrated rural health services demonstration projects and the development of comprehensive public health institutes.

Overall, although advances are being made in environmental sanitation in the countries in the Region, they are not sufficient in scale and scope to alter significantly the environmental health equation. Progress in this sector varies from country to country, and achievements normally occur in segments rather than uniformly across the entire front. Aggravating the need for increased effort are two factors: the high rate of population growth (region average - 2.2% annual rate) and the accelerating rate of urbanization. The very pronounced increased contact between countries in recent years has introduced a new environmental health factor which countries must take into account in concert.

As a general consideration, it can be stated that needs for environmental health services and sanitary infrastructures continue to outpace available resources.
SANITATION AND HEALTH EDUCATION go hand in hand. In the Chung Chong Nam Do province of the Republic of Korea, sanitarians and health educators together demonstrate a sanitary type of latrine to the village people. Scale models and drawings were prepared for this purpose by the WHO sanitarian. The overall purpose of the project is to strengthen the organization of the health services at various levels in the province, with the ultimate objective of improving the country's local health services.

SEWERAGE SYSTEM. The first UNDP Special Fund-assisted project executed by WHO in the Region is the preparation of a master plan for a modern sewerage system in Manila, Philippines, and its 14 nearby towns and cities (Greater Manila). The study, started in 1967, will continue through 1969, and is estimated to cost over one million dollars.

Photo shows clogged "estero" creating environment detrimental to human health.
The scarcity of trained personnel; the inadequacy of the budget devoted to environmental health activities; the lack of co-ordination and co-operation among the several agencies having jurisdiction over environmental health problems; the lack of an integrated plan of action, are all factors which have tended to hamper the achievements of the programmes.

The establishment of public health engineering organizations at national level and the corollary unified environmental health programmes has continued to have preference, since this is the a priori requirement for ensuring a lasting basis for promoting environmental health. The formulation of a programme and the availability of qualified personnel to carry it out are, in effect, the basis of all future action and should be supported by promotional and liaison activities and supervision and control functions, all originating from the same organization. This broad scope of work implies that the executive officers of the public health engineering organization should be at a very high level. This is not always possible to achieve within the ministry of health as the establishment of new posts is often subject to limiting conditions. It is also difficult to obtain the transfer or secondment of personnel from the ministry of public works to the ministry of health because there is some reluctance in leaving an established and recognized career for one which has a more doubtful future in comparison.

In the year under review, the attitude of governments has not undergone any specific changes with respect to environmental health programme planning. In countries where national planning and a corresponding health plan are being implemented or formulated, the tendency has been to use engineering advisory services in the broad sense and to train nationals to fill the proposed posts in the environmental health services scheme.

In countries with scattered populations in rural surroundings, engineering advice has been given to local and central governments in connexion with programmes for individual and public water supplies and excreta disposal.
In countries where environmental health services are already well established, governments have requested assistance in some specific and more sophisticated facet of sanitary engineering, such as food sanitation and control of air and water pollution. They are also becoming aware of the need for advanced planning of phased programmes leading to the construction of the essential infrastructure for water supply, sewerage and solid waste disposal.

The integration of environmental health with other public health activities, according to a national development plan, is essentially a two-way operation performed at various levels. A well-conceived environmental health programme cannot be divorced from the realities of budget. It should, therefore, be thoroughly discussed with the other planners, be properly phased and show well-defined priorities for every stage of development, in order that activities which cannot be financed immediately can be delayed in implementation without affecting the rest of the programme. Progress in this field is very difficult to assess as in most countries of the Region WHO advisory services directed specifically to this purpose are of recent establishment.

During the year under review, the programme had, in operation, twenty-three projects.

In Cambodia, WHO assisted the Government to set up and operate a training programme for sanitation staff. Part V of the report contains a summary of this project.

In China (Taiwan), the formulation of a unified environmental health plan is a difficult undertaking because of the number of agencies which have responsibility in various segments of this field. A WHO sanitary engineer is assigned to the Public Works Department and he provides advisory services to this agency and others on matters pertaining to the field of water supply and environmental health. During the period under review, this project has led to the preparation of a special report, including recommendations on the administration, financing and technology
of community water supplies. In addition, WHO provided two consultant-
ship missions: one dealing with the subject of water pollution and the
other with a sanitary engineering education programme for the National
Taiwan University. WHO is the executing agency for the Greater Taipei
area sanitary sewerage planning (population: 1 800 000) project, which
is financed from the Special Fund component of the United Nations
Development Programme (UNDP). The estimated cost of this undertaking
is US$1 034 400 and it is planned for implementation in 1968. UNICEF
assistance has led to the construction of many small water supply
installations and the programme is now being evaluated with the
assistance of WHO and UNICEF.

In the Republic of Korea, a WHO sanitary engineer was assigned
to the Ministry of Health to provide advisory services beginning in
1967. Due to difficulties, the project was terminated in February
1968. Two WHO sanitarians are assigned to multi-disciplinary pro-
jects: one is working as a member of the WHO team assisting the
integrated health services project and the other is giving assistance
in training at the National Institute for Public Health.

In Laos, a WHO sanitarian was attached to the rural health
development project which was terminated in 1967. He assisted in
the training of sanitation personnel and in the development of
simple sanitation works for rural areas.

In Malaysia, advisory assistance to the Ministry of Health
at federal level has led to a concrete proposal for the establish-
ment of a central division of public health engineering. A full
description of this project is given in Part V. A WHO sanitarian
is assigned to an integrated rural health services project and has
continued to assist staff training and rural sanitation activities.

A WHO sanitary engineer is providing advisory services to the
health authorities in East Malaysia. Major activities are the
training of rural sanitation personnel and the development of
rural sanitary infrastructures such as water supplies.
Three consultantship missions will be provided to West Malaysia. The first will assist the Government to review, appraise and develop two major sewerage schemes in conjunction with the inter-country advisory services on water and sewerage programmes project; the second will advise the Public Works Department on the planning for water supply development on a national basis; and the third will study and advise the Ministry of Health on the fly problem in the Cameron Highlands. Two consultantship missions will be sent to East Malaysia. The first will advise the State and the Medical Department in Sarawak on planning for the sewerage of Kuching; and the second will advise the Public Works Department in Sabah on the planning for sewerage development.

In the Philippines, WHO is the executing agency for the master plan for a sewerage system for the Manila metropolitan area project, which is financed from the Special Fund component of the UNDP. A phased sewerage-development programme to meet the present and future requirements of the metropolitan population (3,000,000) will be prepared. The estimated cost of this undertaking is US$1,112,000. Advisory services in the field of food sanitation were provided by a WHO consultant until April 1968. The project assisted the Department of Health in improving the organization and administration of its food sanitation programmes and the conduct of training programmes.

Under planning for implementation later in 1968 are: (a) a long-term project to provide advisory services to the National Waterworks and Sewerage Authority in the field of water supply, particular attention being given to the improvement, construction and administration of provincial waterworks; and (b) a short-term consultantship mission to advise the Government on the development of a region-wide solid waste management programme for Metropolitan Manila.

In the Republic of Viet-Nam, three WHO sanitary engineers are assisting the Government to deal with environmental health problems, many of which are daily aggravated by the massive displacement of the population and the natural deterioration and/or destruction of
sanitary infrastructures associated with the war. WHO assistance is mainly restricted to the urban towns for reasons of security.

In the South Pacific area, WHO operates an inter-country project, based in Suva, consisting of two sanitary engineers. The project has continued to give assistance to the participating countries in the planning, technical appraisal and supervision of the construction of piped water supplies built with central and local government funds and UNICEF assistance. Operations continued in Fiji, Gilbert and Ellice Islands, Niue, Tonga and Western Samoa, and plans are being made to start projects in the British Solomon Islands Protectorate and the Condominium of New Hebrides.

A new inter-country water supply and sewerage project was set up in January 1968. It is staffed by a sanitary engineer based in Manila and is intended (with any necessary support from specialist consultants provided under the inter-country advisory services project) to enable governments to obtain advice (including information on the economic, administrative and financial aspects) in connexion with the implementation of water supply and sewerage plans. Several discussions have been held with officials of the Asian Development Bank on this question.

In Singapore, a WHO consultanship mission completed a technical feasibility study on solid waste management. A short-term consultant will be provided later this year to advise the Ministry of Health on public health engineering programmes. Under discussion are plans to provide consultanship assistance to the Department of Public Works in sewerage planning and the management of sewage treatment plant operations. In cooperation with the United Nations Department of Social and Economic Affairs, WHO will participate in an urban renewal and development project, which is financed under the Special Fund component of the UNDP, by providing sanitary engineering and public health administration consultants.

In Australia, Hong Kong, Japan and New Zealand, the situation stated in previous annual reports still prevails. In the main, WHO provides fellowship assistance where indicated to improve the competence of national environmental health personnel. Japan, however, has requested the services
of a short-term consultant on air pollution in 1968, thus initiating a possible trend for WHO assistance in the more sophisticated aspects of environmental health.

It is believed that progress is being made in all WHO-assisted projects in the Region. This is attested by the fact that governments have continued to give priority to such projects and have shown increasing capacities to absorb WHO assistance effectively. It is anticipated that there will be increasing need for assistance in urban-oriented environmental health problems in the coming years.

UNICEF assistance for rural water supply and sanitary facility development and training programmes has been most useful in the South Pacific area and in countries where rural health programmes are operational.

7. HEALTH STATISTICS

Although some Administrations have modern and well-developed health statistics units and have achieved satisfactory standards in the registration of vital events, there are still a number of Member countries and territories where the health statistical services are only in the early stages of development. In some of these, the need for certain basic information has resulted in special population, morbidity and mortality surveys, some of them through sampling, having to be carried out. These are recognized by the governments concerned as temporary measures which have to be used until there are properly organized services of vital and health statistics. Increasing requests are being received for the training of health statisticians and for advisory services in connexion with the improvement of national health statistical services.

Health statistics consist, in essence, of a series of numbers conveniently tabulated, whose magnitude may or may not be inter-related and may or may not indicate summarized attributes. Their value, therefore, depends to a marked degree on the quality of the data from which they are derived. Statistics of good quality can
only be provided if they are based on data which have been recorded and tabulated accurately. Medical records furnish, *inter alia*, one of the best sources of basic health statistical data. It is considered, therefore, that special attention should be given to the development of medical records departments in hospitals, health centres, dispensaries, and other similar institutions. WHO advisers assigned to specific projects can render useful assistance in the organization of modern systems of medical records and give the necessary in-service training to the personnel who will operate them. Training at a higher level should, of course, be given to selected staff by means of special courses organized locally or by the award of fellowships for study at teaching institutions abroad.

WHO continued to provide a WHO statistician to the University Hospital, Faculty of Medicine, University of Malaya, where a modern medical records department is being established. Results to date have been extremely satisfactory. The procedures used are simple and permit accurate and complete recording on well-designed forms, which contain all the necessary information for adequate medical care but take up little of the doctors' and nurses' time. The records are easily retrieved at every subsequent admission. Disease indexing and hospital statistics are being processed by an up-to-date system. All the newly-appointed personnel in the medical records department have received in-service training and are fully qualified to maintain the standards set up. A WHO visiting professor in vital and health statistics is giving a series of lectures, which have now become part of the curriculum, and special courses to selected professional staff.

In Cambodia, a new system of hospital medical records and statistics is being implemented on a trial basis in the "Hôpital de l'Amitié Khméro-Sovietique", and a scheme for use in health centres is being tried out at the Takhmau Health Centre. It is hoped that after some more months of experience, during which the necessary adjustments can be made, these systems can be applied in
similar institutions throughout the country. The Government is fully aware of the importance of these developments and has requested the additional assistance of a medical statistician consultant.

A new project started in Laos in March 1968. A WHO adviser is now carrying out a survey and will prepare a plan of work on the basis of the information collected. Training of personnel, the organization of medical records at institutional level, the establishment of recording and reporting systems, and the introduction of procedures to permit the presentation, processing and analysis of data will be important activities.

A new WHO-assisted project was started in Tonga in February 1968. WHO is providing a medical records officer who will assist in the establishment of the medical records department of the new hospital of Nuku'alofa. An active programme of in-service training is in progress and work has started on the design of forms, records and systems which will be tried out in the old Vaiola Hospital. The Government has agreed that, until the new hospital is ready, the WHO adviser may also provide assistance to similar programmes in other parts of the South Pacific area.

In August 1967, a WHO statistician terminated a six-month assignment in connexion with the tuberculosis campaign in Hong Kong. He has recommended that advisory services of a longer duration, possibly two years, beginning in 1969, would be useful.

WHO provided a consultant for four months to assist the Government of Singapore in setting up in the Ministry of Health a statistical unit to co-ordinate and supervise the collection of health statistics and to compile and analyze the data collected. Further assistance will be provided in 1969.

The Government of the Republic of Viet-Nam has reiterated its desire to continue receiving WHO assistance in the reorganization of its vital and health statistical services. Although the general situation at present does not permit the organization of vital health and statistical activities on a country-wide basis, it is
considered that substantial improvements can be made in Saigon and that these could gradually be expanded when the situation improves. A long-term adviser is being recruited for this purpose.

Plans have been completed for the establishment of an epidemiology and health statistics project in the Republic of Korea. WHO will provide a medical officer/epidemiologist and a medical officer/statistician who will assist the Ministry of Health and Social Affairs in organizing central epidemiological and health statistical services, with the ultimate aim of establishing a disease intelligence network throughout the country.

A number of territories in the South Pacific have indicated their wish to receive WHO assistance in this field. Every effort will be made to implement such requests when they are formally presented.

8. EDUCATION AND TRAINING

Well-trained health personnel remain in great demand in countries throughout the Region. This need has led to an acceleration of planning for the development and extension of training programmes for many categories of health workers.

In discussions with governments on education and training matters, WHO continued to place great emphasis on the fact that in planning the overall health programme, manpower studies must be given a high priority as it is only after manpower needs have been thoroughly and carefully investigated that proper balanced training programmes can be developed.

The "brain drain" situation, of particular concern in more rapidly developing countries, continues to receive a good deal of attention. Apart from the exodus of health personnel to work abroad, many countries are also facing a serious problem with an internal "brain drain" due to the difficulty of getting staff to work in the less attractive rural areas.

WHO endeavours to provide an education and training component in most of its programmes. Full-time lecturers as well as consultants
have been made available to strengthen the teaching programmes in medical schools, schools of public health, and public health institutions.

The fellowship programme has continued to expand, enabling more health workers to undertake specialized study programmes abroad.

8.1 Medical Education

A proposal of the Government of Malaysia for the possible establishment of a WHO medical school in the Region was considered by the Regional Committee during its eighteenth session in September 1967. To meet the request of the Committee, relevant information has been collected from all countries and a report on the situation of medical education in the Region will be presented to the nineteenth session of the Committee. The report also contains information on the type of assistance being provided by WHO in this particular field.

Medical schools in the Western Pacific Region, in common with those in other areas of the world, continue to experience a shortage of qualified teachers. This problem is likely to be even more acutely felt in those countries where new medical schools are being planned, for example, in the Republic of Korea, where government approval was recently given to the establishment of two new medical schools in 1968 and of a third one which may commence in 1970. In addition to the shortage of faculty staff, lack of adequate hospital facilities will also be a problem.

Despite every effort to recruit full-time lecturers in preventive medicine, physiology and microbiology to assist the teaching programme in the Royal School of Medicine in Laos, WHO has been unsuccessful in finding suitable candidates. The only assistance which it has been possible to give throughout the past year was the services of a three-week consultant in preventive and social medicine.

WHO assistance was continued to the Faculty of Medicine, University of Malaya. Despite some changes in staff throughout the period, a full complement of WHO advisory personnel was able to be provided most of the time. The WHO tutor in medical laboratory techniques, who helped to develop a course for technicians required for service in the
hospital and the Medical School, completed his assignment in August 1967. Two WHO nurse educators remain with the project, one of these being concerned primarily with the organization of the post-basic course for nursing tutors and the second one assisting in the strengthening of the public health nursing component of the basic and post-basic training courses. The WHO biostatistician and the medical records officer are expected to complete their assignments towards the end of the year. A consultant lecturer in internal medicine was appointed in May 1968 and will serve for approximately six months. The awarding of WHO fellowships to faculty members has helped to strengthen the teaching staff.

A consultant lecturer in preventive medicine for six months is being recruited to assist the Faculty of Medicine, Department of Social Medicine and Public Health of the University of Singapore. A short-term consultant in human genetics will also be provided later in 1968. Unfortunately, it was not possible to secure the services of the consultant cardiologist provided for in the 1967 programme and budget. Fellowships have also been provided to strengthen the teaching staff.

In 1968, twelve students on WHO fellowships were enrolled in the Fiji School of Medicine.

Planning has commenced for the travelling seminar on education and training which will be held in 1969. A topic of considerable interest to be discussed at the meeting is the possibility of establishing a regional association of medical schools in the Western Pacific. Interest is growing in this subject and the Association of Philippine Medical Colleges was established in 1967 with the help of the Josiah Macy Jr. Foundation of New York. The Association has been active since its inauguration and successfully organized the First National Conference on Undergraduate Medical Education, which was held in Manila in May 1968.

In China (Taiwan), the deans of medical schools are also considering the possibility of establishing a similar association.
8.2 Public Health Training

A landmark in the field of public health training was the conference held in Manila in November 1967 of directors of schools of public health from the African, Eastern Mediterranean, South-East Asia and Western Pacific Regions. Topics examined included the post-graduate programmes offered by schools of public health within those regions, research in public health practice and future plans for co-operation.

A proposal to form an association of schools of public health in the four regions was widely welcomed. A provisional committee was set up and charged with the task of taking the necessary steps to arrange for the establishment of the Association. A proposed set of articles were drawn up and the following purposes of the new Association were defined:

(a) to study ways for the improvement of education, training and supply of health personnel;
(b) to establish relationships with schools, institutions and other bodies interested in health problems;
(c) to study ways for the promotion of mutual exchanges among institutions and schools;
(d) to permit and maintain regular contact between its members by the organization of periodic meetings;
(e) to co-operate and collaborate in furthering national and international support for its programmes.

The proposed name of the organization is the "Association of Schools of Public Health and Institutions Responsible for Advanced Training in Public Health in Geographical Areas Covered by the African, Eastern Mediterranean, South-East Asia and Western Pacific Regions of WHO".

It is hoped that a second conference will be held in the Eastern Mediterranean Region in 1969, when the theme will be "New Developments and Studies in Public Health Practice", and that the proposed new Association will be inaugurated at that time.
The Government of the Republic of Viet-Nam, in line with the recommendations of a WHO consultant who visited the country in 1966, has decided to set up a public health development institute to train various categories of health workers. The Government of the United States of America has indicated that it is interested in giving substantial financial support. Arrangements are being made for a WHO consultant to assist in the detailed planning of the project, which should be of major importance and a keystone for the further development of health services in Viet-Nam.

Since early 1967, the Government of Laos has indicated its interest in the setting up of an institute for the public health training of several categories of public health workers. WHO will provide a short-term consultant later this year who will assist in drawing up plans for the proposed programme, which will be closely linked with the Royal School of Medicine and will operate under the Ministry of Public Health.

In China (Taiwan) and the Republic of Korea, facilities exist for graduate public health training, but the Governments and WHO are concerned that the facilities are not being fully utilized. The principal reason for this is a financial one. Although a few fellowships carrying small stipends are said to be available in the institutions in both countries (School of Public Health, Seoul National University and the Institute of Public Health, China (Taiwan)), these are not financially attractive. To overcome this problem, WHO is examining the possibility of providing study grants, whereby fellowships offering reasonable stipends could be provided to nationals wishing to undertake academic training in public health. There are good prospects of such a scheme being developed in the Republic of Korea. However, it is thought unlikely that candidates for the master of public health course will come forward in China (Taiwan) at the moment.

WHO is providing assistance to the School of Public Health, Seoul National University, and also to the National Institute of Health. These two projects are now being amalgamated and the WHO staff, consisting of a medical officer (public health adviser), a public health
nurse educator and a sanitarian-tutor, are working as an advisory team in four principal areas: the School of Public Health, National Institute of Health, medical schools and nursing schools.

WHO provided the School of Public Health with a consultant in public health nursing, whose terms of reference were to advise on the possible establishment of a master's programme in public health nursing. She recommended that the present certificate course for public health nursing should be developed further before embarking on a master's programme.

Following the major reorganization of the public health training programme in the Republic of Korea early in 1967, the National Institute of Health has engaged in the long-range planning of training courses. WHO has provided a public health nurse educator and under her direction nursing training programmes are progressing satisfactorily. The two principal nursing programmes are the ten-week courses for nurses on public health and the six-week course for health aides. The second course is being extended to nine months and will include three months of midwifery training. A most important development in the sphere of the Institute's activities has been the decision to proceed with the training of junior sanitarians. Two courses have been organized, a six-month course in Woo Suk University and a four-month course in the Institute for persons who have previously taken two months' training in sanitation. Both of these programmes will receive technical assistance from a WHO sanitarian-tutor.

Orientation courses (previously given in the Institute) for health centre directors and public health physicians were discontinued in 1967. A programme of regional workshops and seminars on public health topics was organized in their place. A WHO consultant in public health training was provided for three months to assist this programme.

The suggestion of WHO that the development of the Public Health Institute in Kuala Lumpur might qualify as a suitable project for assistance under the Special Fund component of the United Nations Development Programme was pursued during the year. Although the
Ministry of Health recommended that this should be done, the proposal was not supported by the Government in view of the large number of high priority projects already submitted. Nevertheless, plans for developing the Institute are progressing satisfactorily and additional senior staff are being recruited by the Government. The Institute continues to play a major role in the training of health personnel to staff the country's rural health services.

The programme of assistance to the Institute of Hygiene, University of the Philippines, commencing in 1968, calls for the provision of a cultural anthropologist. Fellowships in the field of public health education and training are also being provided so that faculty staff can receive advanced training abroad.

Four fellowships were given to senior staff from schools of public health in the Region to enable them to visit other countries and obtain information on the background of prospective students and an insight into the public health problems. It has been found that fellowships of this nature afford an excellent opportunity for the interchange of ideas and the development of contacts between schools. As a result, training courses can be better adapted to meet requirements.

8.3 Other Education and Training Activities

Information has been collected on existing anaesthesiology services, including training facilities, in countries of the Region. At the same time, governments were asked whether they were interested in sending trainees to a regional training centre for anaesthesiologists, which it is hoped will be established in Manila. A WHO consultant visited a number of countries to obtain first-hand information on the subject. The present indication is that many countries would like to have their staff trained in a regional centre. Discussions are being held with the Government of the Philippines on the possibilities of establishing such a centre and it is hoped that the co-operation of the World Federation of Societies of Anaesthesiologists can be obtained. A visit of a team from the Copenhagen
Anaesthesia Training Centre is expected later in 1968. The team will follow up trainees from the Region who have previously taken courses in Copenhagen. The possibility of the Copenhagen Centre assisting in the proposed regional centre will be explored at that time.

8.4 Fellowships

During the period under review, a total of 310 individual regional fellowships, including 66 for courses at the Malaria Eradication Training Centre, Manila, were awarded. This represents an increase of almost 19% over the number reported last year. Not included in this total, however, are awards from inter-country and inter-regional funds for participation in educational meetings, seminars and courses, which are listed under section 8.5, four special awards made under the Exchange of Malaria Workers Scheme, and one WHO-administered special UNICEF fellowship for the Certificate Course in Public Health Nursing in Calcutta.

On the following page, the distribution of the fellowships by the most common fields of study, i.e., malaria, public health administration, environmental health and nursing, is given in graphical form.

Some other aspects of the regional fellowships awarded are analyzed below:

**Profession of Fellows**

<table>
<thead>
<tr>
<th>Profession</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physician</td>
<td>128</td>
<td>41.29%</td>
</tr>
<tr>
<td>Nurse</td>
<td>35</td>
<td>11.29%</td>
</tr>
<tr>
<td>Sanitarian</td>
<td>31</td>
<td>10.00%</td>
</tr>
<tr>
<td>Others</td>
<td>116</td>
<td>37.42%</td>
</tr>
</tbody>
</table>

**Fields of Activity**

<table>
<thead>
<tr>
<th>Field</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical and health services</td>
<td>273</td>
<td>87.4%</td>
</tr>
<tr>
<td>Teaching</td>
<td>31</td>
<td>10.00%</td>
</tr>
<tr>
<td>Undergraduate study</td>
<td>6</td>
<td>1.94%</td>
</tr>
</tbody>
</table>

**Types of Studies Arranged**

<table>
<thead>
<tr>
<th>Type of Studies</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual studies</td>
<td>241</td>
<td>77.74%</td>
</tr>
<tr>
<td>WHO-sponsored courses</td>
<td>67</td>
<td>21.61%</td>
</tr>
<tr>
<td>Other courses</td>
<td>2</td>
<td>0.65%</td>
</tr>
</tbody>
</table>
I HEALTH ORGANIZATION AND SERVICES
ORGANISATION DE LA SANTE ET SERVICES DE SANTE

Public health administration - Administration de la santé publique
Environmental health - Hygiène du milieu
Nursing - Soins infirmiers
Dental health - Hygiène dentaire
Maternal and child health - Protection maternelle et infantile
Mental health - Santé mentale
Health education - Éducation sanitaire
Nutrition
Occupational health - Médecine du travail
Vital and health statistics - Statistiques démographiques et sanitaires
Rehabilitation - Rénovation
Drug control - Contrôle des médicaments

II COMMUNICABLE DISEASES
SERVICES DES MALADIES TRANSMISSIBLES

Malaria - Paludisme
Leprosy control - Lutte contre la lépre
Tuberculosis control - Lutte contre la tuberculose
Other communicable diseases - Autres maladies transmissibles
Quarantine procedures - Méthodes de quarantaine
Communicable diseases (laboratory) - Maladies transmissibles (laboratoire)
Epidemiology - Épidémiologie
Venera1 disease control - Lutte contre les maladies vénériennes

III MEDICAL EDUCATION, CLINICAL AND BASIC SCIENCES
ENSEIGNEMENT MEDICAL, SCIENCES MEDICALES CLINIQUES ET FONDAMENTALES

Medical education - Enseignement médical
Radiology - Radiologie
Surgery and medicine - Chirurgie et médecine
Undergraduate medical assistants' studies - Études universitaires d'assistant médical
Other medical and surgical specialties - Autres spécialités médicales et chirurgicales
Place of Study

- In countries within the Region only: 142 (45.81%)
- In other regions and not in the Western Pacific Region: 115 (37.09%)
- In the Western Pacific Region and other regions: 53 (17.10%)

A total of forty-four fellows from other regions were accepted for long- and short-term study in the Western Pacific Region. The breakdown by region of origin is as follows:

- Regional Office for Africa: 2
- Regional Office for the Americas: 4
- Regional Office for the Eastern Mediterranean: 23 (17)
- Regional Office for South-East Asia: 15 (3)

The figures in brackets refer to fellowships in malaria eradication undertaken at the Malaria Eradication Training Centre in Manila.

The World Health Organization gratefully acknowledges the splendid co-operation and willingness of countries in the Region to receive fellows for academic courses as well as observation visits.

8.5 Educational Meetings and Courses

The inter-country educational meetings and courses held during the year are listed in Part VI. WHO financed the attendance of sixty-four participants at these meetings.

A total of fifty-five participants from the Region took part in seventeen inter-regional seminars and courses of less than a month's duration. These are listed below:

(a) Seminar on Organization and Management of Laboratory Services, London, 4-28 July 1967;
(b) Seminar on Air Pollution Control, Ministry of Health, Union of Soviet Socialist Republics, 31 August - 20 September 1967;
(c) Refresher Course on Anaesthesiology, Copenhagen, 17 September - 7 October 1967;
(d) Travelling Seminar on the Training and Utilization of Medical Assistants (Feldshers), Union of Soviet Socialist Republics, 29 September - 20 October 1967;
(e) Course on Biological Standardization, Zagreb, 3-28 October 1967;
(f) Health Statistics Seminar (Health Centre Records and Reports), New Delhi, 9-21 October 1967;
(g) Seminar on Food-Borne Diseases and Intoxications and Food Hygiene Practices, New Delhi, 23-28 October 1967;
(h) Seminar on Water Pollution Control, New Delhi, 15-22 November 1967;
(i) Seminar on Smallpox Eradication, Bangkok, 11-16 December 1967;
(j) Seminar on the Training and Utilization of Dental Personnel in Developing Countries, New Delhi, 5-11 December 1967;
(l) Training Course for Quality Control of Drugs, Copenhagen, 17 March - 7 April 1968;
(m) Conference on Training of Health Statistical Personnel, Kampala, 1-10 April 1968;
(n) Travelling Seminar on the Organization and Functioning of Hospital and Sanepid Laboratory Services, Union of Soviet Socialist Republics, 3-26 April 1968;
(o) Travelling Seminar on Plague, Union of Soviet Socialist Republics, 14 May - 6 June 1968;
(p) Travelling Seminar on the Health and Sanitation Aspects of City Planning, Union of Soviet Socialist Republics, 24 May - 15 June 1968;
(q) Refresher Course in Anaesthesiology, Copenhagen, 2-22 June 1968.
Twenty-eight fellowships were also awarded to enable participants from the Region to attend the following long-term (more than one month's duration) inter-regional courses:

(a) Course on Planning and Organization of In-Service Education Programmes in Nursing (Fifth Course), Røskilde and Copenhagen, 8 September - 21 October 1967;

(b) Course on Ergonomics, Bombay, 15 November - 8 December 1967;

(c) FAO/WHO Training Centre on Meat Hygiene, Røskilde, 1 October - 4 November 1967;

(d) Advanced Course in Diagnosis, Treatment and Prevention of Major Cardiovascular Diseases, Copenhagen, 1 November 1967 - June 1968;

(e) Training Course for Senior Teachers of Paediatrics, London and Bombay, January - December 1968;

(f) Anaesthesiology Training Course, Copenhagen, January - December 1968;

(g) International Course on the Epidemiology and Control of Tuberculosis, Rome, 15 February - 31 May 1968;

(h) Course on Child Dental Health, Copenhagen, 1 March - 29 May 1968;

(i) Third Advanced Course in Clinical Chemistry, Copenhagen, 3 April - 19 June 1968;

(j) International Course in the Epidemiology and Control of Tuberculosis, Prague, 25 April - 20 September 1968.
EDUCATIONAL MEETINGS are a regular part of WHO's programme of education and training. They enable health professionals from different countries and territories to discuss their problems. Such meetings took place in different places during the period under review, in addition to the technical discussions held during the Regional Committee meeting. The subjects of discussion were: occupational health, schools of public health, and health planning in urban development.

Photo shows participants in the Seminar on Health Planning in Urban Development, which took place in Singapore from 21 November to 4 December 1967 at the invitation of the Republic of Singapore.

TUBERCULOSIS remains one of the major health problems in the Region in spite of a marked reduction in its death rate in many countries during the past twenty years. In a few countries, it is still one of the first three major causes of death.

One of the main duties of WHO is to assist in the planning and conduct of TB courses for the training of personnel. Photo shows participants in the second regional training course on TB which took place in Tokyo, jointly with the Japanese Government from May to September 1967. The third course started in May 1968.

REGIONAL COMMITTEE

The 18th session of the WHO Regional Committee for the Western Pacific took place in Taipei, China (Taiwan), at the invitation of the Government of the Republic of China, from 13 to 19 September 1967. The Chairman was Dr. C. K. Chang, Director, Department of Health Administration, Ministry of Interior, Republic of China. The Vice-Chairman was Dr. R.C. Lee, Director of Public Health and Medical Activities, University of Hawaii. Chief Representative of the United States of America.
PART II. CO-OPERATION WITH OTHER ORGANIZATIONS
1. CO-OPERATION WITH UNITED NATIONS AND RELATED AGENCIES

WHO continued to co-operate with individual organizations on matters of common interest. A brief summary is given below of the areas of co-operation.

Information on the health survey in the development area of the Lower Mekong Basin carried out in co-operation with the Mekong Committee of the Economic Commission for Asia and the Far East (ECAFE) is described in Part I, section 5.2.

Two staff members of ECAFE, the Regional Adviser on Public Health Administration and the Economic Affairs Officer, acted as resource persons during the regional seminar on health planning in urban development held in Singapore in 1967.

WHO continued its activities in connexion with the National Orthopaedic Centre in Laos. The United Nations Bureau of Technical Assistance Operations and ILO are also supporting the Centre.

United Nations Development Programme (UNDP)

Close relations have continued with the Resident Representatives of the UNDP.

WHO is the executing agency for two projects financed from the Special Fund component of the UNDP: the first relating to the development of a master plan for the sewerage system for the Greater Manila area, which went into operation in December 1966; and the second, the Greater Taipei area sanitary sewerage planning project. Further details are given in Part I, section 6.

The Organization will also participate in two other projects financed under the Special Fund component of the UNDP. In the Republic of Korea, it will be the participating agency with FAO in the pre-investment survey of the Naktong River Basin, and in Singapore, it will co-operate with the United Nations Department of Social and Economic Affairs in an urban renewal and development project.
United Nations Children’s Fund (UNICEF)

As in previous years, there has been close co-operation and continuous consultation in the planning, implementation and evaluation of government projects with UNICEF, which is giving supplies and equipment to seventy-seven projects receiving WHO assistance. The assistance provided covers many fields, including maternal and child health, nursing, rural health, environmental health and communicable diseases.

As pointed out in various sections of this report, the material assistance provided by UNICEF represents a valuable contribution to health programmes in the Region.

World Food Programme (WFP)

Technical advice was given on the health implications and hazards and nutritional aspects of WFP projects in, or proposals from, China (Taiwan), Malaysia, Philippines and the Republic of Korea. A proposal for the use of surplus dried fish and butter oil, available through WFP, in the maternal and child health services is under study.

Food and Agriculture Organization (FAO)

Nutrition projects have been planned in collaboration with the FAO Regional Office. The respective Regional Nutrition Advisers have visited most areas of the Region together (Cambodia, Laos, Malaysia, Philippines, Singapore and the South Pacific), and joint reports have been issued on these visits. Further information is contained in Part I, section 3.4.

International Labour Organisation (ILO)

Close contact is being maintained with the ILO Regional Adviser in Occupational Health with a view to obtaining closer collaboration between ministries of health and ministries of labour in connexion with joint projects. Part I, section 3.6, contains further information on co-operation with ILO.

Meetings Attended

Representatives from the Regional Office attended the following meetings:

(a) ECAFE: Working Group on Communication Aspects of Family Planning Programmes, Singapore, 5-15 September 1967;
(b) OIE-FAO: Regional Conference on Epizootics in Asia and the Far East, Tokyo, 2-9 October 1967;
(c) United Nations: Forty-sixth session (professional) of the United Nations Visual Information Board, Singapore, 23 October - 1 November 1967;
(d) IAEA: Regional Panel on Waste Management Research Development, Singapore, 6-10 November 1967;
(e) ECAFE: Working Group of Experts on Water Codes, Bangkok, 15-29 November 1967;
(f) ECAFE: Thirty-fourth (plenary) session of the Committee for the Co-ordination of Investigations of the Lower Mekong Basin (Cambodia, Laos, Thailand and Viet-Nam), Bangkok, 11-15 January 1968;
(g) ECAFE: Twenty-fourth session, Canberra, 17-30 April 1968;
(h) ECAFE: Eleventh session of the Sub-Committee on Energy Resources and Electric Power, Singapore, 30 May - 6 June 1968.

2. INTERGOVERNMENTAL ORGANIZATIONS

Asian Development Bank

The Regional Office was represented at the First Annual Meeting of the Board of Governors of the Asian Development Bank, held in Manila, 6-9 April 1968. Several discussions have also been held with officials of the Bank on the possibility of giving financial assistance to governments in connexion with the development and implementation of water supply and sewerage plans.

3. WITH OTHER ORGANIZATIONS

3.1 South Pacific Commission (SPC)

A major field of collaboration has been in the holding of short courses on applied nutrition in 1967 in New Caledonia and
Western Samoa and the planning of the applied nutrition education and training programme in Suva.

Planning is in progress for two joint inter-country group educational activities: a seminar on filariasis control, which will be held later in 1968, and a tuberculosis training course, which will be held in 1969.

The Commission's Executive Officer for Health attended the last session of the Regional Committee. A representative from the Regional Office attended the Seventh South Pacific Conference held in Noumea, 2-7 October 1967.

3.2 Other Joint Work

The South Pacific Health Service has continued to work closely with the Organization in connexion with WHO-assisted projects in the South Pacific.

A number of projects in the Region have received assistance from the Colombo Plan, China Medical Board and the United States Agency for International Development. A number of governments have also reported that Peace Corps workers are now assigned to health projects in their countries.

Representatives from the Regional Office attended the following meetings:

(a) Philippine Department of Health: National Seminar on Rural Medicine, Manila, 11-13 October 1967;
(b) South-East Asian Regional Centre for Tropical Medicine: Seminar on Medical Entomology, Bangkok, 15-23 January 1968;
(c) First National Medical Convention of the Singapore Medical Association, Singapore, 23-26 March 1968;
(d) Third General Session of the AFRO-Asian Rural Reconstruction Conference, Seoul, 22-29 April 1968;
PART III. PUBLIC INFORMATION
1. PRESS AND PUBLICATIONS

Thirty press releases, nine special features and twenty-two press notes were issued during the period under review. Some of this material was accompanied by photographs.

A temporary public information assistant served in the unit from 17 July 1967 to 16 May 1968. During her stay in the office, the number of items about the work of WHO in the local press increased significantly.

A total of 50,000 copies of a fourteen-face illustrated folder entitled "Health Problems and Health Progress in the Western Pacific Region" were printed on the occasion of the Twentieth Anniversary of the Organization. This is intended as an inexpensive publication (cost: US$0.025 per copy) for wide distribution, especially among health personnel, medical students, education personnel, voluntary associations, United Nations Information Centres, etc.

The distribution of publications has increased to the extent that two previous publications, namely "The Health of People in the Western Pacific Region" (1965) and "Fifteen Years of Activity in the Western Pacific Region" (1966) are now out of print. In addition, 10,000 copies of the 1967 publication "Activities of the WHO in the Western Pacific" were distributed in the period under review.

A five-page fact sheet on "WHO in the Philippines" was prepared to replace the obsolete edition of the information booklet on the same subject. This is constantly being revised and reprinted according to needs.

Most special features of general interest are now mimeographed in large quantities, so as to add to the printed material distributed as hand-outs. The policy of distributing back issues of the magazine "World Health" devoted to specific subjects continues to meet with an enthusiastic response, especially among teachers and visitors.

Both mailing lists - (a) for full distribution, (b) for "World Health" - are steadily increasing. The former reached the 1000 mark in April 1968. In reply to a questionnaire sent to a sample of
addressees in May 1968, asking whether they wished to remain on the mailing list, only two persons stated that they were not able to make use of WHO's information material. All the other replies contained expressions of continuing interest and the statement that the material was being used either frequently or occasionally. The steady expansion of the mailing list is a direct result of increased interest in WHO.

2. REGIONAL COMMITTEE

The coverage of the eighteenth session of the Regional Committee, which was held in Taipei, was excellent thanks to the co-operation of the Government, which put its national information facilities at WHO's disposal. The session was intensively covered by the press, photographic, radio and television services. A press conference held on the eve of the opening was attended by thirty information people. Nine microphones recorded the opening ceremony, in the course of which fifteen photographers and cameramen operated. In all, ten press items were issued on the occasion and about thirty clippings, in English and Chinese, were collected from the local press.

3. WORLD HEALTH DAY AND WHO'S TWENTIETH ANNIVERSARY

World Health Day 1967 was observed in the Philippines on 30 September 1967, in collaboration with the Department of Health and the Philippine Medical Association. Press notes prepared for the local press were published by at least two of the main dailies in Manila. Tapes of the World Health Day message of the Regional Director were distributed to seventeen radio stations in the Philippines, along with other radio material produced by WHO Headquarters. The Department of Health, through the Office of Health Education and Personnel Training, prepared and distributed posters depicting the theme for last year.

As a follow-up of a resolution adopted during the last session of the Regional Committee (WPR/RC18.R6) pertaining to the commemoration
of WHO's Twentieth Anniversary, twenty-three government liaison officers were designated by as many countries and territories to deal directly with the Public Information Unit in order "to facilitate the information aspects of the Twentieth Anniversary, World Health Day, and the Organization's work as a whole". The material distributed to these liaison officers consisted of:

(a) World Health Day "kit";
(b) set of twenty-three photographs;
(c) catalogue of WHO films;
(d) list of recordings available (with scripts);
(e) four special features;
(f) text of the Regional Director's message for World Health Day 1968;
(g) recording of the Regional Director's message;
(h) World Health Day poster;
(i) 1968 issues of "World Health" magazine;
(j) WPRO folder "Health Problems and Health Progress in the Western Pacific Region";
(k) eight information circulars.

So many additional requests for copies of the World Health Day "kit" and posters were received that they could not all be met. By 7 April, sixty-three copies of the photograph set (i.e., 1449 photographs) and about 100 dubbings of recordings had been sent to government liaison officers, various information media and voluntary organizations at their own request.

Five exhibit stands, produced by WHO Headquarters, were sent to exhibitions arranged by public and medical library associations in Australia, Hong Kong, Japan, New Zealand and the Philippines.

Following the recommendations of the World Health Assembly, the Executive Board and the Regional Committee, national and territorial ad hoc committees for the commemoration of WHO's Twentieth Anniversary were set up in most countries and territories. Several countries issued their own material based on the theme "Health in the World of
Tomorrow". The press, radio and television coverage was more extensive than usual.

Messages sent by several heads of state, ministers and other notabilities were published on the occasion of the Twenty-first World Health Assembly.

Several countries and territories issued special postal and/or cancellation stamps.

Activities performed in connexion with the Twentieth Anniversary were preceded, in October-December 1967, by the visit of a public information consultant, whose mission was to write articles and a book on health problems and progress in this part of the world. The consultant visited Brunei, East Malaysia and the Philippines.

4. AUDIO-VISUAL MEDIA

Radio recordings were made mainly in connexion with the Regional Committee and seminars in Manila and Singapore.

In February-March 1968, a photographer was sent by WHO Headquartes to Cambodia, Laos, the Philippines and West Malaysia to shoot photographic material on the subject of education and training. However, other subjects were also covered at the request of the Public Information Officer and the WHO Representatives concerned.

The talks and film shows arranged for the many visitors from the Manila area and elsewhere is a particular feature of the Regional Office. The number of visitors amount to several thousands a year and are particularly high during the United Nations Week.

In October-November 1967, at the request of WHO Headquarters, the Public Information Officer attended the forty-sixth session (professional) of the United Nations Visual Information Board in Singapore. He took part, among other things, in the discussions which were held between members of the Board and some thirty-eight representatives from twenty-two national and territorial radio/television networks in Asia and the Far East, brought together on
the occasion of the meeting of the Asian Broadcasting Union. Other fruitful discussions took place and valuable contacts were made in the course of the session.

The full distribution of information material includes almost all radio and television stations in the Region. In addition, specific material and contributions from WHO staff members were provided in answer to specific requests.
PART IV. CONSTITUTIONAL AND ADMINISTRATIVE DEVELOPMENTS
1. THE REGIONAL COMMITTEE

The eighteenth session of the Regional Committee for the Western Pacific was held in Taipei from 13 to 19 September 1967. The session was attended by representatives of all Member States in the Region, except Cambodia and Laos, and by representatives of the Member States responsible for territories in the Region, except France. Representatives of the United Nations, the United Nations Development Programme, UNICEF, the International Committee of Military Medicine and Pharmacy, the South Pacific Commission and eight non-governmental organizations in official relations with WHO were also present. The Director-General and an Assistant Director-General attended the session.

The Committee examined the report of the Regional Director for the period 1 July 1966 to 30 June 1967. During the discussion, considerable attention was given to integrated planning; the Committee considered that Member governments, in national health planning, should take into account the assistance that could be provided by private foundations, enterprises, and bilateral volunteer programmes. The extent to which the Organization and its country representatives should take the initiative in promoting co-ordination in integrated planning in Member countries was also discussed.

The Committee noted that, although activities in environmental health had expanded considerably, additional financial resources were required for the construction of waterworks and sewerage systems. Information was presented to the Committee on the different agencies which might be willing to invest money in such projects.

In the discussion of the section of the report on education and training, several references were made to the shortage of health manpower in the world. The view was expressed that Member governments should strengthen their national training institutions; WHO could provide assistance in improving the quality of training programmes.

The Committee discussed the proposed programme and budget estimates for the Region for 1969 and requested the Regional Director to transmit them to the Director-General.
The Committee considered the report submitted by the Regional Director on the arrangements proposed for celebrating the Twentieth Anniversary of the Organization. It decided that representatives of Australia and Japan should address the Twenty-first World Health Assembly on behalf of the Regional Committee at the commemorative meeting.

At the request of the Government of Malaysia, an item proposing the establishment of a WHO medical school in the Region was discussed.

In compliance with resolution WHA20.38, the Regional Committee gave further consideration to the implementation of resolution WHA19.31. The views expressed in that respect by the Regional Committee will be submitted to the Twenty-first World Health Assembly.

"The integration of maternal and child health and family planning activities in the general health services" was the subject of the technical discussions. "Health planning as an administrative tool" was selected as the theme for the technical discussions in 1968.

2. REGIONAL OFFICE

2.1 Organizational Structure

Some modifications in the organizational structure of the Regional Office occurred with the addition of a fourth post of assistant director of health services and the grouping of the assistant directors with the regional advisers posts. Steps have been taken to meet future needs by planning for the addition of a public health adviser in health laboratory services in 1969 and a translator-revisor in 1970.

2.1.1 Regional office staff

Recruitment was completed during this period for the posts of administration and finance officer, an environmental health officer, both personnel officers, a communicable diseases adviser, a translator, two assistant directors of health services and an adviser in maternal and child health. In some cases these recruitments resulted from the Organization's policy of reassigning staff at intervals to assure the best use of available experience as well as to infuse new ideas.
2.1.2 WHO Representatives

A representative was appointed to Laos on 1 January 1968. The posts in the Republic of Korea and Fiji were filled by reassignment of staff from the Regional Office.

The Representative covering the area of China (Taiwan), Guam, Hong Kong, Japan, Macao, Ryukyu Islands and the Trust Territory of the Pacific Islands, stationed in Taipei, was reassigned to the Regional Office. The Representative in Cambodia was appointed to succeed him.

The WHO Senior Medical Adviser working in Western Samoa was appointed Country Liaison Officer. He will work under the supervision of the Representative in Suva.

The WHO Representatives attended programme planning and country review meetings in Manila in December 1967 and again in April 1968. Advantage was taken of their presence to discuss administrative matters of mutual interest.

2.1.3 Project staff

The recruitment of highly qualified staff for field projects has continued to be difficult despite the efforts made to improve the situation. Methods and procedures designed to accelerate recruitment continue to be reviewed.

A comparison between the situation in June 1966, June 1967 and June 1968 shows that the overall percentage of filled posts in the Region remains reasonably high - 78% in June 1966, 76% in June 1967 and 79% in June 1968. During the period under review, a total of 108 selection committees were held.

2.2 Salaries and Allowances

2.2.1 Staff in the professional category

There was no change in the professional and higher level salary scales but there were increases in the post adjustment for four countries within the Region.

2.2.2 Staff in the general service category

Salary scales for general service staff were increased during the period in the following countries: Cambodia, China (Taiwan), the Philippines, Republic of Korea and Republic of Viet-Nam.
The revision for the Philippines was based on a full-scale review of the rates of selected employers in Manila. The review was conducted and analyzed by the Regional Office on behalf of all the organizations related to the United Nations in the country. Rising salary scales tend to reflect the rapid development of many countries and reflect as well the increasing demand for skilled "white collar" workers. There is no indication of any slowing down in the rate of increase for salaries.

2.3 Regional Office Building

2.3.1 The Conference Hall

The Regional Office Conference Hall was made available for eight conferences and seminars. These were either sponsored by WHO or were of an international character and met the established criteria for such meetings.

2.3.2 Repairs and maintenance

In addition to normal maintenance operations, the interior of the two upper floors of the WHO building was painted. A storeroom was constructed to provide additional facilities for storing supplies and equipment. The two evaporative condensers of the WHO building air conditioning system were completely renovated.

2.4 Regional Obligations and Expenditure

The increasing complexity of the Regional Office's financial management is shown by the fact that twenty-four bank accounts are now being operated in thirteen countries. These accounts represent ten different currencies. Appropriate safeguards are being continuously reviewed.

On pages 98-99 of this report will be found a graphic presentation and a financial table of obligation totals by fiscal year, for the Region from 1950 to 1967. For the regular budget, a comparison of implementation in relation to funds budgeted for the fiscal years 1965, 1966 and 1967 shows an 87.6% implementation in 1965, a 96.6% implementation in 1966 and for 1967, 97.4%. For the United Nations Development Programme, Technical Assistance sector only, the implementation percentage was 99.5% for the biennium 1965/1966 and 85.7%
for 1967 only, the first year of the biennium. It will be noted from these figures that during the period under review the Region was able to absorb nearly all the funds allocated for its use.
GRAPH OF OBLIGATIONS INCURRED BY THE WORLD HEALTH ORGANIZATION WESTERN PACIFIC REGION 1/ 1950-1967

EXPRESSION IN MILLIONS OF US DOLLARS

LEGEND:
- REGULAR BUDGET 2/
- UNDP (TA & SF) 3/
- TOTAL BUDGET


1/ Figures extracted from Official Records Nos. 34, 41, 47, 54, 62, 70, 78, 85, 93, 101, 109, 117, 126, 134, 142, 150 and 159 (Financial Reports and Reports of the External Auditor to the World Health Assembly).

2/ Includes Voluntary Fund for Health Promotion, Funds-in-trust and Reimbursable Funds.

### TABLE OF OBLIGATIONS INCURRED BY THE WORLD HEALTH ORGANIZATION WESTERN PACIFIC REGION

1950-1967

(Expressed in Millions of US Dollars)

<table>
<thead>
<tr>
<th>Year</th>
<th>Regular Budget</th>
<th>UNDP (TA &amp; SF)</th>
<th>Total</th>
</tr>
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</tr>
<tr>
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<td>0.75(^1)/</td>
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\(^1\) Figures extracted from Official Records Nos. 34, 41, 47, 54, 62, 70, 78, 85, 93, 101, 109, 117, 126, 134, 142, 150, 159 and 167 (Financial Reports and Reports of the External Auditor to the World Health Assembly).

\(^2\) Includes Voluntary Fund for Health Promotion, Funds-in-trust and Reimbursable Funds.

\(^3\) Includes the Region's first UNDP/SF component obligation of $1728.

\(^4\) Includes the UNDP/SF component obligation of $56 417.
PART V. SUMMARIES OF COMPLETED LONG-TERM PROJECTS
SUMMARIES OF COMPLETED LONG-TERM PROJECTS

A complete list of projects current during the year will be found in Part VI. The following selected projects are described in fuller detail.

<table>
<thead>
<tr>
<th>Project number</th>
<th>Title</th>
</tr>
</thead>
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<tr>
<td>Cambodia 0019</td>
<td>Environmental sanitation training</td>
</tr>
<tr>
<td>Malaysia 0032</td>
<td>Nursing education, West Malaysia</td>
</tr>
<tr>
<td>Malaysia 0034</td>
<td>Environmental health advisory services, Malaysia</td>
</tr>
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</table>
1. ENVIRONMENTAL SANITATION TRAINING, CAMBODIA
(April 1965 - February 1968)

The aim was to develop a national sanitation training plan suitable to the needs and resources of the country. WHO provided a sanitarian tutor. Fellowships were awarded for training of national counterparts. Training was given in the form of lectures followed by discussions and comments by the trainees; demonstrations, including the use of equipment for simple physical and chemical water examinations, the membrane filter technique for bacteriological analysis, as well as visits to different related laboratories, water supplies and food establishments; field training, during which the trainees participated in the construction of the mould, the bowl and the slab for water-seal latrines, and in the construction and maintenance of dug and driven wells. Every effort was made to encourage the trainees to work with the community. The technical instructors were given the same training with particular emphasis on the planning and organization of the training courses and work programmes.

As a result of the assistance given, the environmental health training programme has been progressively developed and the original syllabus has been significantly improved. New sanitation subjects were introduced to meet existing conditions and resources. A total of 164 sanitary agents were trained, bringing to about 450 the total number of sanitary agents working for the Government. The technical instructor counterparts are now qualified to continue the training activities and also to direct and supervise the construction of sanitary facilities, such as wells and latrines, in rural areas. A major problem is the fact that many of the sanitary agents are performing work which is not related to their training. This is due to the fact that there is, as yet, no environmental sanitation division in the Ministry of Public Health. The Government has requested WHO assistance in the establishment of such a service and it is hoped that some of the sanitary agents already trained will be used in the new service.
2. NURSING EDUCATION, WEST MALAYSIA  
(August 1962 - April 1968)

The aim was to assess the present educational programmes for nurses, nursing needs and resources; to develop education programmes and the associated clinical practice fields to prepare nursing personnel to meet the needs of the country; to improve the quality of nursing service and nursing education through in-service education, refresher courses and special courses for local registered nurses; and to study the needs and plan for the establishment of courses to prepare nursing personnel for administrative and teaching positions. WHO provided two nurse educators and sixteen fellowships of varying durations. These have been awarded to the senior nursing officers in the Ministry, in state and hospital posts, and to all senior tutors in the schools of nursing.

The nursing and midwifery services in hospitals have been studied extensively since 1962 to determine the amount of service provided for patients, the distribution of staff between the in-patient and out-patient services and the ratios of professional to auxiliary staff. An estimate of the service requirements in hospitals and in health for the period 1968-1980 was submitted by the Department of Nursing as a part of the overall estimate by the Ministry of Health of its needs during the twelve-year period.

A Midwives Act was drawn up in 1966. This requires the registration of all practising midwives in the country. The regulations and schedules are being completed by a special committee of the Ministry, and arrangements have been made for the administration of the Act within the Department of Nursing of the Ministry.

On the basis of a study of the needs of practising professional nurses for competence in the various areas of nursing and the trends in nursing services, a wide revision of the curriculum was undertaken by the senior nursing officers and the tutors in the three schools of nursing. A new curriculum was initiated in September 1965 incorporating the traditional courses of medical-surgical and paediatric nursing and new courses in obstetrics, psychiatric and public health nursing for all
students. The subject of principles of management was included because of the responsibilities carried by senior students and by newly qualified nurses in the administration of the wards.

A new curriculum for the assistant nurse programme was approved in 1967 by the Nursing Board. This should strengthen the total teaching and learning situation for the pupils. As assistant nurses currently comprise slightly more than half of the total nursing personnel in the country, the upgrading of their training can be a major factor in improving the nursing services.

Two types of post-basic programmes were considered by the Ministry of Health and the University of Malaya: a one-year programme for the preparation of tutors and a programme of a year in nursing service administration. It is now possible to offer the tutors' programme. Consideration is being given to the possibility of establishing in 1969 a curriculum in nursing service administration simultaneously with the second tutors' programme.

In the area of continuing education for the staff, the country has a number of programmes. Conferences for matrons have been held annually for many years and during the past four years, a two-week course in administration has been conducted for all matrons in co-operation with the Government Staff Training Centre. Annual conferences for tutors have been held for a number of years and since 1965 these have been organized as seminars in nursing education. A number of courses in ward administration and new nursing techniques have been arranged for sisters and staff nurses.

In terms of quantitative standards, there has been an increase of approximately twenty-five per cent. in the amount of service provided per patient per day (twenty-four hour period) in hospitals during the past five years.

From the quality standpoint, every effort is being made to improve the service through consultations with the state and hospital officers, increase in tutorial staffs, further development of education and training at all levels and additional equipment and supplies as funds
become available for these purposes. Continuing education for the employed staff is a major activity of the Department of Nursing. Emphasis is placed on principles of administration in the courses conducted for the nursing service personnel. New teaching techniques, educational problems and future plans for schools of nursing are stressed in the annual seminar on nursing education held for all tutors. Further opportunities will be offered to sisters and staff nurses as continuing education is developed with the assistance of a nursing sister assigned to the Ministry staff to organize courses in this area.

In the future, fellowships will be awarded to junior nursing officers, and the Government has requested one fellowship of twelve months for advanced study in nursing education or nursing service each year.

3. ENVIRONMENTAL HEALTH ADVISORY SERVICES, MALAYSIA
(November 1965 - October 1967)

The aim was to assist the Government to establish sanitary engineering services in West Malaysia within the framework of the Ministry of Health; to develop policies and introduce methods and practices for the organization, administration and operation of the sanitary engineering services; to establish effective and efficient advisory and supervisory services in environmental health programmes in the medical and health offices of West Malaysia; to train national sanitary engineers to carry out the specialized services indicated; and to plan and implement in-service training of professional and sub-professional health personnel responsible for carrying out the activities mentioned. WHO provided a sanitary engineer and fellowships.

The technical services given consisted broadly of four main types: (a) study and assessment of the environmental health situation and problems, needs and priorities, and governmental administrative framework of the project area; (b) assistance to the Ministry of Health in the development and establishment of a public health engineering service; (c) consulting and technical operations in public health engineering, with a view to formulating programmes and assisting in the development of sanitary
infrastructures; and (d) advisory and technical services to the Ministry of Health and governmental agencies in the field of sanitary engineering.

The necessary preparatory work leading to the elaboration of a plan for establishing a Public Health Engineering Service was completed. Work during this phase included studies and examination of the need and potential for public health engineering programmes in the urban and rural areas. An organic document for the development and establishment of a public health engineering service was submitted to the Ministry and approved by the National Health Advisory Council (see page 108). Subsequently, the first public health engineering post was created in the Ministry and filled by a public works department engineer in December 1966. A scheme has now been developed for the Public Works Department to service public health engineering posts in the Ministry of Health. The development plan calls for the establishment of seven engineering posts in the Ministry and corresponds approximately to one engineer for a population of one million persons. The financial commitments of the Government for developing the first phase (five years) of the service is estimated to amount to M$769,288 (US$1 = M$3.03).

Following the posting of the first national engineer to the Ministry of Health, various activities were initiated to introduce him to the administrative and technical aspects of public health engineering service functions. These included the conduct of an emergency health flood disaster survey and reporting; the elaboration of the public health engineering service organic document; work connected with the Emergency Health Mobilization Plan; work on technical committees; reconnaissance surveys; liaison work; the planning and development of three planning survey projects; field investigation of sewage disposal problems; technical assistance dealing with the proposal and design of a sewerage scheme for the Sungei Buloh Leper Colony (population: 2500); investigation and technical assistance in the field of rural water supply.

The project maintained close liaison with the Water Supply Unit, Public Works Department, throughout the period of operation. Assistance had included the development of proposals for specialized consultant
PROGRAMME

DEVELOPMENT & PUBLIC HEALTH ENGINEERING SERVICES

FUNCTIONS

WATER SUPPLY
WASTE DISPOSAL

TECHNICAL ASSISTANCE

REGIONAL

PUBLIC

HEALTH ENGINEER

FIELD STUDIES

OCCUPATIONAL HEALTH AND
AIR POLLUTION

FOOD PROTECTION
SANITATION
VECTOR CONTROL

DIVISION OF ENVIRONMENTAL
HEALTH AND
ENGINEERING

RURAL

DEVELOPMENT
& ENGINEERING
CONSTRUCTION GROUP

DIVISION OF ENVIRONMENTAL
HEALTH & ENGINEERING

STATISTICAL & MANAGEMENT
SERVICES

Planning  Advisory  Policy Formulation  Regulatory

ASSISTANCE AND PROJECT MANAGEMENT

Government Agencies  States  Industrial and Private Sectors  Federal Projects

PROJECTS AND ACTIVITIES

National surveys  Sewerage development  Housing  Water supply
Water pollution control  Standards  Epidemiology  Refuse disposal
Air pollution  Sanitary legislation  School health  Vector control
Soil pollution  Enforcement  Rural health  Hospital and institutional facilities
Radiation hazards  Slum clearance and urban renewal  Sanitation  Industrial hygiene

Industrial waste disposal
assistance from WHO and project planning. In this connexion, a concrete proposal for a short-term WHO project to provide consultant services to assist the Government to review the requirements for public water supply in West Malaysia and to conduct a training seminar was developed and approved by the Public Works Department. Limited advisory and consultant services were provided to district officers in the development of rural water supplies.

Assistance was also given to the Ministry of Health, the Public Works Department, the Economic Planning Unit, the Commissioner of the Federal Capital of Kuala Lumpur, and the City of Ipoh in the planning and development of sewerage facilities.

The advisory and technical assistance provided by the project in the field of sewerage development and construction focuses on an area where public health engineers are critically needed. Promotion and advisory assistance in this connexion has resulted in the development of three sewerage schemes with a total construction worth of M$700 000 and has introduced new sewage treatment practices. In addition, assistance was provided to the Government in the planning for the development of the Kuala Lumpur regional sewerage master plan (population: 520 000) and the implementation of the Ipoh sewerage scheme (population: 250 000). These two schemes, when implemented, will make a large and significant impact on public health and the economic development of the two largest urban centres in West Malaysia. This work has served to illustrate the promotional and co-ordinating role of the Ministry of Health in this field.

Two inventory and assessment surveys dealing with privately managed water supplies and urban sewerage and excreta disposal were elaborated and carried out in co-operation with the Commissioner of Labour and the Commissioner of Local Government. The possibility of establishing a revolving loan scheme to assist small towns and local authorities to finance sewerage construction is under consideration.

It is felt that a proper groundwork and necessary formal (governmental) documentation for establishing the Division of Environmental
Health and Engineering in the Ministry of Health have been completed. In addition, it is believed that the public health engineering service, when properly developed along the lines indicated, can make important contributions to the economic development and health standards of the country.

It is also believed that demands are fast developing for public health engineering services from the Ministry of Health in water pollution control, sanitary legislations, physical planning, national health planning, rural sanitary construction, national sanitary development policies, housing standards and policies, industrial wastes and air pollution, and industrial hygiene.

Assistance to this project had to be withdrawn earlier than planned as United Nations Development Programme/Technical Assistance funds were not available for its continuation. The dominant objective of this project was to assist the Government to develop and establish a viable federal public health engineering service and programme. This implies that the assistance will be long-termed. The continuation of sanitary engineering advisory services is essential if a public health engineering service is to be developed properly.
PART VI. PROJECT LIST
PROJECTS IN OPERATION

This part of the Report contains a list of the projects — country and inter-country — that were in operation during the whole or part of the period from 1 July 1967 to 30 June 1968. Continuing projects for which the only assistance given during the period was technical advice from the Regional Office are not shown.

In country projects, the purpose for which the government undertook the project is stated.

Under the heading "Fellowships" are shown those fellowships awarded during the same period that do not form part of assistance to a larger project.

The starting date of each project is shown, between brackets, after its title, the finishing date being also shown for completed projects and, where possible, for uncompleted projects. Names of co-operating agencies, whether or not they have contributed funds, are given, between brackets, after the source of funds.

The abbreviations used include the following: R - regular budget; UNDP/TA - Technical Assistance component of the United Nations Development Programme; UNDP/SF - Special Fund component of the United Nations Development Programme; AID - United States Agency for International Development. Other abbreviations are explained in the list on page ii.
American Samoa 0200 Fellowships R: Public health dentistry (twelve months).

Australia 0200 Fellowships R: Clinical pathology (twelve months), radiation health physics (eight months), radiotopes in endocrine assays (three months).

British Solomon Islands Protectorate 0002 Malaria Pre-eradication Programme (Jan. 1965 - 1970) R UNDP/TA (South Pacific Commission)

To develop the operational, technical and administrative facilities of the malaria and public health services, so that a country-wide malaria eradication programme can be implemented later.

This programme supersedes a malaria eradication pilot project carried out from 1961 to 1964.

British Solomon Islands Protectorate 0003 Nursing Education (Nov. 1959 - 1968) R UNICEF (South Pacific Commission)

To carry out a basic programme of general nursing for nurses and medical assistants, and a programme of midwifery and maternal and child health, combined with the nursing programme, for women nurses.


To expand and strengthen the network of local health services and to train auxiliary health personnel.


To eradicate malaria from the country. This follows the malaria pre-eradication programme started in 1962.

Brunei 0200 Fellowships R: Environmental health (two months).
Cambodia 0013 Nursing Education and Administration
(Nov. 1963 - 1970) R

To survey and evaluate training resources, and prepare short-term and long-term plans for meeting the nursing needs of the health services; to organize and improve nursing services and education programmes throughout the country; and to review nursing legislation, personnel policies, and terms of service.

Cambodia 0019 Environmental Sanitation Training
(April 1965 - Feb. 1968) UNDP/TA (Asia Foundation)

See Part V for a full description of this project.

Cambodia 0023 Leprosy Control
(Oct. - Nov. 1967) R

WHO provided a consultant for one month to assess the nature and extent of the leprosy problem and current leprosy control work, and to assist in planning and implementing an extended programme for leprosy control.

Cambodia 0028 Municipal Sanitation
(Nov. - Dec. 1967) R

WHO provided a consultant to examine sanitation problems in Phnom-Penh and Sihanoukville. His recommendations on the measures to be taken to improve the situation were outlined in the assignment report submitted to the Government.

Cambodia 0501 Malaria Pre-eradication Programme and Development of Health Services (July 1962 - 1974) R UNDP/TA

To build up administrative and operational facilities to the level required for the implementation of a full malaria eradication programme; to complete an epidemiological survey of malaria; and to train national technical staff for the eradication programme.

The pre-eradication programme continues the antimalaria operations with which WHO has been assisting (under the project number Cambodia 0001) since October 1950.
Cambodia 0503 Tuberculosis Control  
(May 1965 - 1970) R UNICEF

To set up the nucleus of a national tuberculosis control service with emphasis on preventive and public health work; and to carry out an effective control programme, so as to reduce, and finally to eliminate, the infection as a public health problem.

Cambodia 0505 Epidemiology and Health Statistics  
(March 1966 - 1970) R

To establish in the Ministry of Public Health an epidemiological and health statistical service which will be responsible for planning and guiding national disease control programmes; to study local epidemiological patterns of prevailing causes of morbidity and mortality as a basis for the formulation of such programmes; and to train personnel of the health services in epidemiology and health statistics.

Cambodia 0508 Public Health Nursing Advisory Services  
(Jan. 1967 - 1968) UNDP/TA

To organize a system of public health and midwifery administration and services to meet the changing health needs and resources of the country.

Cambodia 0511 Applied Nutrition  
(June 1967 - 1972) R UNICEF (FAO)

To improve nutritional levels in the community; to study the etiology and epidemiology of nutritional diseases and deficiencies affecting the population; to establish patterns for practical nutrition programmes that can be adapted for any part of the country; and to train national staff for their implementation and evaluation.

Cambodia 0512 Smallpox Eradication  
(Jan. 1968 - ) Special Account for Smallpox Eradication

To intensify the smallpox vaccination and surveillance activities to prevent the introduction of smallpox from other endemic areas.
Cambodia 0200 Fellowships R: Public health administration (two for twelve months).

China 0001 Venereal Disease Control
(Jan. - March 1968) R

WHO provided a consultant to assess the extent of the venereal disease problem; to evaluate the current venereal disease control programme which started in 1953; and to render consultative and advisory services on related activities.

China 0020 Mental Health Programme, Taiwan
(Second phase: March - May 1965; Dec. 1966 - 1968) R (AID)
(Asia Foundation)

To establish, as part of the mental health programme, a post-basic training programme for psychiatric social workers, and to review the psychiatric nursing services and the psychiatric nursing content of the nursing education programme.

Assistance with the first phase of this project was provided between October 1955 and December 1964.

China 0027 Institute of Public Health, Taiwan
(Aug. 1958 - 1974) R (China Medical Board)

To strengthen the training at the Institute of Public Health, particularly in epidemiology and public health practice.

China 0034 Trachoma Control, Taiwan

To carry out an island-wide study of the prevalence, distribution and relative gravity of trachoma, and of environmental and other factors influencing the transmission of the disease; to develop a comprehensive control programme based on existing health services with the objective of reducing trachoma to a level at which it will no longer be a major public health problem, and of preventing disabling complications and sequelae.
China 0036 Community Water Supply and Sewerage, Taiwan
(Jan. 1963 - 1968) UNDP/TA UNICEF

To follow up the recommendations made in 1961 by a WHO team of water supply consultants in connexion with the improvement of community water supply and sewerage; to review and amend as necessary national and provincial legislation pertaining to community water supplies; to develop techniques for financing and administering water supply and sewerage programmes, so as to make the programmes self-supporting; to stimulate regional planning of water supply schemes; to initiate training programmes; and to co-ordinate activities relating to community water supply with other sectors of the nation's economy (industry, agriculture, etc.), which are directly concerned with the use and allocation of water resources.

China 0045 Prevention and Correction of Disabilities of Leprosy Patients, Taiwan (Nov. 1965 - 1969) R

To establish a training and demonstration pilot project for rehabilitation of leprosy patients, and to prepare a plan for a national programme.

China 0046 Communicable Disease Control Centre, Taiwan
(July 1965 - 1970) R

To set up in the Provincial Department of Health an epidemiological service that will include laboratory facilities; to study local epidemiological patterns of prevailing causes of morbidity and mortality, in order to establish a basis for planning specific disease control programmes; and to develop procedures, suited to local conditions, for the investigation, diagnosis, control and prevention of the most prevalent communicable diseases.

China 0049 Physical and Occupational Therapy, Taiwan
(Dec. 1966 - 1972) R

To organize at the National Taiwan University collegiate courses for training physical therapists and occupational therapists and to improve professional standards.
China 0052 Virus Laboratory Services
(Sept. 1967 - 1968) R

To develop the diagnostic services in the virus laboratory of the Communicable Disease Control Centre and to strengthen the services in the local laboratories; to carry out surveys and studies for assessing the prevalence and nature of virus infections, especially among children, in order to provide a basis for the formulation of specific disease control programmes; and to train local personnel in techniques for immunological diagnosis of virus diseases.

China 0053 Water Pollution

WHO provided a consultant for two months to advise on the planning and execution of water pollution surveys, on the training of national staff for the work, and on other matters related to the water pollution control programme.

China 0055 Nursing Administration

To strengthen the Nursing Division of the Provincial Department of Health and increase its participation in the development of health programmes; to improve nursing organization, administration and supervision; to carry out studies in nursing practice; and, in collaboration with the education authorities, to improve the programmes and the practical training facilities for student nurses.

China 0058 Industrial Health
(June - Dec. 1967) R

WHO provided a consultant to determine the nature and extent of occupational health and industrial hygiene problems and the factors responsible for them; to assess the facilities and resources of their control; to review the relevant legislation and regulations; to strengthen the occupational health and safety services; and to examine problems of air and water pollution caused by industry.
China 0059 Course in Sanitary Engineering
(March - May 1968) UNDP/TA

WHO provided a consultant for two months to review the programme of the post-graduate course in sanitary engineering of the School of Engineering of the National Taiwan University, and to assist in strengthening and upgrading the course with respect to curriculum of studies, standards of admission, degree requirements, teaching staff, legal status and existing facilities for theoretical and laboratory work.

China 0200 Fellowships R: BCG vaccine production (three months), dental health (two for five months), leprosy control (six weeks), maternal and child health (one for six months, one for twelve months), occupational health (twelve months).

China 0201 Fellowships UNDP/TA: Water pollution (six months).

Cook Islands 0200 Fellowships R: Assistant medical officers' course (twelve months and a twelve-month extension of a previous award).

Fiji 0011 Training in Health Education
(Nov. 1967 - 1969) R

To improve health education work in the health services and teaching institutions and to develop the health education aspects of training programmes in the school of medicine, the schools of nursing and other institutions.

Fiji 0200 Fellowships R: Medical library administration (twelve months), nursing administration (twelve months), public health administration (nine months).
French Polynesia 0001  Filariasis Control  
(Nov. 1967 - Feb. 1968)  R

WHO provided a consultant for three months to assess the long-range achievements of chemotherapy control and its effect on reducing the infection rate of filariasis.

French Polynesia 0004  Nutrition and Dental Health Education  
(March - Sept. 1968)  R  UNICEF

To strengthen the nutrition activities of the health services, especially the MCH and dental health services; to study the food patterns and the socio-cultural and other factors affecting the nutritional state, especially of the nutritionally vulnerable groups; to study nutritional factors affecting dental health, and to make practical recommendations in the nutrition field which would protect dental health as far as possible, especially among the vulnerable groups; to assist all nutrition education and training activities; to promote co-ordination between various governmental and non-governmental agencies engaged in nutrition activities.

Gilbert and Ellice Islands 0004  Nursing Education  
(Feb. 1964 - 1970)  UNDP/TA  UNICEF

To develop training programmes for preparing nursing and midwifery personnel for the hospital and health services.

Gilbert and Ellice Islands 0200  Fellowships  R:  General medicine  
(eight months).

Hong Kong 0016  Tuberculosis Advisory Services  

To plan, set up and train staff for a statistical section in the Tuberculosis Unit of the Medical and Health Department; and to collect, process and provide statistical data for general and research purposes in the tuberculosis service.
Hong Kong 0200 Fellowships  R: Dental health nursing (twelve months),
nursing techniques in open heart surgery (twelve months).

Japan 0023 Medical Rehabilitation

To raise the standard of teaching at the physical and occupational
therapy school set up in 1963; to give in-service training to physical
and occupational therapy personnel; to train a nucleus of senior
physical and occupational therapists, in conformity with internationally
accepted standards, for teaching posts in other similar schools to be
established in the future; to modify procedures for the admission and
classification of patients at rehabilitation centers to enable
rehabilitation measures to be undertaken more quickly.

Japan 0025 Mental Health Advisory Services

WHO provided a consultant for three months to advise on the
strengthening of the community mental health services and on their
integration into the general health services; to plan preventive and
treatment facilities with emphasis on ambulatory non-institutionalized
patients; to assess generally the problems and to initiate surveys
where required as a basis for guidelines in planning.

Japan 0200 Fellowships  R: Accident prevention in pre-school children
(one month), assay of marihuana (three months), cancer prevention measures
(three months), care of the deaf and mute (three months), control of food
additives (three months), dental health (three months), drug control -
clinical testing methods for evaluating efficacy of drugs (three months),
environmental sanitation in urban development (three months), health
planning (three months), hospital administration (two for three months),
medical insurance systems (three months), methodology of hospital statistics
(four months), methods of early diagnosis, treatment and prevention of
smallpox (three months), noise control (three months), orthopaedic surgical treatment of the physically handicapped (three months), radiation protection (three months), streptococcal infections (five weeks), vaccine supply organization (three months), venereal disease control (three months), virus disease control (six weeks).

Korea 0003 Maternal and Child Health Advisory Services
(Feb. 1968 - 1972) R
To strengthen and develop the national maternal and child health programme.

Korea 0004 Leprosy Control
To expand the leprosy control programme.
During the period under review, WHO assistance was limited to consultant services.

Korea 0013 Malaria Pre-eradication Programme
(Jan. 1962 - 1970) R
To survey the malaria situation, organize a national malaria service and train staff, so as to enable an eradication programme to be planned and implemented.
This programme follows the pre-eradication survey that began in June 1959.

Korea 0015 National Institute of Health, Seoul
To strengthen the Department of Training and Surveys of the National Institute of Health (formerly the National Institute for Public Health Training) which trains staff for the local health services.
Korea 0019 Tuberculosis Control  

To develop an effective and comprehensive national tuberculosis control programme, so as to reduce, and finally to eliminate, the disease as a public health problem. In 1967, a WHO consultant was appointed to review and evaluate the programme and to make recommendations as regards future policies in combating the disease.

Korea 0025 Local Health Services, Chungchong Namdo  
(March 1963 - 1972) R UNICEF  

To develop the public health services in the demonstration province (Chungchong Namdo) and the local health services in other provinces; and to train local health personnel at the Division of Training of the National Institute of Health.

Korea 0027 School of Public Health, Seoul National University  
(Nov. 1967 - 1968) R  

To develop and strengthen the teaching faculty of the School of Public Health, Seoul National University.

Korea 0029 Environmental Health Advisory Services  

To strengthen the sanitation section of the Public Health Bureau, and to improve sanitary services, including water supplies, excreta and refuse disposal, food hygiene, and control of vectors of disease, in urban and rural areas.

Korea 0200 Fellowships R: BCG vaccine production (three months), dental health (three weeks), planning and operation of drug control programmes (twelve months), public health administration with emphasis on epidemiology (twelve months), public health planning (six months), quarantine services (two for two months), tuberculosis bacteriology (ten weeks).
Laos 0009 Public Health Administration Advisory Services  
To survey health conditions and prepare a long-range national health plan; to develop a programme of work appropriate to local conditions, and to organize the operation of the national health administration at the central and local levels.

Laos 0010 Rural Health Development  
(March 1961 - Sept. 1967) UNDP/TA UNICEF (UN) (FAO) 
(UNESCO) (Colombo Plan)
The project was part of the integrated rural development project assisted by the United Nations, FAO and UNESCO, the aim of the health component being to assess the health needs of the local communities comprising the rural development centres set up under that project, to develop local health programmes and to provide the communities with a basic health service. WHO provided a sanitarian and a nurse/midwife from March 1961 and a medical officer from September 1964.

Owing to the shortage of national counterpart staff, the WHO staff mainly performed operational duties at rural health centres and health posts in fourteen villages, with a total population of 8,500, located some twenty to forty kilometres from Vientiane. They also made surveys on disease incidence in the villages, examined some 1,200 schoolchildren and administered treatment and carried out vaccinations as necessary. They helped to train community development workers and administrators and, between 1965 and 1967, gave field training to some traditional birth attendants. The WHO sanitarian assisted the villagers in constructing sanitary wells and installing latrines, and gave field training to local sanitarions.

The project was hampered by financial difficulties, and only a limited contribution could be made to the training of health personnel.

Laos 0012 Nursing Education  
(March 1962 - 1972) UNDP/TA UNICEF (AID) (Asia Foundation) 
(Colombo Plan)
To set up a school of nursing and midwifery for training personnel
for the country's hospital and health services, which are to be extended and improved.

Laos 0015 Royal School of Medicine
(Nov. 1967 - 1973) R

To improve the standard of teaching at the School of Medicine particularly in the basic medical sciences and in preventive and social medicine.

Laos 0018 Rehabilitation of the Physically Handicapped

To assess the extent of the problem of the physically handicapped; to plan and operate rehabilitation facilities and to train staff for them; and to review legislation dealing with the physically handicapped.

Laos 0021 Health Laboratory Advisory Services

WHO provided a consultant for one month to assess the activities and organization of the medical laboratories and to advise on the steps to be taken to organize a nation-wide programme and to expand the activities of the laboratories at central and provincial levels.

Laos 0509 Central Public Health Laboratory, Vientiane

To establish a public health laboratory service and train laboratory personnel.

Laos 0512 Vital and Health Statistics Advisory Services
(March 1968 - 1971) R

To assist in the establishment of a vital and health statistics service in the Ministry of Public Health and to train staff.

Laos 0513 Maternal and Child Health Services

To ascertain the principal maternal and child health needs in Laos
and set up training programmes; to expand and improve maternal and child health services as an integral part of the general health programme.

Laos 0514 Smallpox Eradication  
(1967 - 1969) R Special Account for Smallpox Eradication  
To intensify the smallpox vaccination and surveillance activities to prevent the introduction of smallpox from other endemic areas.

Malaysia 0020 Malaria Pre-eradication Programme, West Malaysia  
(July 1964 - June 1967) R

Malaysia 0020 Malaria Eradication Programme, West Malaysia  
(July 1967 - 1979) R

The aim of the pre-eradication programme, which followed a malaria eradication pilot project (February 1960 - June 1964) was to develop throughout the country the operational, technical and administrative facilities of the malaria and public health services for the subsequent implementation of a malaria eradication programme, including the training of national staff and completion of country-wide epidemiological surveys of malaria. WHO provided a malariologist, a sanitary engineer and an entomologist for the duration of the project, seventeen fellowships and supplies and equipment.

A country-wide malariometric survey covering the sixty-nine districts of the eleven states of West Malaysia revealed that in 65 per cent. of all 1316 villages, malaria was endemic and that the disease was a public health problem of primary importance in rural areas. Surveys were also carried out on the habits of the vector anophelines and on the extensive malaria control work undertaken in each state.

Taking into consideration the present well developed state of the rural health services, the pre-eradication programme was terminated in June 1967 and superseded by a malaria eradication programme under the same project number. This latter programme, with the final objectives of eradicating malaria from West Malaysia and preventing its
re-establishment, will be implemented by stages over ten years, starting in the three northern states of Perlis, Kedah and Wellesley-Penang.

**Malaysia 0030 Health Education Advisory Services, West Malaysia**  
(Jan. 1962 - 1971) R UNICEF

To survey the health education work at the national and state levels, in order to evaluate the effectiveness of present methods of health education and recommend improvements.

Long-term advisory assistance was withdrawn in February 1967. WHO provided a consultant for two and a-half months from August to October 1967 to assist in assessing the school health education programme and in planning for its further development, with special attention to health education in teacher training and in in-service training for education and health personnel responsible for school health, and its incorporation in the curriculum of schools at all levels. Further consultant services will be provided as appropriate.

**Malaysia 0032 Nursing Education**  
(Aug. 1962 - April 1968) UNDP/TA

See Part V for a full description of this project.

**Malaysia 0034 Environmental Health Advisory Services**  
(Nov. 1965 - Oct. 1967) UNDP/TA

See Part V for a full description of this project.

**Malaysia 0035 Strengthening of Health Services and Training of Health Personnel**  
(Jan. 1964 - 1972) R UNICEF

To strengthen and expand the rural health services in East and West Malaysia and to train personnel according to a consolidated plan, which includes phasing of expansion and development of uniform standards throughout the country.

WHO provided a consultant for two months to review, document and evaluate critically available information pertaining to the status of the present health services, with reference to the needs and particularly
the demand of the people and the conditioning factors of the health situation, and to recommend whether a major study for the further improvement of health services in the rural and urban areas should be undertaken.

Malaysia 0040 University of Malaya (Sept. 1965 - 1973) R

To strengthen the teaching staff of the Faculty of Medicine of the University of Malaya, particularly in the fields of preventive medicine, public health and medical recording.

Malaysia 0041 Environmental Health Advisory Services, East Malaysia (Jan. 1966 - 1971) R UNICEF

To improve the general level of community sanitation and personal hygiene in the rural areas of East Malaysia; to develop sanitary facilities suitable for villages and small rural communities, including sanitary latrines and water supply systems; and to train village workers in sanitation techniques, with emphasis on rural water supplies, excreta disposal, vector control and food sanitation.

Malaysia 0042 Malaria Eradication Programme, East Malaysia (Sabah) (July 1961 - 1974) R UNDP/TA UNICEF

To eradicate malaria from Sabah. The eradication programme follows antimalaria operations for which WHO has provided assistance since July 1955.

Malaysia 0043 Malaria Eradication Programme, East Malaysia (Sarawak) (Oct. 1961 - 1974) R UNDP/TA UNICEF

To eradicate malaria from Sarawak. This follows the malaria pilot project started in 1952.

Malaysia 0065 Mental Health Advisory Services (April - June 1968) R

WHO provided a consultant for three months to advise on the further development and organization of mental health services and
on the training of medical, nursing and other staff in the mental health field.

**Malaysia 0070 Tuberculosis Control**  

To develop a practical, comprehensive and integrated tuberculosis control service within the framework of the general public health services in all states; to continue the training of the different categories of personnel required for the nation-wide control project; to study the epidemiological patterns of tuberculosis in the country; to continue field trials so that more effective methods for the public health control of tuberculosis adapted to local conditions can be found and applied.

**Malaysia 0200 Fellowships**  
R: Administration in nursing education (six months), environmental health - water treatment and related works (six months), filariasis research and control programmes (three months), leprosy control (two for ten weeks), maternal and child health (twelve months), nursing education (twelve months), nursing service research (four months), pharmaceutical manufacture and technology (six months), public health administration - rural health (four months), X-ray technology (eleven months).

**New Hebrides 0004 Tuberculosis Control**  
(June 1964 - 1972) UNDP/TA UNICEF

To expand and improve the tuberculosis control service; to carry out a systematic tuberculin testing and BCG vaccination campaign throughout the Condominium; to treat all cases, mainly at home under supervision; to take measures to protect the healthy; and to immunize children against diphtheria, pertussis and tetanus.

**New Zealand 0200 Fellowships**  
R: Air pollution control and administration (four months), mental health nursing (three for five weeks).
Niue 0200 Fellowships R: Anaesthetics (six months).

Papua and New Guinea 0008 Health Education Advisory Services
(Second phase: June - July 1968) R

WHO provided a consultant for six weeks to assist the Government to review and to advise on development in health education training, health education services and school health education.

Papua and New Guinea 0200 Fellowships R: Dental health (one for six months, two for four months), maternal and child health (three months), mental health (four months), nursing (twelve months).

Philippines 0004 Mental Health Advisory Services

To develop a mental health programme for the whole country.

Philippines 0040 General Health Services

WHO provided a consultant to review the organization, administration and programme of the provincial, municipal and rural health services, including their relationship to specialized health services and supervision received from higher levels; to assess the present state of the general health services at the provincial and local levels with particular reference to the determination of baselines for a general health services development project.

Philippines 0049 Leprosy Control
(Second phase: Feb. - April 1968) R UNICEF

WHO provided a consultant for two months from February to April 1968 to determine the extent to which the recommendations of the WHO consultant who visited the project in 1963 had been implemented, to study the effectiveness of the leprosy consultants who were added to the national regional health offices in 1964, to study and observe the activities of the "static" and "mobile" clinics, to determine
the effectiveness of the leprosy nursing attendants and to assess the current leprosy control programme, particularly its integration into the general health services.

Philippines 0053 Malaria Eradication Programme
(Aug. 1956 - 1975) R (AID)
To eradicate malaria from the country and prevent its re-establishment.

Philippines 0069 Tuberculosis Control
To determine whether tuberculosis control plans based on the data already obtained are practical, productive and suitable for local conditions; to investigate, in controlled groups, specific developments in BCG vaccination, case-finding and chemotherapy, particularly as regards their economy and acceptability; to provide facilities for training various categories of health personnel; and to obtain data on which to base the integration of tuberculosis control work into the national public health programme.

Philippines 0073 School Health Education
(Oct. 1963 - 1968) UNDP/TA UNICEF
To carry out a co-ordinated school health education programme; to train staff for the programme, and to promote closer co-operation among the various official and voluntary agencies concerned.

Philippines 0075 Social Paediatrics
To strengthen the organization of maternal and child health services at national and regional levels.

During the period under review, WHO assistance was limited to fellowships.
Philippines 0083 Nursing Education
(First phase: Jan. - March 1968; 1970) R

WHO provided a consultant to assist in the organization and conduct of a national seminar on the evaluation and accreditation of nursing education programmes in the Philippines.

Philippines 0087 Food Sanitation
(First phase: March 1967 - April 1968) R

To advise the Department of Health on matters connected with food sanitation, including the establishment of standards and the improvement of food preparation, handling and dispensing. Also to advise on modern methods of food processing.

Philippines 0088 Demonstration and training centre
(First phase: Feb. - April 1968) R

WHO provided a consultant for two months to review, in collaboration with the Department of Health, existing local health services and to prepare a feasibility study for the development of the public health demonstration and training centre project.

Philippines 0092 National Hospital Programme
(May - Sept. 1967) R

Two WHO consultants made a study of government and private hospitals and submitted recommendations on the organization and administration of the hospital system.

Philippines 0093 Cancer Control
(Dec. 1967 - July 1968) R

WHO provided consultants to advise the Department of Health: on the development of a co-ordinated cancer control programme for the country; on the setting up of a cancer control programme in all of the eight health regions of the country, commencing with the establishment of a pilot demonstration project in a province near Manila; on needs in staff and resources and training requirements.
for personnel; on the operation of a national tumour registry; and on the use of cytological cancer detection techniques, with particular attention to the detection of female genital cancer.

**Philippines 0098**  Seminar on Research and Evaluation in Health Education (Feb. - March 1968)  R

WHO provided a consultant to assist the Department of Health in organizing a seminar for health personnel who would undertake action-research programmes, including the evaluation of health education programmes and efforts. This was a sequel to the seminar on the administration and supervision of health education services (Philippines 0085) organized in 1966.

**Philippines 0111**  Master Plan for a Sewerage System for the Manila Metropolitan Area (Dec. 1966 - 1969)  UNDF/SF

To prepare a master plan for a sewerage system for the Manila metropolitan area and a phased sewerage-development programme to meet the present and future requirements of the metropolitan population. The work includes the preparation of detailed financial and engineering studies for the first phase of development, which involves the construction of the most urgently needed works.

**Philippines 0200**  Fellowships R: Hospital administration (twenty-one months), laboratory training in diagnostic techniques of bubonic plague (three for two months), leprosy - public health and epidemiology (twelve months), leprosy - reconstructive surgery, physical medicine and rehabilitation (six months), photocoagulation and cryosurgery in ophthalmic surgery (four months), public health administration, with emphasis on statistics (twelve months).

**Ryukyu Islands 0200**  Fellowships R: Dental hygiene with emphasis on dental health education (three months), public health administration - epidemiology (twelve months).
Singapore 0003 Nursing Education
(June 1952 - 1968) UNDP/TA
To improve the standards of nursing education and nursing service.

Singapore 0004 Nursing Administration and Practice
(Jan. 1956 - 1969) R UNICEF
To develop programmes to prepare nursing personnel for administrative posts in hospital and public health services and to improve the quality of nursing practice, patient care and clinical teaching.

Singapore 0012 Health Education Advisory Services
To evaluate the health education programme, and to plan and carry out an expanded programme, particularly in schools, maternal and child health centres, teacher-training centres and institutions, and centres for the training of health and medical workers.

Singapore 0013 Radiation Health Advisory Services
(June - Sept. 1968) R
WHO provided a consultant to advise the Radiotherapy Department of the General Hospital on the physical aspects of the radiotherapy service, the calibration and maintenance of equipment, the organization of an isotope service, and the training of physicists and technicians engaged in this service.

Singapore 0015 Tuberculosis Control
(May 1968 - 1972) R
To conduct field trials on certain pertinent problems involved in the case-finding, treatment and prevention of tuberculosis, with the ultimate aim of improving these activities further and making them more economical, practical and effective; to study the epidemiological pattern of tuberculosis in the country; to introduce a comprehensive tuberculosis control programme integrated into the general
public health programme; and to provide facilities for training various
categories of public health workers in tuberculosis control work.

**Singapore 0016 Medical Statistics and Hospital Records**

WHO provided a consultant to review the health statistical services
and hospital records services and assist in reorganizing them and in
training the necessary staff, and to advise the Ministry of Health on
various aspects of statistics.

**Singapore 0018 Environmental Health Advisory Services**
(June - Sept. 1968) R

WHO provided a consultant to review existing conditions and the
work and programmes of the Ministry of Health in the environmental
sanitation field; to recommend short- and long-term programmes of
work for the Public Health Engineering Unit, with special emphasis
on co-ordination between the Ministry of Health and the ministries
and agencies having jurisdiction over important internationally-
assisted municipal projects; to revise and recommend appropriate
procedures for the stimulation, administration and supervision of
environmental sanitation work and to instruct staff of the Public
Health Engineering Unit in the methods for carrying out these
procedures.

**Singapore 0020 Refuse Collection and Disposal**

WHO provided two consultants to make a survey of the refuse
collection and disposal system and to advise on the selection of
refuse disposal plans best suited to local conditions.

**Singapore 0200 Fellowships R: Environmental health - operation
and management of sewerage systems (six months), waste disposal
(twelve months), maternal and child health services (six months).**
Tonga 0009 Hospital Administration  
(Feb. 1968 - 1972) R

To establish an efficient medical records department at the new General Hospital in Nuku'alofa and a medical records system that can be extended to all the hospitals in the Kingdom; to train medical records personnel in the organization and use of hospital medical records; to organize a statistics unit within the medical records department, capable of providing statistical data and analyses useful for hospital administration, programme planning and evaluation; and to provide general technical advice on hospital services and hospital administration, with particular reference to the establishment of the General Hospital.

Tonga 0200 Fellowships R: Assistant health inspectors' course (twelve months), assistant medical officers' course (twelve months), clinical bacteriology and pathology (twelve months), nursing administration (twelve months), public health nursing (two for four months).

Trust Territory of the Pacific Islands 0200 Fellowships R: Environmental health (two for twelve months), public health administration (two for twelve months), public health dentistry (two for six months).

Viet-Nam 0007 Tuberculosis Control  
(Jan. 1958 - 1975) UNDP/TA UNICEF

To set up the nucleus of a national tuberculosis control service, with emphasis on preventive and public health work; to complete a national tuberculosis centre in Saigon and to integrate it in the existing facilities; to continue the UNICEF/WHO-assisted BCG vaccination project and integrate it in the national tuberculosis control service.
Viet-Nam 0016 Malaria Pre-eradication Programme  
(March 1959 - ) R (AID)

To train national staff and to make preparations for the implementation of a malaria eradication programme. Since March 1967, WHO assistance has been limited to fellowships.

Viet-Nam 0018 Health Laboratory Services  

To establish a central health laboratory service and to train health laboratory workers; later, to organize regional and peripheral health laboratory services.

Viet-Nam 0026 Venereal Disease Control  
(June 1966 - 1972) R

To reduce the incidence of the venereal diseases; to demonstrate modern methods of venereal disease control and to strengthen and improve the syphilis serological work carried out in the laboratories.

Viet-Nam 0030 Occupational Health  
(First phase: Nov. - Dec. 1967) UNDP/TA

To determine the nature and extent of occupational health and industrial hygiene problems and the factors responsible for them; to assess the facilities and resources for their control; to review the relevant legislation and regulations; to strengthen the occupational health and safety services; and to examine problems of air and water pollution caused by industry.

Viet-Nam 0033 Environmental Health Advisory Services  
(April 1966 - 1972) R

To strengthen the environmental sanitation service in the Ministry of Health and to introduce improvements in public water supply, human excreta disposal, refuse disposal, food hygiene and vector control in urban and rural areas.
Viet-Nam 0034 Leprosy Control  

A WHO consultant was provided for one month to assess the nature and extent of the leprosy problem and current leprosy control activities, and to assist in planning an expanded programme for leprosy control.

Viet-Nam 0036 International Quarantine Advisory Services  

To assess the nature and extent of the problem of quarantinable diseases; to survey and assess existing quarantine facilities and services; and to plan and to train the necessary personnel for quarantine work.

Viet-Nam 0041 Food and Drug Control  

To help the Ministry of Health to develop and maintain the work of the national food and drug control laboratories. Assistance has been given in chemical and bacteriological control of food and in control of biological substances, drugs and pharmaceutical substances.

Viet-Nam 0042 Orthopaedics and Rehabilitation  
(Jan. 1968) R

WHO provided a consultant for two weeks to study the problems of rehabilitation of the civilian population handicapped by the war, by street accidents or disease. His recommendations on the measures to be taken to improve the situation were outlined in the assignment report submitted to the Government.

Western Samoa 0003 Tuberculosis Control  

WHO provided a consultant during the first quarter of 1968 to evaluate the progress of the programme which has received assistance
in the past eight years from a WHO medical adviser and the regional tuberculosis advisory team.

Western Samoa 0007 Filariasis Control
(July 1965 - 1970) R UNICEF
To determine, by a pilot project, the best way of controlling filariasis, mainly by drug treatment, in Western Samoa; to prepare a filariasis control programme for the whole country, based on the results of the pilot project; and to train staff in filariasis survey and control techniques.

Western Samoa 0012 Strengthening of Rural Health Services and Training of Health Personnel (Oct. 1967 - 1972) R
To develop and strengthen the organization and operation of the general health services, particularly at district and local levels; to improve the operation of the rural health programme; to organize in-service training for medical and paramedical personnel; to conduct epidemiological studies on the most important causes of morbidity and mortality in the country; and to plan disease control programmes as part of the general health services.

Western Samoa 0013 Public Health Laboratory Services
To develop and strengthen the health laboratory services.

Western Samoa 0200 Fellowships R: Assistant medical officers' course (one for twelve months, five for twelve months - extension of previous awards), medicine (twelve months), nursing (two for twelve months, two for twelve months - extension of previous awards), physiotherapy (twelve months - extension of previous award), public health administration (two for six months).
To provide training in the theory and techniques of malaria eradication for various categories of personnel needed by countries of the Western Pacific Region and other regions.

Regional Tuberculosis Advisory Team
(July 1961 - 1975) R UNICEF
To assist countries of the Region in assessing their tuberculosis programmes. During the period under review, individual members of the team visited Cambodia, Hong Kong, Japan, Laos, West Malaysia, East Malaysia (Sabah and Sarawak), Philippines, Republic of Korea and Singapore.

Advisory Services
(1961 - ) R
To meet requests from countries of the Region for advisory services in connexion with the planning of long-term projects or with specific problems. The following assistance was provided during the period under review:

Hong Kong, Malaysia, Philippines and Singapore. A consultant for two weeks in November-December 1967 to demonstrate the fluorescent treponemal antibody test and to assist the governments concerned to develop venereal diseases and treponematoses diagnostic laboratory services.

Philippines - Goitre Control. A consultant for two weeks in October 1967 to assist the Department of Health in planning a pilot goitre control project, based on the injection of iodized oil, and to advise on laboratory studies necessary for the evaluation of the project.

West Malaysia - Filariasis Control. A consultant for three months from May 1968 to compile and analyze (with the assistance of his counterpart and other national staff) all available data on filariasis with special reference to the progress of survey and control activities; to assess the filariasis control programme; to advise on the further development of this programme.
A maternal and child health team, based in Fiji, to conduct in-service and refresher courses for maternal and child health staff, as required, in territories of the South Pacific area.

During the period under review, visits were made to the Cook Islands, Fiji, Gilbert and Ellice Islands and New Hebrides.

WHO provided two nurse consultants who visited certain countries in the Region to advise governments on the implementation and follow-up of field studies of staffing patterns for nursing services.

The following fellowships were provided: Fiji - public health education and training (ten weeks); Japan - public health education and training (three months); New Zealand - public health education and training (five weeks); Singapore - public health education and training (ten weeks).

The following fellowships were awarded for participation in educational meetings: (i) for the WHO seminar on the organization and management of laboratory services, London, and deviation travel to observe laboratory management and vaccine production in the United States of America and Canada - a ten-week fellowship to a candidate from the Philippines; (ii) for the WHO seminar on health statistics (health centre records and reports), New Delhi -
two-week fellowships to candidates from East Malaysia (Sabah), Philippines and the Republic of Korea; (iii) for the VIth International Tuberculosis Course, Bangalore, and deviation travel on the way to attend the XIXth International Tuberculosis Conference, Amsterdam - a seven-week fellowship to a candidate from the Republic of Viet-Nam; (iv) for an IAEA course on planning for the handling of radiation accidents, Manila - two-week fellowships to candidates from Japan and West Malaysia; (v) for the WHO seminar on endemic goitre, New Delhi - one-week fellowships to candidates from China (Taiwan) and East Malaysia (Sarawak); (vi) to sit the diploma in anaesthesiology examination in London - a one-week fellowship to a candidate from Hong Kong; (vii) to visit public health institutes in India and Pakistan on the way back to Kuala Lumpur after attending the WHO Expert Committee on Health Education in Geneva - a ten-day fellowship to a candidate from West Malaysia; (viii) for the VIIth International Course in the Epidemiology and Control of Tuberculosis, Prague - a three-month fellowship to a candidate from Singapore; (ix) for the VIIIth International Course in the Epidemiology and Control of Tuberculosis, Rome - a fourteen-week fellowship to a candidate from Laos.

WPRO 0124 Sixth Regional Seminar on Public Health Administration:
Health Planning in Urban Development, Singapore
(21 Nov. - 4 Dec. 1967) R

The purpose of the seminar was to exchange views on the health aspects of urban development in countries of the Region, to assess the resources which would be available for implementing plans for urban health and to draw up guidelines for urban health planning as part of the national process.

There were twenty-two participants from Australia, China (Taiwan), Hong Kong, Japan, Laos, Malaysia, Papua and New Guinea, Philippines, Republic of Korea, Republic of Viet-Nam, Ryukyu Islands, Singapore and Western Samoa, and observers from the United Nations Development Programme and the South Pacific Commission.
WHO provided three consultants and the cost of attendance of the participants. Two staff members, one from headquarters and one from the Regional Office, and personnel from the United Nations Economic Commission for Asia and the Far East, and from the Ministry of Law and National Development, Singapore, assisted with the seminar.

WPRO 0125 Second Regional Tuberculosis Training Course, Tokyo
(15 May - 15 Sept. 1967) R

The course, which was the second course on tuberculosis held in the Region, was sponsored by the Government of Japan and WHO. Its purpose was to provide assistance in training national workers in the application of modern methods of tuberculosis control. It was also designed to stimulate the provision of practical training and demonstration in national institutions. There were ten participants from China (Taiwan), Hong Kong, India, Indonesia, East Malaysia (Sarawak), Philippines, Republic of Korea, and Thailand.

WHO provided five lecturers (on statistics, tuberculin testing, tuberculosis chemotherapy, planning, organization and evaluation of national tuberculosis programmes, and the WHO policy on tuberculosis control), the cost of attendance of five participants, and reference material.

WPRO 0135 Environmental Health Advisory Services, South Pacific Area (Oct. 1965 - 1972) UNDP/TA

To assist countries and territories in the South Pacific area to improve community water supplies and environmental sanitation in general.

During the period under review visits were made to the British Solomon Islands Protectorate, Fiji, Gilbert and Ellice Islands and Western Samoa.
WPRO 0137 Communicable Diseases Advisory Team

To assist the governments of countries and territories in the Region in assessing the general situation regarding the communicable diseases, in planning epidemiological and laboratory surveys of the most important of them, in planning and organizing control and preventive measures, and in strengthening epidemiological and laboratory services.

During the period under review, visits were made to Cambodia, Fiji, Gilbert and Ellice Islands, Malaysia, Philippines, Singapore, Tonga and Western Samoa.

WPRO 0138 Public Health Nursing, South Pacific

To assist countries and territories in the South Pacific area to develop public health nursing services as a part of the general health services.


The seminar discussed the development and co-ordination of occupational health services at all levels, particularly as regards the needs of developing countries and the relationship between productivity and workers' health and safety. Recommendations were made on regional training programmes and on collaboration between occupational health physicians, industrial hygienists, occupational health nurses and factory inspectors in dealing with occupational health problems. There were twenty-one participants - health and labour authorities - from Australia, China (Taiwan), Fiji, Hong Kong, Japan, Laos, Malaysia, New Zealand, Philippines, Republic of Korea, Republic of Viet-Nam, Ryukyu Islands, Singapore and Thailand.

WHO provided the seminar director, two consultants in industrial hygiene and occupational health nursing and three temporary advisers and the cost of attendance of the participants. ILO provided two consultants.
WPRO 0143 Malaria Eradication Assessment Team  
(Febr. 1967 - ) R  
To make independent appraisals of the status of malaria eradication and of any special aspects of the malaria programmes in the Region.  
During the period under review, teams visited the following countries: East Malaysia (Sabah and Sarawak) and Cambodia.

WPRO 0148 Nutrition Education and Training Centre, South Pacific  
(May 1967 - 1972) R FAO UNICEF (South Pacific Commission)  
To assist in improving the level of nutrition in the South Pacific area; to conduct nutrition surveys, and to train personnel at both medium and higher levels. This is a joint project with the Government of Fiji, FAO, UNICEF and the South Pacific Commission, and it is centred at the moment in the School of Nutrition and Dietetics of the Fiji School of Medicine. Preparations are being made for courses to be held in 1969, and the nutrition component of existing courses in Fiji is being strengthened.

WPRO 0153 Lower Mekong Basin Health Survey  
(Jan. - Sept. 1967) UNDP/ECAFE Mekong Committee  
A WHO team, consisting of a public health administrator and a sanitary engineer, carried out a health survey in the development area of the lower Mekong Basin in cooperation with the Mekong Committee of the Economic Commission for Asia and the Far East. The countries covered by the survey were Cambodia, Laos, Republic of Viet-Nam and Thailand.

WPRO 0162 Training of Anaesthetists  
(Febr. 1968; April 1968; June 1968) R  
WHO provided a consultant for three months to visit selected countries and territories for the purpose of surveying and reporting on the level of anaesthetic services provided and on existing resources and facilities available for the training of anaesthetists, and to report on the particular needs of the countries and territories in respect of this type of training. The consultant will also advise
WHO on the feasibility of establishing and operating a regional centre for the training of anaesthetists, which may be located in Manila.

WPRO 0169 Advisory Services on Water and Sewerage Programmes (Jan. 1968 - 1972) R

To assist governments in carrying out studies on water supply and sewerage programmes and on other environmental health activities, and in developing the programmes.

During the period under review, visits were made to Fiji and Malaysia.

WPRO 0174 Second Regional Conference on Education and Training: Conference of Directors or Representatives of Schools of Public Health, Manila (6-10 Nov. 1967) R

The purpose of the conference was to enable directors and representatives of schools of public health to exchange information on the organization and programmes of their schools. The subjects discussed included the adequacy of courses for meeting present and future health needs, field training in public health, public health research, and co-operation between schools of public health, for which purpose the conference recommended that an association be established. There were sixteen participants from Australia, China (Taiwan), India, Indonesia, Iran, Japan, Lebanon, New Zealand, Pakistan, Philippines, Republic of Korea, Singapore, Thailand, Uganda and United Arab Republic, and observers from the United States Agency for International Development, the Rockefeller Foundation and the South Pacific Commission.

WHO provided two consultants and the cost of attendance of the participants.

WPRO 0200 Fellowships R: Assistant medical officers' course (twelve months - extension of previous award), diploma in public health course (twelve months), industrial hygiene (twelve months), nutrition (four months), public health administration with emphasis on health education (twelve months), radiography (twelve months - extension of previous award).