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TO THE
WORLD HEALTH ASSEMBLY
AND TO THE
UNITED NATIONS

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WORLD HEALTH ORGANIZATION
PALAIS DES NATIONS
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March 1960
ABBREVIATIONS

The following abbreviations are used in the *Official Records of the World Health Organization*:

- **ACC** — Administrative Committee on Co-ordination
- **CCTA** — Commission for Technical Co-operation in Africa South of the Sahara
- **CIOMS** — Council for International Organizations of Medical Sciences
- **ECAFE** — Economic Commission for Asia and the Far East
- **ECA** — Economic Commission for Africa
- **ECE** — Economic Commission for Europe
- **ECLA** — Economic Commission for Latin America
- **FAO** — Food and Agriculture Organization
- **IAEA** — International Atomic Energy Agency
- **ICAO** — International Civil Aviation Organization
- **ICITO** — Interim Commission of the International Trade Organization
- **ILO** — International Labour Organisation (Office)
- **ITU** — International Telecommunication Union
- **OIHP** — Office International d’Hygiène Publique
- **PAHO** — Pan American Health Organization
- **PASB** — Pan American Sanitary Bureau
- **TAB** — Technical Assistance Board
- **TAC** — Technical Assistance Committee
- **UNESCO** — United Nations Educational, Scientific and Cultural Organization
- **UNICEF** — United Nations Children’s Fund
- **UNKRA** — United Nations Korean Reconstruction Agency
- **UNRWA** — United Nations Relief and Works Agency for Palestine Refugees
- **UNTAA** — United Nations Technical Assistance Administration
- **WFUNA** — World Federation of United Nations Associations
- **WMO** — World Meteorological Organization

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— IV —
INTRODUCTION

The work of the Organization in 1959 was carried on against a general background of reduced tension in international affairs, substantial improvement of economic conditions throughout the world, particularly in Europe, and growing evidence of the determination on the part of world leaders to devote more of their countries' resources to the basic problem of our time: to help raise the living standards of nations which are still in the early stages of their technological and economic development.

By the end of the year there was a growing conviction both in Member States and in the various WHO bodies that the Organization could not only cope with the tasks for which it had been created but could also successfully attack some of the problems which have emerged recently and which will have a definite bearing on the social and economic evolution of our fast-changing world.

* 

In line with policies established by recent Health Assemblies particular attention was given to the world-wide malaria eradication campaign, as well as to the intensification of various medical research programmes. At the same time care was taken to conserve a sound balance of the essential activities through which WHO has been trying since its inception to promote better health everywhere.

* 

The scope and importance of the world-wide malaria eradication campaign can be measured by the following figures: in December 1959 about 568 million people were being protected by operations which had reached the attack or consolidation phase, while preparatory or pre-eradication survey work was being undertaken for an area inhabited by about 168 million people. Eradication work was extended to the whole of India, the largest malarious country in the world. The second largest, Indonesia, has begun the implementation of a programme which was recently drawn up. While in the third largest, Pakistan, a pre-eradication survey was initiated, the fourth, Brazil, started a country-wide eradication project to be carried out in stages and using chloroquinized salt as the main weapon in the most difficult area of the country, i.e., the Amazon Valley. Moreover, most of the countries which were already engaged on eradication work have concentrated during the year on improving operations wherever necessary. The concern of all regional committees for the objective of eradication is exemplified by the resolution adopted by the Regional Committee for Europe which provides for a co-ordinated plan designed to bring eradication programmes to the consolidation phase by 1962 in all the remaining malarious areas of continental Europe.

In Africa there was increasing evidence of the feasibility of interrupting transmission and the prospect of eradication seemed better than a year or two ago. Studies of this problem were
continued and, it is hoped, should eventually lead to methods which are better suited to the particular conditions under which malaria appears on the African continent.

There was a substantial increase in 1959 in the technical advisory services given by WHO to a number of countries at both the operational and the supervisory level. Field experiment projects were undertaken to help solve the problems of alternative insecticides, drugs and surveillance schemes. Furthermore, the Organization did not neglect fundamental functions such as training, promotion of research, dissemination of scientific and technical information, and the sponsorship of conferences, technical meetings and seminars. There is no doubt that future eradication operations will gain by the conclusions reached at the conferences and regional technical meetings held during the year in such places as New Delhi, Brazzaville, Addis Ababa, Semarang, Kuala Lumpur and Geneva, as well as by those reached at the meeting of the Directors of the National Malaria Eradication Services of Central America, Mexico and Panama, and those of the Seminar on Malaria Eradication Evaluation Techniques held in Rio de Janeiro.

Although world-wide malaria eradication practically started only three years ago, the amount of knowledge that has now been accumulated is greater than in any other field of health and the programmes in operation form an area covering all the continental malarious countries of the Americas, Europe and South-East Asia.

However, technical and administrative aspects of malaria eradication continued to be overshadowed at the end of 1959 by the uncertainty as to whether adequate financial means could be found to complete this truly unprecedented task in the history of international health. The World Health Assembly in 1959 stressed the need for supplying WHO with the funds required to assist the growing number of countries which have already embarked on, or are now planning, eradication campaigns.

Despite a special effort made by senior members of the staff, including myself, and by my personal representatives in approaching high authorities in twelve countries, and in spite of action undertaken by the Organization to stimulate the interest of the general public and enlist the support of foundations, non-governmental organizations, industrial and business groups, and labour organizations, the outlook at the end of the year is far from promising. Indeed, 95.3 per cent. of the contributions to the Malaria Eradication Special Account are still from one country alone, the United States of America. The majority of the other contributors are economically under-developed countries, some of them with the lowest incomes per head in the world, and most of them already spending considerable sums on their own malaria eradication projects. It is clear at the turn of the year that any further progress will depend solely on the willingness of governments to contribute to the Special Account and to organize national campaigns soliciting the financial co-operation of their citizens, individually and in groups.

Two major developments highlighted the effort made by WHO in 1959 to expand and intensify its role in the all-important field of medical research. The Twelfth World Health Assembly approved a plan for research which outlines the main avenues of the Organization's work during the years to come. In the autumn of 1959 the Advisory Committee on Medical Research met in Geneva to provide the Director-General with the necessary guidance on future research activities. As a result of these two developments we now know that from a global point of view the major target for international research activities will have to remain the communicable diseases, with priority to be given to the study of viruses and of the diseases prevalent in tropical countries. For the highly industrialized countries the first objectives are the chronic diseases and particularly cancer and cardiovascular troubles. Furthermore, in view of their importance for the two categories of disease mentioned, nutritional problems, always an essential factor in WHO's work, must remain among the basic
subjects of investigation. Finally, because of the rapidly expanding use of fissionable materials for peaceful needs, medical research must be concerned with problems of the increased risk of exposure of man to ionizing radiations, as well as the possible effects of these radiations on generations unborn.

As to the type of research to be undertaken within each individual subject, priority will go to what may be called service to research, such as standardization of nomenclature, techniques and equipment, and the expansion of the WHO system of international reference centres for the identification of certain types of virus and of malignant tumours. The Advisory Committee has also provided us with precious advice on the distribution of grants-in-aid to be given by WHO and on the two types of training awards designed to bring forward the future leaders of medical research.

In evaluating the progress made by WHO in this particular field, one has to keep in mind the fact that the world-wide medical research programme under intergovernmental auspices is a development for which there is no precedent. Useful as some of the established national patterns of central research organization have proved in this respect, it has also been found that many are not easily applicable to the international scene. Therefore, in addition to building up the scientific programme, we had to develop the necessary organizational framework and administrative patterns for this new undertaking. By the end of 1959 all this work had been completed and WHO seemed sufficiently prepared to launch the intensified programme of medical research which has become one of its major responsibilities.

* * *

By and large, the communicable diseases programme carried out in 1959 has confirmed two general tendencies which appeared earlier in this sector of WHO's work: on the one hand the shift in importance in some countries from parasitic and bacterial diseases to virus diseases, and on the other hand the more generalized use of eradication as compared with control techniques. The present report confirms the soundness of this evolution and bears witness to the undeniable fact that communicable diseases continue to be one of the world's most serious public health problems.

For the great majority of countries, increased vigilance will have to be exercised. To take only the case of the treponematoses, over a hundred million people still live in low-prevalence yaws areas in tropical countries and studies will therefore have to be made of the problems of such areas if effective assistance in fighting these infections is to be given to the health administrations concerned. There is also the disturbing recrudescence of venereal syphilis in several countries, which provides additional justification for the establishment of new epidemiological methods for case-finding, for improving diagnosis by fluorescent antibody techniques and through rapid serum tests based on finger pricking.

The growing incidence of gonorrhoea in fifteen out of twenty-two countries surveyed raises another problem, particularly in view of the increasing resistance of the gonococcus to penicillin. The Expert Committee on Venereal Infections and Treponematoses which met in 1959 suggested that WHO study this problem. Clearly much investigation and work is required before we can bring this particular disease under control.

The resistance of the gonococcus and other organisms—and particularly the staphylococcus— to penicillin brings up two problems of general importance to WHO's work: on the one hand the development of bacterial resistance to the antibiotics and on the other hand the hypersensitivity and the anaphylactic reactions of the host to these antibiotics. Both questions have received much attention over the year from various expert bodies such as the Scientific Group on Antibiotics Research, the Advisory Committee on Medical Research and, as we have seen, the Expert Committee on Venereal Infections and Treponematoses.

As to tuberculosis, the first findings were reported from the study undertaken by the Tuberculosis Chemotherapy Centre of Madras, in collaboration with the Medical Research Council of Great
Britain and the Indian Council of Medical Research. These findings show that domiciliary chemotherapy may give as good results in pulmonary tuberculosis as sanatorium treatment, and they are thus of considerable importance for the many countries in which the tuberculosis problem is aggravated by an acute shortage of sanatorium beds. Basic requirements for programmes of large-scale domiciliary chemotherapy are now being formulated on the basis of the practical experience gained in the study in Madras and in two other tuberculosis pilot projects started more recently in Nairobi and in Tunis.

The control of leprosy, a disease which according to recent estimates still numbers about ten million victims in the world, was the subject of three important meetings in 1959: a conference in Brazzaville sponsored jointly by CCTA and WHO; an expert committee and a scientific group on research, both in Geneva. One of the questions examined was the prevention of disabilities and deformities which diminish the leprosy patient's working capacity, and which it is now established can be drastically reduced through early diagnosis and treatment. Other problems discussed were the spread of leprosy, the methods of conducting the trial of new drugs in the field and, in the realm of research, studies on microbiology, chemotherapy and rehabilitation—all factors which could substantially improve antileprosy programmes.

The work against bilharziasis in 1959 has concentrated on two major problems. A survey was undertaken to examine the extent to which the efficiency of molluscicides depends on factors such as climate, sunlight, topography and the quality of water. A special team visited ten countries in the Eastern Mediterranean and African Regions to study the ways in which the spread of bilharziasis could be prevented in newly irrigated areas, with particular reference to the best possible designs for the construction of canals. Since the problems of planning schemes of water management is of general importance for improving agricultural production, FAO is sharing WHO's concern in this matter.

Preparatory work was done during the year in order to carry out the resolutions of the Eleventh and Twelfth World Health Assemblies concerning smallpox eradication. Though the goal of eradication was still distant, successful programmes were being organized in the Americas and plans for eradication were drawn up with WHO's assistance for several countries in the Western Pacific and the Eastern Mediterranean. In addition a conference was held in the African Region to discuss the organization and co-ordination of smallpox campaigns in that region. The objective of elimination of smallpox on a global scale should be greatly advanced by the all-India eradication campaigns for which recommendations were drawn up in 1959. The assistance given by the Organization to individual countries consisted mainly of guidance on the choice of vaccine, the techniques of preparing it and the training of laboratory personnel.

In the field of poliomyelitis, the outstanding event of the year was a conference on live poliovirus vaccines sponsored jointly by the Pan American Health Organization and WHO in Washington in June with the assistance of the Sister Elizabeth Kenny Foundation. This conference, attended by sixty-one participants from seventeen countries, produced valuable information on the development, control and evaluation of the safety and efficacy of experimental live attenuated poliovirus vaccines. In the autumn of 1959, WHO also made an evaluation of the extensive field studies undertaken in the Union of Soviet Socialist Republics where the total number vaccinated by the end of the year was well over twelve million. Experience with the use of inactivated vaccine increases and the results can be considered generally as favourable.

In view of the increasing awareness of the importance of several zoonoses to public health, some mention should be made here of the role played by WHO in that field. In the last month of 1959 a scientific group on brucellosis met in Geneva and established plans for field trials on man of live vaccines prepared from attenuated strains of Brucella in countries where the disease is endemic. A world-wide survey of the current incidence of rabies has been undertaken in order to improve the
reporting system, to study the effect of measures adopted against the disease and for the preventive treatment of persons exposed to bites from animals likely to be infected. Finally, WHO is coordinating work for the improvement of vaccines for human and veterinary use and for more effective laboratory procedures for diagnosis and study of the rabies virus.

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The approval given by the Twelfth World Health Assembly to a vast community water supply programme emphasized the intimate connexion between environmental sanitation and practically all problems of public health. By asking Member States to give priority in their national programmes to providing their peoples with safe and adequate water supplies, the Assembly recognized both the public health and the economic value of this programme. Moreover, the provision of water should also serve as a spearhead programme in environmental sanitation and should stimulate work on a host of problems which, to varying degrees, affect the health conditions of all countries: waste disposal, vector control, atmospheric pollution, food hygiene, transport sanitation and water pollution.

Studies were continued in 1959 on the development of new pesticides and for methods for their safe use in vector control, as well as on the co-ordination of research on insect resistance to insecticides.

* 

In mentioning the subjects to be covered by WHO's intensive research programme, I have already stressed the importance of the association of malnutrition and communicable diseases, and the fact that nutritional factors also appear to play some part in the causation of certain cardiovascular and metabolic diseases prevalent in highly-industrialized countries. The outstanding problem is still protein malnutrition and several activities undertaken during the year were concentrated on the prevention and treatment of this type of malnutrition. Iron deficiency anaemia, common in many countries and most frequently resulting from a combination of malnutrition and parasitism, causes widespread reduction in working efficiency and therefore economic loss as well as much sickness and death. During the year various field studies were carried out on this subject in Africa, Asia and Latin America. These are likely to lead to a much better understanding of the etiological factors and it is anticipated that in due course widespread programmes for the prevention of iron deficiency anaemia will be established.

* 

In 1959, as in previous years, high priority was given to activities relating to the education and training of health personnel. As WHO enters its second decade, the urgent need for the Organization to give practical help to countries in solving the growing problems created by the shortage of trained personnel becomes more and more evident. Indeed, the demand for more and better-trained health workers is increasing everywhere faster than the supply. The pressure grows on every side—malaria eradication, the strategic advance against other communicable diseases, environmental sanitation, health education of the public, and the intensification of research are notable examples. The grants and other forms of assistance given by WHO to medical schools and schools of nursing, the organization of various types of training, the creation of national or regional training centres, the provision of travelling seminars and the exchange of visitors—all these projects were designed to alleviate the critical shortage of health personnel and in particular of teachers who can pass on knowledge to the students on both graduate and undergraduate levels. One of the promising signs for the future is the
fact that in 1959 the number of fellowships granted under the aegis of WHO reached the ten thousand mark. Those who have received these fellowships are the living sources from which the public health leaders and scientists of tomorrow are drawn.

* 

The Twelfth World Health Assembly gave a warm welcome to two new Members, Colombia and the Republic of Guinea. As a result of this, it is pleasing to report, the Organization now has 87 full Members. The number of Associate Members remains unchanged at three.

* 

In its search for still more effective ways of promoting world health, WHO owes a great deal to the help received from thousands of medical scientists and health workers in all continents. This debt relates to all sectors of the Organization's work but is particularly evident in the intensified medical research programme that WHO is building up at this time. If we are, by and large, solving the complex problems raised by the launching of this new international public health venture, it is because many eminent research workers and scientists have generously given their time and attention. This applies especially to the various scientific groups and to the Advisory Committee on Medical Research whose guidance has been of such great value in establishing our policies and our plans. In closing this introduction I should like to express to them the whole-hearted thanks of the Organization and the gratitude of the millions of people in all countries whose health and welfare are the constant concern of WHO.

[Signature]

Director-General
PART I

GENERAL REVIEW
CHAPTER 1
MALARIA ERADICATION

The Organization has continued work on the task set before it by the Eighth World Health Assembly—the "implementation of a programme having as its ultimate objective the world-wide eradication of malaria." It has supplied advisory staff to many countries to assist in the operation of their programmes and in training national personnel, and it has for that purpose expanded its own regional staff. Particular attention has been paid to strengthening the organizational and administrative aspects of eradication projects. A course to prepare administrative officers for work in malaria eradication programmes was held in Geneva during the early part of the year; later, in May, the participants were taken on a field observation tour in Greece, Jordan, Lebanon and Syria, and were then assigned to regional offices and projects. Increased attention has been given to the engineering aspects of eradication programmes and eight new posts for malaria engineers have been created. Various forms of technical training have received attention. WHO consultants gave series of lectures at the Malaria Eradication Training Centres in Jamaica, Turkey and the United Arab Republic (Province of Egypt). Others visited Indonesia, Iran, Mozambique, the Philippines, Tanganika, Tunisia, the United Arab Republic (Province of Egypt), Viet Nam and Yugoslavia to advise on training activities. A course, sponsored by WHO, on advanced entomological techniques was given in April at the London School of Hygiene and Tropical Medicine, by an expert from the Institute of Malaria, Medical Parasitology and Helminthology, Moscow.

WHO has continued to act as a clearing-house for technical information coming in from various malaria projects. The amount and variety of the information have been growing so rapidly that the existing staff has been severely taxed in keeping pace with it. One result of the increase has been an accelerated issue of technical documents for the use of persons engaged in the campaigns in all parts of the world.

Advisory teams on malaria eradication, formerly controlled from headquarters, have now been assigned to regional offices. One of those teams has made a pre-eradication survey in the Transvaal Province of the Union of South Africa; another is working in the South-East Asia Region. A third team is acting as an insecticide testing team to carry out field trials of organo-phosphorus insecticides; its work, which is part of a larger programme of research initiated by the Organization, will be of great importance to malaria eradication programmes in countries where anopheline resistance to the chlorinated hydrocarbons might present more serious problems than have yet been met with. The fourth advisory team is being assigned to the Eastern Mediterranean Region.

In addition to co-operating with other international agencies, WHO has continued to encourage cooperation between its own regions and between countries with antimalaria programmes. Since October 1958, it has seconded one of its own malarologists to be Secretary of the Antimalaria Co-ordination Board of Burma, Cambodia, Laos, the Federation of Malaya, Thailand and Viet Nam. WHO convened the Third Asian Malaria Conference in March 1959, at New Delhi. This conference had 120 participants from seven countries of the South-East Asia Region and from thirteen countries or territories in the Western Pacific Region; it dealt with administrative as well as technical problems and Ministers of Health and other high administrative officials attended the first half of the Conference. The Conference unanimously recommended that a sustained and world-wide campaign for the eradication of malaria should be vigorously pursued, that each programme should be soundly organized, technically and financially, and operated on a fixed time schedule by a fully responsible service; that the staff of the malaria services should be properly paid and provided with adequate transport. The Conference emphasized the importance of health education and of legislation to give the necessary support, and attached great value to co-operative action. Finally, it urged governments and non-governmental bodies to contribute to the WHO Malaria Eradication Special Account, and thus help the Organization to carry out its immense task.

Other questions of interest were discussed at the Eighth and Ninth Borneo Malaria Conferences in
June and December 1959 and at regional technical meetings at Brazzaville and Addis Ababa. Typical points were the planning of programmes and administrative considerations; technical questions of spraying and the choice of insecticides; techniques of surveying and of surveillance; tests for susceptibility and procedures when resistance is discovered; the use of chemotherapy and the administration of drugs. Special questions were, in the Eastern Mediterranean, oasis malaria and nomadism; in Africa, the feasibility of eradication in the special conditions of tropical Africa; and in Borneo, the effects of migration.

The development of hyperirritability to DDT is also unpleasant frequency. Fortunately it is still rare for chlorinated hydrocarbons are being received with resistance to one or other of the two main groups of malarial epidemiology and parasitology, bionomics of the malaria vectors, resistance in malaria vectors, chemotherapy, and insecticides, as well as research training, and the exchange of scientific information.

Certain problems and difficulties have arisen during the year. The most important is the uncertainty whether adequate funds will be forthcoming for the continuation of the work. The Twelfth World Health Assembly adopted a resolution expressing its concern that not enough money was available to finance WHO malaria eradication work in 1960 and subsequent years. Many malaria-stricken countries that have already embarked on eradication programmes are expecting continued assistance from WHO, and campaigns are developing well in all parts of the world, but they need financial help. Following the decision of the Twelfth World Health Assembly appeals have been made to governments, foundations, industry, labour organizations, institutions and individuals to make contributions to the Special Account and so avert a major set-back to world health.

Against the financial crisis foreseen in 1960, other problems appear comparatively small. Reports of the development of anopheline physiological resistance to one or other of the two main groups of chlorinated hydrocarbons are being received with complete spray-coverage, is a problem in many countries; it means that time is wasted in finding the temporary dwellings of the nomads, and the dwellings themselves may be so constructed that spraying is ineffective. The spraying of nomads' tents in Sudan has been tried with some success; but in other cases protection by insecticides does not appear to be the answer to this problem; the matter is to be carefully studied. Locked, replastered and rebuilt premises all cause difficulty for the spraying teams; much is being done by health propaganda to induce the public to co-operate more closely, but much more is needed. If people come to regard malaria eradication as something of vital importance to themselves, such difficulties, and similar ones encountered by surveillance workers, will largely disappear. Mass drug campaigns are being conducted and assessed as a supplement to spraying, in some areas where spraying alone has not arrested transmission. Medicated salt is being employed on a large scale in Brazil, and in pilot projects in Cambodia and Ghana. WHO is strongly encouraging research on antimalarial drugs.

During the past few years the fullest attention has been given to perfecting the general organization and to ensuring thorough spraying, with emphasis on total coverage; strong efforts have therefore been made to improve the supporting administration. In the meantime it has become increasingly evident that the success or failure of these programmes depends at least as much on well organized and well directed evaluation. The results of such evaluation are the basis of the epidemiological assessment which is essential in all phases of the programme from pre-eradication survey to maintenance. The considerable expenditure required for these operations has also become increasingly evident; it is therefore not only a technical point but one of paramount economic importance to determine more exactly what is required of surveillance.

At the end of the attack phase, and during the consolidation phase, an eradication campaign becomes involved in what are described as "surveillance operations". During the consolidation phase, surveillance operations are the one and only method used for the final achievement of total eradication; the efficiency of these operations, which must have a total coverage similar to that of the spraying operations in the attack phase, is therefore of the first significance. As more and more projects near or enter the consolidation phase, the better elaboration of suitable techniques for surveillance
has become urgently necessary. The whole idea of surveillance in malaria eradication is relatively new, and experience of its practical application is limited, so that various methods are still in a state of development and experimentation. The Expert Committee on Malaria, at its meeting in Lisbon in September 1958, devoted much of its time to this problem, which was discussed also at the Regional Malaria Advisers’ Meeting held in Geneva from 27 April to 2 May 1959. Action taken to promote progress in this matter has included assistance for studies on methods of surveillance in projects nearing or entering the consolidation phase; two special field projects for experimental studies in surveillance, by the Organization itself, in the state of Mysore in India, and in Ceylon; and the introduction of special quarterly reports on surveillance operations.

There was also a seminar on evaluation techniques at Rio de Janeiro from 29 November to 7 December 1959. It was attended by representatives from WHO headquarters and PASB, by all malaria consultants in the Americas and by national directors and epidemiologists engaged in malaria eradication programmes in Northern, Central and South America and the Caribbean region.

It is hoped that the the experience so accumulated will make it possible, within the next two years, to draw up detailed “guides” for evaluation and surveillance operations which will make them more effective technically and less costly.

It has been recognized for many years that the conditions in tropical Africa make it exceptionally difficult to eradicate malaria by ordinary methods. Nevertheless, most of the spraying campaigns in tropical Africa, although they failed to interrupt transmission, have greatly reduced death rates, particularly in infants and children. Pilot projects have been undertaken in a number of African territories, and the present gaps in knowledge were reassessed at the technical meeting at Brazzaville in November 1959; work throughout the Region will be concentrated on these points in 1960. Information thus obtained on malaria transmission and its interruption under tropical African conditions will be studied at the Third African Malaria Conference in March 1961. Meanwhile, in southern Africa, an eradication project including the Bechuanaland Protectorate, Southern Rhodesia, the southern half of Mozambique, the northern part of the Transvaal Province, and the Province of Natal and Swaziland, has every hope of success.

The Regional Committee for Europe, at its ninth session, urged all countries of continental Europe in which there is still indigenous malaria to make every effort to ensure that the consolidation phase of their eradication campaigns shall be reached in 1962 at the latest. It has requested WHO to provide any assistance needed for this purpose, and to produce a co-ordinated plan for the eradication of malaria in Europe.

In general it may be said that the prospects of eventual malaria eradication are bright, provided that the campaigns are pursued with continuous energy, and that sufficient funds can be made available.

Appendix

COUNTRIES AND TERRITORIES IN WHICH MALARIA PROGRAMMES WERE IN OPERATION IN 1959

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<tr>
<td>Pre-eradication Survey</td>
<td>Cuba</td>
</tr>
</tbody>
</table>

1 Trusteeship under French administration during period under review
### South-East Asia Region

**Eradication in Progress**
- Afghanistan
- Burma
- Ceylon
- India
- Indonesia
- Portuguese India
- Thailand

**Pre-eradication Survey**
- Nepal

### European Region

**Eradication in Progress**
- Albania
- Bulgaria
- France (Algeria)
- Greece
- Portugal
- Romania
- Spain
- Turkey
- Union of Soviet Socialist Republics
- Yugoslavia

### Eastern Mediterranean Region

**Eradication in Progress**
- Iran
- Iraq
- Israel
- Jordan
- Lebanon
- United Arab Republic: Syria

**Pre-eradication Survey**
- Libya
- Pakistan
- Saudi Arabia
- Tunisia
- United Arab Republic: Egypt

### Western Pacific Region

**Eradication in Progress**
- Cambodia
- Laos
- Philippines
- Ryukyu Islands
- Sarawak
- Taiwan
- Republic of Viet Nam

**Pre-eradication Survey**
- Republic of Korea
- Pilot Project
- Netherlands New Guinea
- North Borneo

**Pilot Project**
- Ethiopia
- Somalia
- Sudan
CHAPTER 2

COMMUNICABLE DISEASES

New technical developments and continuous evaluation of its activities have enabled the Organization to aim at eradication, and not merely control, of those communicable diseases in which it is possible to interrupt transmission or effectively reduce the reservoir of infection. This new approach entails a reorientation in the planning, implementation and evaluation of the work involved. Malaria eradication is, of course, the prime example of this recent reorientation but the possibility of eradication exists also for yaws, endemic syphilis and smallpox.

The experience of the mass campaigns against the treponematoses, jointly assisted by UNICEF and WHO, shows that mass therapy with long-acting penicillin can lead to the final eradication of those diseases; but the gains secured by yaws control must be preserved by vigilant surveillance carried out by existing or newly organized rural health services.

Although an effective vaccine is available against smallpox, this disease is still an important public health problem in South-East Asia and in Africa, parts of the Eastern Mediterranean Region and a few countries in the Western Pacific Region and in the Americas. The Twelfth World Health Assembly has recommended a world-wide effort to eradicate smallpox, because so long as it persists anywhere in the world it presents a constant menace to all countries.

The discovery of an oral antimycotic antibiotic may revolutionize the treatment of mycotic diseases. Recently griseofulvin—a new inexpensive antimycotic antibiotic that can be taken orally—has been used for mycosis of the scalp detected in the campaign in Yugoslavia against endemic non-venereal syphilis, and has been found highly effective. Further field trials are needed before it can be recommended for mass treatment.

The Organization continues to gain useful experience in epidemiological methodology by wide field studies. Practical methods for the large-scale use of therapeutic and prophylactic drugs in the ambulatory treatment of leprosy and tuberculosis in rural communities are being assessed in such studies, and the results indicate that, even in outlying areas of under-developed territories, it may be possible to control diseases in this way.

The Tuberculosis Research Office of WHO, which was established in February 1946 in Copenhagen, has been working on tuberculin testing, BCG vaccination and tuberculosis chemotherapy. It has also provided specialist training for field personnel and for fellows from various parts of the world. The office has now moved to Geneva and has been incorporated in the tuberculosis unit. The training of field personnel and fellows in tuberculosis control is being reorganized.

The co-ordination of research, fundamental in providing answers to problems that prevent effective control of diseases, was continued during the year, and such research will be greatly expanded in coming years.

The UNICEF/WHO Joint Committee on Health Policy, at its eleventh session in October 1958, recommended that UNICEF aid should be extended to bilharziasis control and, because of the importance of the disease in children, UNICEF has agreed in principle to assist in pilot projects. FAO will be closely associated with the work.

In the field of quarantinable diseases, assistance is being given to countries to strengthen their quarantine services. Ways are being investigated of providing a quicker information service and of making quarantine requirements less troublesome to international traffic. The International Quarantine unit has been transferred to the Division of Communicable Diseases to enable it to participate more closely in the Organization's programme on epidemiological intelligence and the prevention of disease.

In 1959, no airports or ports were infected with plague or yellow fever. The downward trend of reported plague continued; 240 cases were notified in the first eleven months of 1959. For the first time since 1942, yellow fever was reported from Sudan; 112 cases (with 85 deaths) were discovered in the Fung area, in the south-eastern part of the country bordering on Ethiopia. Smallpox was reported on nine ships and two aircraft and, in addition, thirteen countries reported imported infections, mostly by land. There were cholera-infected ports in India, East Pakistan and Thailand only. Work is continuing to establish a recognized standard
YAWS ERADICATION WORK

INITIAL SURVEYS
BY WHO REGIONS, 1950-1958

RESURVEYS
BY WHO REGIONS, 1950-1958
for cholera vaccine and to determine more exactly its immunizing capacity.

The effective disinsecting of aircraft is becoming still more important as the world programme of malaria eradication expands and makes it indispensable to prevent the spread of malaria vectors by aircraft, particularly of those resistant to insecticides.

The International Quarantine Committee's further interpretations of the International Sanitary Regulations, and comments, were endorsed by the Twelfth World Health Assembly and issued as an addendum to the Annotated Edition of the Regulations. The Regulations have entered into force for Colombia, the Falkland Islands and the Faroe Islands; Australia, Burma and Chile, although not yet bound by the Regulations, complied with most of their provisions. The Committee considered whether the plague provisions of the International Sanitary Regulations might be made less restrictive, but decided not to recommend any formal amendments for the present. It suggested that Member States might consider bilateral agreements to waive or relax specific provisions of the Regulations; for example, the requirement that ships on arrival must produce deratting or deratting exemption certificates.

Venereal Diseases and Treponematoses

National campaigns for the eradication of yaws are being carried out in all WHO regions where it exists. The earliest began in 1950, and since then, up to the end of 1958, 65 million persons have been examined for yaws in the initial surveys made in collaboration with UNICEF and WHO, and 22.5 million have been treated, of whom over 6 million were patients with clinically active yaws. In resurveys 86 million were examined and 5.9 million treated, of whom 2.9 million were yaws patients. The average number examined of each population was about 70 per cent., in a total of about 100 million people in yaws endemic areas. The charts on page 8 show the numbers of persons examined in initial surveys and resurveys in each region, and the yaws cases found and treated.

The effect of such surveys and treatment on the prevalence of all forms of clinical yaws is that in large populations it is reduced from 10 or more per cent. to about 1 per cent. In many areas the prevalence of infectious yaws has been reduced to less than 0.5 per cent. The prevalence of seroreactors—which initially in some areas was 50 per cent. or more—is declining slowly. Increasingly, campaign measures such as repeated resurveys are being combined with other public health activities, such as smallpox vaccination or leprosy case-finding, or—where the facilities are adequate—they are replaced by surveillance by staff of rural health centres, as in Indonesia, or by special small teams as in Haiti.

The problem of the "last yaws cases" in eradication campaigns, and the adaptation of technical policies to low prevalence areas of endemic treponematoses where little or no work had been done, were studied during the year. It is estimated that another 100 million people live in such low-prevalence yaws areas in tropical countries. The first WHO treponematoses advisory team to help in assessing the nature and extent of the problem in such areas, and to assist health administrations in planning suitable activities, was being established at the end of 1959.

Recrudescences of venereal syphilis continued to be observed in some countries. An increase in incidence of 15 per cent. over 1958 was observed in the United States of America. New epidemiological methods ("cluster technique") for case-finding are being tried. Diagnosis has been greatly improved by the fluorescent antibody technique now available for specific and rapid recognition of the disease—developed by the WHO Serological Reference Centre (at the Venereal Disease Research Laboratory, Chamblee). New rapid serum tests, based on finger-pricking, are also being developed. The wide use of these and similar procedures is highly desirable and WHO is recommending their use.

The incidence of gonorrhoea increased in fifteen out of twenty-two countries surveyed, where the disease is notifiable. This public health problem is growing in importance, particularly in view of the emerging resistance of the gonococcus to penicillin and the fact that infectious latency in women is now common in several areas. The Expert Committee on Venereal Infections and Treponematoses, which met in 1959, advised that WHO should take up the study of these problems. Research is clearly needed and failure to control this disease has to be recognized.

An international survey, undertaken by WHO, showed that the incidence of penicillin reactions was increasing in some countries, but is not a cause for alarm. They in no way compare with the incidence or severity of reactions in the chemotherapeutic era. But penicillin should not be used without individual or public health indication. Penicillin reactions are not so far prejudicing the mass campaigns in rural areas of developing countries where antibiotics have not long been in use.

The work of the WHO serological reference centres at Copenhagen and Chamblee and of the International Treponematosis Laboratory Center at Baltimore has continued.
Now that WHO has established standard international reference preparations of cardiolipin, lecitin and reactive human serum, those preparations are gradually coming into use in national laboratories, so that national tests can express serological reactivity in international units and the results of quantitative and qualitative serological tests in different countries can be better compared. Work continued between collaborating laboratories to define an international reference serum for the treponemal immobilization tests, and research on other treponemal and lipoidal tests was carried out.

In co-operation with the Medical Research Council, London, the factors that affect the comparability of PAM preparations, in regard to persistence of treponemical blood levels, were further defined, with a view to the establishment of a standard international reference preparation of PAM. The continued need for research on this question was pointed out by the Expert Committees on Venereal Infections and Treponematoses and on Biological Standardization at their meetings during 1959.

Following the discussion at the twentieth and twenty-first sessions of the Executive Board on the Brussels Agreement of 1924 (as to venereal disease treatment for international seafarers in ports), the technical definitions of its articles, minimum standards for venereal disease control practice in ports and a scheme for evaluating the working and worth of the Agreement were studied.

Several meetings on venereal diseases and treponematoses were held during the year, apart from the expert committees already mentioned. A yaws control co-ordination conference was held in Kuala Lumpur (Federation of Malaya) for adjoining countries in the South-East Asia and Western Pacific Regions. A scientific group on treponematoses research met to advise on priorities in the WHO research programme. Among the subjects recommended were culturing of the treponemes, susceptibility to penicillin and other antibiotics, and certain epidemiological aspects of yaws and syphilis.

A revised edition of the World Directory of Venereal-Disease Treatment Centres at Ports was published.

Tuberculosis

The importance of developing simple methods for the diagnosis, treatment and prevention of tuberculosis has been stressed by the Organization ever since it came into existence. By the introduction of antituberculosis drugs in the last fifteen years, the effective control of tuberculosis throughout the world has become a real possibility; but many practical problems have to be solved and many difficulties associated with established beliefs or traditions have to be overcome before the control measures can be applied on the necessary community-wide scale. During 1959 some progress has been made along these lines.

The Significance of Institutional Treatment of Tuberculosis

A highly important question is whether institutional treatment of tuberculosis patients is indispensable; in many, if not in most, countries it is impossible to provide such treatment on a sufficient scale. A controlled study, designed to compare the value of home treatment with that of sanatorium treatment for pulmonary tuberculosis, was completed early in 1959 by the Tuberculosis Chemotherapy Centre, Madras, India, with the collaboration of the British Medical Research Council and the Indian Council of Medical Research. This study, which was started in September 1956, included 193 patients who were allocated at random to one of the two forms of treatment. Both groups received isoniazid and para-aminosalicylic acid daily for a period of twelve months. Contrary to general expectation, toxic manifestations attributed to PAS occurred only in 2.6 per cent. of the cases; no toxic effects were produced by isoniazid. The twelve months' treatment was completed by 163 cases: 82 home and 81 sanatorium patients. The sanatorium patients had in general gained more weight and had shown the greater reduction in the erythrocyte sedimentation rate. On the other hand, they showed only slightly more radiographic improvement, and the two series had similar results as regards cavity closure and reduction in cavity size. The two groups had also responded very similarly bacteriologically; less than 10 per cent. of the patients in either group remained positive at the end of twelve months' treatment. Most of the patients in this study belonged to low-income groups and lived in overcrowded conditions. The follow-up of these patients is being continued and the results will be reported later. This study has put the value of domiciliary chemotherapy for pulmonary tuberculosis on a firm scientific basis. It is further described on page 75.

In most of the economically less-developed countries, the tuberculosis problem is aggravated by an acute shortage of sanatorium beds. Great importance must therefore be attached to the possibility of substituting mass domiciliary chemotherapy for sanatorium treatment. The results obtained with domiciliary chemotherapy in the Madras project come sufficiently near to those of sanatorium treatment to suggest that most patients could be treated at home.
Obviously any programme of large-scale domiciliary chemotherapy must meet certain minimum requirements. Among these are adequate supply of drugs, sufficient staff, transport, a small number of hospital beds (for special cases), a system of surprise checks on the co-operation of the patients in taking the medicines, and a welfare fund for specially needy patients. The organization of such a programme will have to be examined and tried in different places before it can be applied universally.

**Development of Radiophotographic Units**

The future tuberculosis control programme will be based on mass case-finding, and for this x-ray examination of the chest is essential. Suitable x-ray equipment is therefore of paramount importance to the development of the tuberculosis programme. The x-ray apparatus will be widely used in different countries under very different conditions; it should be simple, easily transportable, sturdy, and able to be simply operated and maintained; it should be relatively inexpensive so that every government can afford it. WHO has prepared specifications that incorporate these requirements, and has approached manufacturers who might be interested in designing and producing x-ray units to those specifications. A few companies have taken up the problem and have produced prototypes of radiophotographic units which will be tested under field conditions in WHO-assisted projects.

**Typing of Mycobacteria**

Information received from a number of research institutions on the typing of tubercle bacilli obtained through WHO tuberculosis survey teams from various parts of the world has shown that the tubercle bacilli that cause pulmonary tuberculosis in Asia and in Africa differ from the classic types of tubercle bacilli. Besides the problems posed by the classification of different mycobacteria, has appeared another problem of the so-called atypical mycobacteria. These seem to be more frequent in some parts of the world, and to be particularly common in countries where there is a high prevalence of low-grade tuberculin sensitivity. The use of bacteriostatic drugs has made the typing of tubercle bacilli more difficult. Techniques for the detection of these atypical strains, which may be of great immunological and epidemiological importance, should be developed.

**Scientific Group on Tuberculosis Research**

A scientific group on tuberculosis research met in Geneva from 26 January to 2 February 1959. The group recommended that in addition to the existing research assisted by WHO, there should be a substantial increase in research on problems such as self-administration of antituberculosis drugs, atypical mycobacteria, drug resistance, and the value of BCG vaccination in areas of low-grade tuberculin sensitivity.

**Veterinary Public Health**

In veterinary public health, the chief emphasis is still on the control of zoonoses and on problems of food hygiene, but a significant development has been the addition of comparative studies on animal diseases analogous to cancer and cardiovascular disease in man. These diseases in animals lend themselves to experimental and epidemiological studies with relative ease, and it is expected that the information so gained will lead to a better understanding of these diseases in man. The results may warrant the extension of such studies to other chronic and degenerative diseases.

**Brucellosis**

A scientific group on brucellosis met in Geneva in December 1959 and formulated plans for field trials on man of live vaccines, prepared from attenuated strains of *Brucella*, in countries where the disease is endemic.

Co-ordinated studies on the vaccination of goats and sheep with a living attenuated strain (Rev. 1) and with formol-killed vaccine containing an adjuvant were continued in Israel, Malta, Tunisia and by the Pan American Zoonoses Center in Argentina. Further evidence of the value of the live vaccine in protecting these animals was obtained and comparative studies with another live vaccine (Strain 19), which had proved useful against ovine brucellosis in the Union of Soviet Socialist Republics, were started. Very unsatisfactory local reactions were observed to follow injections of the adjuvant vaccine and field trials with it were stopped.

Studies on the characterization of *Brucella* by phage lysis were started and the results indicate specificity of the lysis of *B. abortus*, and to some extent of *B. suis* strains. Further work on the use of this method in the classification of *Brucella*, particularly of "intermediate" strains, is in progress.

**Rabies**

An Expert Committee on Rabies met in Geneva in December 1959 and suggested modifications of recommendations made at the meeting in 1956 about antirabies treatment, diagnosis and preparation of vaccines and serum. Among the subjects reviewed by the Committee were modified serum-vaccine schedules for human prophylaxis, wild-life rabies
with special reference to bats, excretion of rabies virus by infected dogs, and advances in laboratory techniques, especially the application of the fluorescent antibody technique to the diagnosis of rabies. Particular emphasis was laid on improvement in the collection and reporting of statistics to be used for control and eradication programmes on a national and international scale.

Results of a third series of experiments co-ordinated by WHO, on human sero-vaccination by different inoculation schedules, are being studied and analysed. The object of these studies was to find reduced schedules of vaccine and serum injections, and to develop effective treatment of exposed persons as well as pre-exposure immunization. It is expected that results of the latest studies will be available for publication in 1960, and a further series of experiments has been planned.

A second batch of ultraviolet-inactivated vaccine prepared in the United States of America has been tested in France and India for providing an international reference product to be used in standardizing inactivated vaccines prepared in different countries.

A world-wide survey of the current incidence of rabies has been undertaken with a view to improving the reporting system and also for study of the effectiveness of different measures adopted against the disease and of procedures followed in treating persons exposed to bites of animals that are probably infected. The information gathered is being checked and analysed.

Co-ordinated experimental work has been started on the pathogenesis of rabies, with special reference to the excretion of the virus in saliva. Work on the use of the fluorescent antibody technique is also in progress and preliminary studies have already shown that rabies virus can be demonstrated by this method in the brain as well as in the salivary glands of infected animals. WHO is also co-ordinating studies on local treatment of bites, on the improvement of preparation of vaccines for human and veterinary use, and on improved laboratory procedures (tissue culture, serum-neutralization test) for study of the rabies virus.

Leptospirosis

In 1958, international reference anti leptospira sera against nineteen major serotypes were prepared and established. In 1959, a second batch of these sera against eighteen other serotypes has been prepared and is being tested at the WHO/FAO Leptospirosis Reference Laboratories. The distribution of these sera and homologous cultures by the Leptospirosis Reference Laboratories will bring about a very desirable uniformity in the identification and designation of Leptospira in different parts of the world.

Animal Influenza

Results of the survey of influenza antibodies in animal sera, co-ordinated by WHO during the last two years, have now been published. This investigation was made to determine the role of animal influenza in the epidemiology of the human disease and it has shown that the Asian (A2) strain can cause natural inapparent infection in horses and swine. Equine influenza caused by the A-equi strain was found to be present in many countries from which it had not been previously reported, and infection in pigs with the A-swine strain, long known in the United States of America, has now been recorded in Europe. Further work is being done to determine if A2 infection has established itself as a continuing disease in animals and to study the possible relationship of other infections of animals to human influenza. WHO is fostering work on the improvement of laboratory tests for use in surveys of animal influenza and their possible importance in the human disease.

Some other articles on animal influenza were published during the year in the Bulletin. They included studies of Asian influenza virus in swine; on the properties of influenza viruses A/Asia/57 and A-equi/Praha/56; and on diseases of the upper respiratory tract in horses after the human influenza epidemic of 1957.

Toxoplasmosis

In order to bring about uniformity in diagnostic procedures employed for the detection of toxoplasmosis, a batch of human convalescent serum has been collected at the Statens Seruminstitut, Copenhagen, for use as a reference preparation. In consultation with leading workers in this field, this work has been extended to include comparative tests with immune sera prepared in four species of experimental animals against a known strain of Toxoplasma, along with the human convalescent serum now available. Several laboratories are collaborating in this work.

5 Gaidamaka, M. G. et al. (1959) Bull. Wld Hlth Org., 20, 505
**Bovine Tuberculosis**

Non-specific sensitivity to mammalian tuberculin has been observed, to varying extent, in cattle in all countries where this test has been applied. This becomes an important problem when bovine type infection is nearing complete eradication or has been eradicated. One of the approaches to a possible solution of this problem is the reduction of the dose of tuberculin to increase the specificity of the test. Some work on these lines, co-ordinated by WHO, is already in progress in Germany, Czechoslovakia and the United Kingdom and further investigations have been planned in which the results of the allergic test will be checked thoroughly by careful post-mortem and bacteriological examination, including typing of the isolated strains of mycobacteria.

**Other Zoonoses**

During the year, articles were published in the *Bulletin* on the role of the fox in the spread of hydatid disease, and on psittacosis and ornithosis. Work has been started on the preparation of reference sera for use in the serological diagnosis of hydatidosis and trichinosis. Work on arthropod-borne viral infections is described in a separate section of this chapter (see page 15).

A review of important ecological studies on wild animal reservoirs of zoonoses, with analysis of factors to be studied, was also published in the *Bulletin*.

**Food Hygiene**

A Joint FAO/WHO Expert Committee on Milk Hygiene which met in Geneva in July recommended principles and methods for the hygienic control of milk products (butter, cheese, ice-cream, etc.) and suggested, in the light of modern advances, modification of the recommendations concerning liquid milk formulated at an earlier meeting in 1956. The Committee paid particular attention to the problems of milk hygiene in warm countries and discussed, as well as the conditions resulting from warm weather, the hygienic aspects of buffalo milk, sheep and goat milk and certain milk products peculiar to those areas. This part of the Committee's work is pertinent to the current efforts of FAO and UNICEF for developing the local dairy industries in these countries.

The preparation of a monograph on milk hygiene embodying contributions from experts is nearing completion. The compilation aims at providing workers in this field with a critical review of the latest information in a handy volume and has been undertaken in collaboration with FAO and UNICEF. The Inter-Agency Working Group on Milk and Milk Products reviewed in September the joint projects of UNICEF, FAO and WHO, including a monograph on milk sterilization, dairy training courses and milk surveys in some Asian countries.

**Comparative Pathology**

Work has proceeded during the year on the recommendations of a group of human and veterinary pathologists who met in December 1958 to indicate the most useful areas of study on animal tumours and cardiovascular diseases. Plans have been drawn up for conducting these studies, and priorities of activities, methodology and standard procedures will be considered by scientific groups early in 1960. The proposed studies are expected to lead to a better understanding of various aspects of analogous diseases in man.

**Virus Diseases**

**Poliomyelitis**

The chief event of the year was the rapid progress made in the study of live attenuated poliovirus vaccines, administered orally. Extensive field studies in Africa, Latin America, and Europe produced much new information, which was discussed in detail at a Conference on Live Poliovirus Vaccines convened jointly by PAHO and WHO in Washington in June, with the assistance of the Sister Elizabeth Kenny Foundation. More than thirty papers were given on research, ranging from advanced laboratory studies of the genetic stability of polioviruses on passage through the human intestinal tract, to trials on a very large scale in man amounting to many million administrations of vaccine. The fact that the vaccine virus spreads fairly freely to others than those initially vaccinated had caused some concern. To accept such a result would be a radical departure from present practice in human preventive medicine, since laboratory tests had shown that in all the strains being studied an increase in the virulence for the monkey nervous system could sometimes be demonstrated after passage through man. But it was found that this increase was neither regular nor progressive, and the results of field studies on man have therefore been of cardinal importance. In the summary report of the Conference it was noted that, although the surveillance of the vaccinated persons and their contacts had not been equally thorough in all the different trials, no evidence had been found that the
use of any of the vaccines had been followed in either group by more cases either of paralysis or of ill-defined illnesses than had been observed in a control group or in the community at large. Indeed, when the vaccine had been administered in the face of an epidemic the incidence was such as would have been expected after the use of an effective vaccine. At this stage, however, caution was necessary in attributing this result to any beneficial effect of the vaccine; the vagaries of the behaviour of poliomyelitis are well known and there are practical difficulties in arranging strictly comparable control groups. One possibly serious obstacle to the effective action of the vaccine has been encountered—interference by other wild enteroviruses present in the intestinal tract at the time of feeding, which may prevent successful immunization by the vaccine virus. Unfortunately these viruses are very common in areas with poor hygiene and sanitation and it is in just such areas that the adoption of this vaccine seems to be specially indicated. Studies on how to overcome this obstacle are in progress. The full report of the Conference, including verbatim discussions, was published later in the year and widely distributed.

The largest field studies took place in the Soviet Union, where the total number vaccinated was by the end of the year well over 12,000,000. To evaluate these important studies a WHO consultant visited some of the trial areas in the autumn. It was found that there had been a thorough surveillance of the vaccinated communities, that there was no evidence that the vaccine had caused symptoms in vaccinees or their contacts and that preliminary data suggested a satisfactory degree of effectiveness. However, final evaluation must await the full data.

It should be added that even if the current impressions of the safety and (in certain epidemiological situations) the effectiveness of the vaccine should be confirmed, there are still problems of ensuring the consistent production of a safe and effective product which must be solved before its public health use on a large scale can be advocated. A meeting of an expert committee is planned for 1960 to consider the present position and to make recommendations as to the manufacture and use of the vaccine.

Experience with the inactivated vaccine continued to be favourable during the year. In several countries where the vaccine was widely used there was rather more clinical poliomyelitis than in 1958, but the great majority of these cases were in unvaccinated persons. As in previous years, there were a few deaths in fully vaccinated persons and some cases also occurred which, however, were usually mild, with little residual paralysis. Both field and laboratory tests indicated that in general the vaccines produced were of higher potency than formerly, although in most, but not in all, of the vaccines the important type 1 component was still less potent than type 2. Complications after vaccination were extremely rare and the evidence continues to support the view that this is a safe and effective vaccine.

Further analysis of the partial failure of inactivated vaccine in Israel in 1958, which was mentioned in the Annual Report for that year, has shown that it was apparently due to inadequate primary immunization, largely by the intradermal route, with a vaccine of which the type 1 component was not up to the best current standards. The intradermal route had been adopted because of shortage of vaccine at the time. Nevertheless some protection was given to those triply vaccinated. The lessons of this important and well studied episode are that the intradermal route should not be used, the subcutaneous route being superior; that every effort must be made to ensure adequate potency of the type 1 component of the vaccine; and that the full primary course, with at least one booster dose, is essential for adequate protection against a severe type 1 epidemic.

Respiratory Virus Diseases

In the first quarter of 1959 there were outbreaks of influenza in the northern hemisphere which were moderately extensive in some areas. The etiology was mixed; the predominant viruses were type B, but type A2 (Asian) was also frequently isolated. Very few reports were received of the isolation of type A1, which seems to have been replaced by type A2.

In some areas where the necessary laboratory tests could be made, adenoviruses seemed to be responsible for a significant amount of respiratory diseases. The tests are not yet adopted as routine in many laboratories. As the Expert Committee on Respiratory Virus Diseases recommended at its meeting in 1958,¹ the study of these and other respiratory viruses is being encouraged so as to arrive at a better assessment of their public health importance.

To follow up the observations on the animal influenza viruses reported elsewhere in this chapter (see page 12), further research has been started to determine their possible relationship to human disease.

A special number of the Bulletin ² devoted to the 1957-58 pandemic and to the studies of animal influenza was published early in the year. A complete bibliography of the literature on the pandemic is in preparation.

² Bull. Wld Hlth Org., 1959, 20, 183-508
**Virus Research**

The main new undertaking during the year was the construction of an expanded programme of virus research, following resolution WHA11.35 of the Eleventh World Health Assembly. Details of the programme were presented to the Advisory Committee on Medical Research and to the Executive Board. Extensions were planned in all the major fields of virus research, including the support of epidemiological studies and fundamental research, on a small scale at first. The main emphasis was placed on the need for increased services to research, additional reference laboratories, standard reagents, exchange of information, and training.

The Scientific Group on Virus Research, which met towards the end of 1958, suggested the large-scale provision of laboratory reagents. This proposal raises difficulties that are not readily solved. Inquiry has confirmed that there is a demand for sources at which laboratory reagents would be made in large quantities and from which laboratories could obtain the reagents, which at present most of them prepare for themselves—a laborious and costly procedure. In many countries there are no central facilities, either governmental or commercial, for such production and purchase outside the country often raises financial difficulties. WHO cannot consider the free provision of reagents because of the great cost of such an undertaking. The problem is being further studied but WHO is planning to support the preparation and establishment of international reference preparations of diagnostic sera which, with the supply of standard virus types, will go a long way to ensure the comparability of reagents produced in different countries.

**Immunological and other Surveys**

A study group which met in December 1958, briefly mentioned in the Annual Report for that year, recommended the extension of WHO's work on immunological and haematological surveys.1 During 1959 possible ways of implementing those recommendations were further explored.

Laboratories engaged in such work were invited to take part, and it is proposed to designate certain international centres in 1960. During a survey for poliomyelitis in Kenya a pilot study was made of techniques intended to increase the value of such surveys. The full results are not yet available but the indications are that the suggested methods are practical. They should also throw a useful light on other problems, such as nutritional abnormalities, anaemias, biochemical changes associated with other chronic diseases, certain questions of human genetics, and the prevalence of other human infections of actual or potential public health importance.

**Vaccine Studies**

With a view to expanding the studies on vaccines which have been initiated and supported by WHO for several years, a scientific group was convened in March. The present position with respect to vaccines in current use and under development was reviewed and proposals were made for research to clarify the many points on which knowledge is deficient.

Among those proposals was a plan to continue the studies of typhoid vaccines which began in 1954 with the controlled field trial carried out by the Yugoslav typhoid commission and supported by WHO. The follow-up of this trial, which is continuing, has shown that the heat-killed phenol vaccine gives protection for at least three to four years but that the alcohol vaccine gives little or no protection, although it was ranked as the better vaccine by the laboratory tests in current use.

A weak point of the trial was that neither of the two vaccines used was stable enough to enable an international reference to be established. The further trials proposed by the scientific group are designed to overcome this difficulty by employing two highly stable dried vaccines, one acetone killed and dried, the other heat-phenol killed and dried. Details of the field and laboratory methods to be employed in these trials were settled at two informal meetings of the experts concerned in August and December. The trials will begin early in 1960, in British Guiana and Yugoslavia, with WHO support under the expanded programme of research.

**Arthropod-borne Virus Infections**

One of the problems in the epidemiology of arthropod-borne virus infections which still remains obscure is how those viruses are spread in nature. There is evidence that birds play an important part in their transmission. A scientific group on birds as disseminators of arthropod-borne viruses met in Geneva in March to advise on this aspect of the programme.

The Group reviewed the epidemiology of the more important arthropod-borne virus infections in different parts of the world, and indicated the chief questions that should be studied, and their specific problems. The ornithological, virological and parasitological aspects of the problem were carefully analysed. The Scientific Group discussed what categories of birds were most probably implicated.

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in the dissemination of arthropod-borne viruses, and the patterns of their migration. The different methods and techniques of catching and handling birds for virological studies were considered in detail. Lists were prepared of centres for ringing or banding birds, of observatories for migration studies and of trapping stations, of virological centres for arthropod-borne virus studies, of ornithological centres devoted to taxonomic identification, and of parasitological centres.

The Group recommended that additional facilities and equipment should be provided at sites where ornithological, virological and parasitological studies could be carried out, and for which the professional staff should be trained at special ornithological stations, reinforced if necessary by specially qualified consultants. Periodical meetings should be held to consider problems of international importance, to exchange information and to plan additional projects, and should be attended by experts in varying disciplines from different regions. It was suggested that the Organization should sponsor the standard geographical mapping of each type of pertinent virus, each species or sub-species of relevant bird and each species of associated tick or mosquito. The maps should show also the migration pattern of each species or sub-species of bird that may be of epidemiological significance.

Assistant has been given to preliminary studies carried out in the Kutch area of Bombay State in India.

Other Communicable Diseases

Bilharziasis

The appraisal of pilot projects aiming at the control of snail intermediate hosts of Schistosoma, either by molluscicides or by changing the environment of snail habitats, has shown that snails can be controlled, that transmission can be interrupted, and that prevalence of bilharziasis can be significantly decreased. Cost calculations for these measures have shown that they are economically feasible. This encouraging evidence, however, has been obtained from a relatively small pilot project and under technically well supervised conditions. A larger control project might be handicapped by the problem of the reintroduction of snails into canals already freed of them, and an attempt has been made during the year to study the methods of mechanical or chemical barriers used in Sudan. The field research that has been done has given some valuable data.

On the other hand, inconsistent results on the efficiency of molluscicides have been reported from various countries. This may be due either to factors inherent in the variety of climates, radiation, topography, and water quality or to the different materials and methods that have been used. A special survey is now being made to find out the factors involved, with a view to establishing improved techniques for applying molluscicides and uniform procedures for evaluation.

A special advisory team visited ten countries in the Eastern Mediterranean and African Regions, with the principal objectives of preventing the spread of bilharziasis in newly irrigated areas and determining the considerations which will prove to be of importance in the design of canals and in improving agricultural practices. The information obtained is also relevant to work against other communicable diseases of man and animals that affect national economies. FAO will collaborate in implementing, as far as economically possible, any methods which may be devised for planning schemes of water management.

In view of the importance of the disease in children, UNICEF has agreed in principle to assist pilot projects in the programme for bilharziasis control.

Earlier surveys in the Eastern Mediterranean and African Region have shown the geographical distribution and the extent of bilharziasis infection and of its intermediate hosts, but the severity of the disease and its socio-economic impact on the community in various areas are still to be determined. A preliminary survey is now being made to collect data on the morbidity caused and its effect on socio-economic development.

Provisional notes are being prepared on the methodology of epidemiological studies in bilharziasis to determine prevalence, incidence and morbidity, and of studies on the snail intermediate host population, and a review of different techniques in use for bilharziasis surveys is also in progress.

The routine programme for research already in operation has been revised and an expanded programme has been prepared with the assistance of special scientific groups on molluscicides and on chemotherapy.

Diarrhoeal Diseases

The diseases and disorders in which diarrhoea is an outstanding manifestation continue to be a leading hazard to the life and health of infants and children, and in adults they are an important cause of invalidity.

To follow up the recommendations of the study group that met in 1958 plans have been worked out for an advisory team on diarrhoeal diseases, which will make comprehensive studies of different aspects of those diseases, including the part played...
in their transmission by factors of environmental sanitation. Provisional lines have been drawn up for epidemiological studies to be undertaken by the team. In addition, a programme of investigations has been prepared on the role of various enteric pathogens, and of nutritional deficiencies, in the etiology of diarrhoeal diseases. A team of consultants and WHO staff visited Yugoslavia during the year to assess a programme on diarrhoeal diseases that has been in progress there for the last five years. Information obtained during this visit has been used in the general programme of research on these diseases.

Cholera

The danger of cholera outbreaks from endemic foci still remains and is a risk to countries in Asia and elsewhere. A programme has been planned for more extensive cholera studies to investigate causes of endemicity, the role of various environmental factors and the degree of protection conferred by immunization.

Epidemiological data are being collected on the present status of cholera in India, particularly in the city of Calcutta, to give a base-line from which to measure the effect of the proposed water-supply scheme for Calcutta.

Leprosy

Estimates of the total number of sufferers from leprosy in the world range from 10 to 12 million.

WHO sent questionnaires to countries interested in the control of leprosy, and the information received from many of them gave a total of 1,579,532 registered leprosy cases, but this figure omitted the number of patients registered in some countries in which anti-leprosy campaigns are in progress and from which no accurate information has been received. Probably about two million leprosy patients are at present registered and about three-quarters of them are under treatment.

Ambulatory treatment of leprosy appears to be for many countries the only practical policy, as the possibility of isolating or treating patients in institutions is small: it is estimated that the number of patients in institutions is 216,000.

The experience of UNICEF/WHO-assisted projects confirms that diamino diphenyl sulfone (DDS) treatment is effective, that the drug is well tolerated if it is used with the correct schedules of administration, and that reduction of infectiousness (the principal aim of the projects) has been achieved in some countries. In Eastern Nigeria, for example, the prevalence rate has been reduced in twenty years from 50 to 2 per thousand. In many other countries, for which no accurate figures exist, it is estimated that from 30 to 50 per cent. of the treated patients are arrested cases and will be discharged within the next few years.

To help the governments concerned to assess the results of the mass campaigns against leprosy, a leprosy advisory team of a leprologist and a statistician was recruited during the latter part of 1959.

The current methods of leprosy control have been carefully examined during the year by the CCTA/WHO Conference on Leprosy in Africa, which met in Brazzaville in April (see also page 59), and by an Expert Committee on Leprosy which met in Geneva in August.

From the point of view of public health administration, leprosy is one of the most expensive diseases. The incidence of disabilities and deformities which diminish a leprosy patient's working capacity in varying degrees is largely unknown. Information collected by WHO suggests that more than 25 per cent. of leprosy patients suffer from disabilities and deformities. The best measures to prevent these are early diagnosis and treatment, which in more than 90 per cent. of the cases can prevent the appearance of deformities. In the early stage of deformity, simple physiotherapy can prevent its progression, and can be given by the paramedical personnel in charge of the leprosy mass campaigns. In future, such methods for the prevention of disabilities should be included in the teaching and training of leprosy personnel.

A Scientific Group on Leprosy Research met in Geneva in February to consider the extension of research in leprosy. Less is known about leprosy than about some other communicable diseases, for it is found in poor and less-developed countries in which there are very few facilities for research. The extension of research on microbiology, chemotherapy and rehabilitation would improve methods of leprosy control.

At present, the only drug useful for leprosy mass campaigns is DDS, and the need to obtain a suspension of DDS with a longer repository effect is one of the primary problems. Several suspensions of DDS are now available which, from preliminary laboratory experiments, can be expected to have a repository effect of at least one month. Centres have been chosen in different parts of the world to conduct trials with these suspensions, using a uniform procedure prescribed by WHO, and such trials are in progress.

In the trials of new drugs it will be necessary to use laboratory animals inoculated with human
leprosy, and grants have been given to centres which have succeeded by different techniques in transmitting human leprosy to murine rodents.

Trachoma

Although trachoma is susceptible to treatment with sulfonamides and certain antibiotics, there remain many difficulties in its effective control. As with other endemic diseases, environmental factors are of the first importance in the agent-host relationship—in their effect on the spread of infection and in determining both local prevalence and the general severity and socio-economic effects of the disease.

History has shown that trachoma disappears from a community when standards of living and hygiene are improved, and, conversely, that if those standards are too low, the treatment of cases (on any scale which is now practicable in areas of high endemicity) may have little effect in reducing incidence. Eradication has been shown to be possible in a few experimental sectors, and a substantial reduction in prevalence and in the incidence of new infection has been achieved in some countries. But under the most unfavourable conditions—such as prevail in many trachoma-endemic regions—it has so far been possible only to control the disabling complications and sequelae. The environmental factors concerned probably vary considerably from one area to another and little is yet known of their exact nature and modus operandi.

During recent years, WHO's work against trachoma has been directed to broadening the line of attack. This has been done by encouraging and assisting research on the infective agent, by organizing epidemiological and therapeutic studies, by sponsoring a series of inter-country conferences on all aspects of the problem, and by providing consultant services and fellowships in relevant fields. Governments are becoming interested in this broader approach, and a number of research programmes are being built up with WHO assistance parallel to national campaigns against trachoma and associated infections.

Hopes of further technical advances of many kinds have followed the recent successful isolation and serial culture of the trachoma virus by workers in several parts of the world. The laboratory techniques are still not sufficiently developed for wide use in field studies, but constant progress is being made. New therapeutic agents are now being screened in the laboratory and may greatly facilitate the adoption of improved and simplified methods of treatment. The future of immunology in trachoma is still obscure. Natural trachoma does not appear to induce a satisfactory immunity to subsequent attacks, probably because the virus is strictly localized in the conjunctiva. It is possible, however, that parenteral injection of a suitable antigen might afford protection, and a number of independent workers are at present engaged on this aspect of the problem.

A scientific group on trachoma research met in London, Paris and Geneva between 3 and 10 March 1959 to review recent progress and to advise on a programme of intensified research to be sponsored by WHO. In addition to laboratory research, emphasis was laid on the need for further studies on the epidemiology and therapy of trachoma and associated viral and bacterial infections of the conjunctiva. The group believed that in the present state of our knowledge advances in prophylaxis and treatment would come only from a combination of fundamental virological research with the more pragmatic investigations into problems of immediate importance to trachoma control.

Onchocerciasis

In recent years interest in onchocerciasis and its control has been increasing in the countries affected. The intensification of national programmes in several endemic areas in Africa and Central and South America has led to requests for assistance from WHO. Field surveys, as a preliminary to control work, have been started in Sudan and Venezuela with help from WHO, and plans have been made for control work in Ghana.

In several important inter-agency projects for social and economic development that are being planned for various parts of Africa consideration is being given to the inclusion of suitable measures against onchocerciasis. These include the Volta River project in Ghana and agricultural projects in Kenya, Uganda, Cameroons and Sierra Leone. Such projects produce new bodies of water in which vectors of onchocerciasis, and of other diseases, may breed unless precautions are taken.

Further research is needed on various aspects of onchocerciasis, and two scientific groups were convened during the year to plan an extended research programme. The first, in August, studied the disputed ophthalmological problems of onchocerciasis; the second, in November, considered the non-ophthalmological aspects of the disease and the possible extension of research on problems of its pathogenesis, epidemiology, therapy and control. Good progress towards a better definition of the ophthalmological problems of onchocerciasis was made during the first of those meetings, particularly
in regard to the classification of certain lesions for which a possibility of genetic origin had been suggested, and to the part that nutritional factors might have in their production.

The necessity of finding methods for studying the susceptibility and possible resistance to the different insecticides of the vectors of onchocerciasis, the Simuliidae, was discussed by the Expert Committee on Insecticides in September.

Co-operation with the International Association for Prevention of Blindness has been intensified.

**Filariasis**

There is a growing demand from certain countries for assistance in the control of filariasis. WHO was represented at a meeting on filariasis to assess the work organized by the South Pacific Commission.

The scientific group on filariasis and on non-ophthalmological aspects of onchocerciasis, which met in Geneva in November, reported to the Director-General on the relevant research problems. Its recommendations cover the clinical field, pathology, immunochemistry, animal infections, quantitative aspects of infection, research on vectors, control methodology, chemotherapy, new drugs and drug-screening, and host-parasite relationships.

Although the available methods of control can be effective under certain circumstances, the report points out that much research is needed before effective control methods are available for all epidemiological patterns.

**Relapsing Fever**

Different strains of spirochetes were studied. A consultant collected available information and reported on those studies, and on research undertaken in Ethiopia; and recommended further research on the strains, on serological methods and on vaccine preparation. The endemic area of louse-borne relapsing fever in the East African highlands should be further studied with a view to eradication of the disease in order to remove the risk of its spread from this area.

**Plague**

No request for assistance against plague has been received since the termination of the WHO-assisted projects in 1958. Results obtained from field research projects carried out in the past, in India and Indonesia and in countries of the Eastern Mediterranean Region, have been prepared for publication in the Bulletin. Those results have stimulated new interest in studies of plague, particularly wild-rat plague, in different endemic areas in Asia, where human plague continues to decrease, and in Africa and South America where the disease remains stationary at its customary low level. A study of the influence which malaria eradication programmes may have in reducing plague in India and Indonesia seems to be desirable, to obtain data for the construction of a programme which would consolidate the present satisfactory situation.

**Smallpox**

A considerable increase in work against smallpox has followed the resolutions of the Eleventh and Twelfth World Health Assemblies on smallpox eradication. The final goal of worldwide eradication is still distant but progress has been made during the last year towards its attainment in all regions concerned.

The Executive Board at its twenty-third session and the Twelfth World Health Assembly had before them a report by the Director-General which contained a review of the smallpox situation in the world and an outline of the technical, administration and financial aspects of a world-wide eradication campaign. The outline gave guidance on such technical questions as the choice of vaccine, the estimation of the amount required for an eradication campaign and what should be done to ensure an adequate supply. It discussed the points that should be taken into account in organizing a campaign of eradication, the scope of a smallpox service, the appointment and training of staff and how to estimate what staff would be required, and it gave information which would assist countries to form an estimate of the financial commitments involved in a campaign of eradication. A guide to the organization of smallpox eradication services, on those lines, was also drawn up and distributed to interested public health administrations.

Several countries in the African Region have expressed interest in starting an eradication campaign in the immediate future, and the Regional Office has co-operated with the local health authorities in the preparation of their plans. Representatives of countries and territories in the African Region and of two countries in the Eastern Mediterranean Region took part in a conference held in Brazzaville in November, to discuss the organization and co-ordination of smallpox eradication campaigns in Africa.

In the Eastern Mediterranean Region, an epidemiologist and a laboratory expert have visited countries to advise on the organization of smallpox eradication.

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1 *Off. Rec. Wld Hlth Org.* 95, Annex 18
services and on the production of effective smallpox vaccine.

In South-East Asia also, much has been done. Pilot projects have been organized in three areas of Indonesia and a national eradication scheme is under preparation. In India, a national committee of experts on smallpox and cholera met in New Delhi in February and produced recommendations for an all-India eradication campaign; and those recommendations are being actively pursued.

In the Western Pacific Region, Viet Nam is preparing an eradication campaign and expects to complete eradication in one or two years. Cambodia has prepared a plan of operation for an eradication programme to be started in the near future.

In the Americas, the eradication programme is being organized successfully.

Assistance has been given to several countries for training laboratory personnel in the techniques of preparing dried smallpox vaccine.
CHAPTER 3

PUBLIC HEALTH SERVICES

Public Health Administration

The basic problems that governments encounter in promoting and protecting the health of their peoples vary widely according to the level of development of the health services. In countries where such services are well established difficulties may arise from inadequate co-ordination between those engaged in research and education on the one hand and those engaged in health and medical work on the other. In some of these countries health services cannot be fully effective until physicians engaged in curative medicine, through general medical practice or in other ways, share with the health authorities the responsibility for the public health. In other countries, where a decentralized integrated health service has been formed, a major problem is to make a public health career attractive to able young people in the medical and allied professions. In countries where the people live at a bare subsistence level and educational standards are generally very low, an adequate service can only be built gradually as part of the general development of the community. Satisfactory solutions to these problems cannot be quickly attained and for some of them concerted action is necessary.

One of the problems just mentioned — the securing of collaboration between scientific, administrative and educational bodies for the improvement of health services — was considered during the technical discussions at the 1958 session of the Regional Committee for Europe. In 1959 a travelling seminar organized by WHO enabled senior public health administrators from European countries to visit the Union of Soviet Socialist Republics and study the system of integrated curative and preventive health services, in which such collaboration has been achieved by intensive State co-ordination and planning.

In the South-East Asia Region, WHO is assisting with the planning and development of public health training and demonstration areas where senior medical students may spend part of their final year and have practical experience of an integrated health service, by which means interest in such a service is stimulated.

In two countries of the Western Pacific Region, regional health services are being organized. These services exercise for the populations of their areas wide powers delegated to them by the central health authority, and they are an important step towards an effective system for improving local health services.

The development of local health services was the subject of an expert committee which was convened by WHO in October 1959, as a sequel to a study group held on the same subject in 1954. The committee had before it detailed reports on six pilot local health studies in England, India, the Netherlands, Puerto Rico, Sweden and the Union of South Africa. The report of this committee, taking into consideration the methods used in the pilot studies, recommended that such studies should be a routine procedure of health administrations and that primary and national reference centres should be set up for public health research on a community basis. The report called attention to domiciliary health service, organized community effort, the role of general medical practitioners, and technical supervision as matters of special importance for the development of local health services.

In the Andean Indian programme and in many community development programmes undertaken by the United Nations and the specialized agencies, the importance of a balanced economic and social development has again been emphasized. WHO's participation has been for the purpose of helping national health administrations to develop permanent systems of decentralized, integrated health service, with adequate provision for training staff. Details of the assistance WHO has provided in the field of community development programmes are given in Part IV.

The Organization's participation in United Nations broad programmes increased during the year. It was represented on the inter-agency working groups on low-cost housing, community development, family levels of living, international survey of social programmes, and statistics for social programmes, and thus was able to contribute to the collective approach to these subjects. The Organization has also taken part in several seminars and similar meetings. A workshop was held at The Hague in
January, primarily to discuss the draft report on Public Administration Aspects of Community Development prepared by the Public Administration Division of the United Nations Technical Assistance Administration; a representative of WHO presented a paper on public health administration and its developments in different circumstances. In February and March a Six Country Seminar was organized at Bangkok by the United Nations and the specialized agencies, to consider the planning and administration of community development programmes in Burma, Laos, Cambodia, Malaya, Thailand and Viet Nam. Representatives of WHO discussed the place of health services in community development programmes, with reference to their experience in health work, linked with community development, in South-East Asia. At a seminar in Bristol in September, on Community Development and Social Welfare in Urban Areas, WHO presented a paper on the public health aspects of those problems with special reference to the importance for mental health of a sound community life. In the same month WHO participated in a Workshop for Planning and Administration of National Programmes of Community Development, convened in Addis Ababa by the Economic Commission for Africa.

The Organization provided the Trusteeship Council and the Committee on Information from Non-Self-Governing Territories with information on health conditions in those territories. This included two reports presented to the Committee on Information and to the United Nations General Assembly, one on the progress achieved in health services and activities between 1946 and 1956 in the non-self-governing territories and the other, jointly with FAO, on developments in nutrition in the same period. The first of those reports emphasized the importance of educating and training indigenous personnel to assume full professional responsibility in the health services, and of securing the full co-operation of the public.

Nursing

Although nurses and midwives form the largest group of health workers there are still not nearly enough of them to meet the constant demands for their services. They are essential elements in the process of expansion and improvement of health services which is going on everywhere today. Any effective increase in their numbers and quality must depend upon more and better facilities for training; it is therefore natural that training, in its various aspects, should have received the main emphasis in WHO’s nursing programme during the year.

An inter-regional conference to consider post-basic education for international students — nurses who study outside their own country — was held in Geneva in October. This conference was attended by thirteen participants from five of the six regions. They included former international nursing students, nurse administrators, and public health administrators, or represented faculties of institutions that receive students. Observers from seven governmental and non-governmental organizations which either sponsor fellowship study or are concerned with the placement of students for study also took part. The discussions were grouped under three main heads: the student before leaving home; the student’s time abroad; and the student on return home. They were mainly based on information obtained from more than a hundred former students and from representatives of twenty-six faculties. The report of the conference will be published by WHO in the Technical Report Series. It is designed to help any nurses who plan to study outside their own countries, nursing and health administrators who select nurses for study abroad and for employment on return, faculties of institutions that receive students from abroad, and agencies that sponsor fellowships programmes.

Most of WHO’s assistance in nursing is still given to basic schools of nursing and midwifery and to the training of auxiliary personnel in these two subjects. As yet not every country has a school for training nurses to a professional level, but that goal is not far away. Moreover, secondary education is becoming available to more girls, which increases the number of possible students, and in countries where nursing used not to be considered a suitable vocation for young women attitudes are changing and recruitment is improving.

Promising efforts are being made to improve the content of the basic teaching curriculum, and the inclusion of the behavioural sciences, public health and psychiatric nursing, is becoming more general. Clinical instructors and adequate facilities for clinical training are much needed so that theory and practice may be closely integrated.

Post-basic courses are preparing a larger number of nurses for the more responsible work, such as the teaching of clinical nursing, public health nursing and midwifery and psychiatric nursing. More countries are considering the provision of such courses, and in the meantime many with WHO assistance organize short courses in teaching, administration, and orientation to public health.

Long-term planning by governments has called for WHO’s assistance in evaluating the quality and adequacy of present nursing and midwifery education
and service and plans for improving them to meet future needs. Advisory services have been provided at state level as in India, and at national level as in Burma, Ceylon, Indonesia, Singapore and Turkey.

Much attention has been given during the year to nursing administration. The monograph, *Principles of Administration Applied to Nursing Service*, published by WHO in 1958, has been much in demand, and requests were received for permission to translate it into Portuguese, Italian, Japanese and German. Several conferences have been organized: for example, the Conference on the Organization and Administration of Nursing Services, held for countries of Europe (see also page 187), to discuss the principles outlined in the monograph and consider their application to specific situations.

A guide to staffing requirements for nursing service is being prepared. It will deal first with nursing service in hospitals and then with public health nursing service; outline factors to be considered in determining what staff is needed and indicate methods by which the nursing care of the patient may be improved in spite of staff shortages.

The Fifth Regional Congress on Nursing was held in Buenos Aires in October to consider nursing legislation for nursing service, a subject appropriate at this time when many countries are considering, in the interests of the patient, the introduction of legislation to regulate the practice of nursing.

The requests made to WHO for assistance in the training of nurses and midwifery personnel of all grades show that governments recognize the essential contribution made by the nursing and midwifery services to the total health programme. Twenty-seven per cent. of all WHO field staff are nurses, and the estimated costs of nursing and midwifery personnel in field projects financed from the regular budget or from Technical Assistance funds are about seventeen per cent. of the estimated costs of all such field activities.

**Social and Occupational Health**

The study on the health and welfare of seamen was continued in a conference convened by WHO in Marseilles, in February to exchange information on the needs of seafarers and the services provided for them in Europe. The participants included medical superintendents of shipping companies, ships' surgeons and other medical officers with a professional interest in the medical problems of seamen, as well as government officers responsible for local or national health services for seamen. ILO and the United Nations Technical Assistance Administration, which are interested in the social aspects of the problem, were also represented. The conference brought out that there is a need for more reliable statistics on morbidity and mortality among seamen, and for more information on the special health dangers to which seamen are exposed. A fuller account of the conference is given in Chapter 16 (see page 81).

Training has again received emphasis in the programme in occupational health. A training course on advanced techniques in industrial health work was organized with assistance from WHO at the Department of Occupational Health of the High Institute of Public Health, Alexandria, United Arab Republic, for physicians, engineers and chemists from countries of the Eastern Mediterranean Region. All the participants were concerned with the administration or supervision of industrial health services—either in government departments or directly in industry. The course dealt with occupational diseases, industrial toxicology, industrial safety, industrial psychology, sanitation and waste disposal, and included lectures, demonstrations, visits and discussions. The need for co-ordination and cooperation among the several services was specially emphasized.

Work in medical rehabilitation in 1959 has included advice to governments in planning the further development of their medical services for handicapped adults and children, including in some cases the blind and the deaf as well as the orthopaedically handicapped. Thus in Greece, Poland, Spain and Yugoslavia comprehensive national rehabilitation programmes, which are to be implemented in the coming years, have been drawn up with WHO assistance. The Organization continued to assist countries in consolidating their rehabilitation services by providing rehabilitation experts to work with the national teams. This has been done, for example, in Argentina and Brazil. WHO has again provided teaching staff to national schools of physiotherapy in Ceylon and Pakistan, in order to help with the training of local personnel for rehabilitation work.

WHO collaborated with the United Nations, ILO and non-governmental organizations in a rehabilitation seminar, held in Copenhagen, for participants from the Latin American countries. Physicians, physical and occupational therapists and social workers from sixteen Latin American countries attended. The programme included lectures on the medical, vocational, educational and social aspects of rehabilitation, group discussions and visits to rehabilitation institutions in Copenhagen and neigh-

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bouring parts of Denmark, in Oslo and in Göteborg. To follow up the Expert Committee on Medical Rehabilitation which met in 1958, a technical conference on medical rehabilitation, in which the United Nations and ILO also took part, was convened in Copenhagen in April. Views were exchanged on the different rehabilitation practices and policies in countries of Europe and new trends and needs were discussed with a view to providing further services for the handicapped.

Although the etiology and pathogenesis of the chronic rheumatic diseases are not well understood, this group of disorders is widespread and economically important. More research will be necessary before an effective preventive programme can be formulated; and a questionnaire has therefore been sent to experts throughout the world to obtain suggestions on the lines of research that should be undertaken.

Organization of Medical Care

A new step in the development of the programme on the organization of medical care was the meeting in March of the Expert Committee on Organization of Medical Care to discuss the role of hospitals in ambulatory and domiciliary medical care. The Committee defined medical care as "a programme of services that should make available to the individual, and thereby to the community, all facilities of medical and allied sciences necessary to promote and maintain health of mind and body," and emphasized that the hospital should have an important part in applying a programme of social and preventive medicine and in the integration of preventive and curative medical service.

The Expert Committee recommended ambulatory and domiciliary medical services as a useful supplement to hospital care. Such services, by providing good diagnostic facilities, after-care and medical rehabilitation, can help to shorten the stay in hospital and enable more efficient use to be made of hospital beds. Dispensaries, polyclinics, outpatient departments, health centres, medical practitioners, industrial medical services and medical rehabilitation centres would be the chief contributors to such a programme.

Other questions explored by the Expert Committee were domiciliary care for the aged and the provision of comprehensive medical care services in new centres of population—whether new towns or the spreading suburbs round certain large cities.

The study on the costs and means of financing medical care was continued. Experimental surveys, using the questionnaire prepared in 1958 by an ad hoc inter-agency working group, were started in six countries (in the Americas and the South-East Asia, Eastern Mediterranean and European Regions) with different administrative and financial systems for the provision of medical care, and whose medical services are at different stages of development. The United Nations and ILO are interested in this study, because it is related to broad programmes of concerted action in the social field and its results may lead to the adoption of some economic indicators which will measure the efforts countries are making to protect the health of their people.

With a view to developing training facilities for medical and hospital administrators, a diploma course in medical services administration has been started with WHO assistance at the University of Edinburgh, United Kingdom. It is intended to provide a centre for training and research in modern hospital administration, for medical and non-medical administrators, including WHO fellows from other regions. It will also examine methods of teaching hospital and medical administration and develop a syllabus suitable for similar courses elsewhere.

WHO has continued to assist countries in hospital administration, medical records and medical stores management.

Cardiovascular Diseases

The appointment of a Chief Medical Officer for Cardiovascular Diseases at the beginning of 1959 and the meeting in March of a scientific group on research in cardiovascular diseases have permitted the general lines of the Organization's programme on these diseases to be developed and its work expanded—particularly in regard to research. Special attention has been paid to cardiovascular epidemiology: proposals for research are the standardization of nomenclature and of certain techniques; training of research personnel; and selected demographic and epidemiological surveys. Some priority has been given to the studies on ischaemic heart disease because, in spite of its frequency and significance, relatively few scientists make it their principal interest. As part of the central services for investigators, centres for the co-ordination of pathological studies will be promoted. Scientific groups have been planned for the beginning of 1960, to consider the present position and future plans for cardiovascular research.

Representatives of the Organization attended international conferences in several countries in Europe and the United States of America, to establish

personal contact with scientists in cardiovascular institutes and centres, and to study in what ways they might be able to co-operate in international research programmes.

The report of the Expert Committee on Cardiovascular Diseases and Hypertension,\(^1\) which met in October 1958, was published during the year. Comments on the minimal criteria given in this report for the diagnosis of ischaemic heart disease and hypertension were made by some members of the Expert Advisory Panel on Chronic Degenerative Diseases and by members of earlier WHO meetings on cardiovascular diseases. The remarks, suggestions and alterations received have been carefully analysed and any future revision of such criteria will take them into account.

Cancer

Two important steps were taken in 1959 to intensify work on cancer research. Firstly, a scientific group on cancer research met in March (preparations for the meeting had been made by a consultant group on cancer in January and February) and in its report to the Director-General outlined the main principles for WHO international collaboration on the problems of cancer. Secondly, a Cancer Unit was set up in the Division of Organization of Public Health Services, and was in full operation by June. The representation on the Expert Advisory Panel on Cancer was widened and closer contact was established with the International Union against Cancer.

The WHO international reference centres for histopathological specimens of lung tumours and soft tissue tumours, which were formally established in the latter part of 1958 in Oslo and Washington, came into use in 1959.

Two meetings on cancer were held during 1959. The first was an expert committee which discussed the histopathology of soft tissue tumours. It suggested tentative classifications of soft tissue tumours and adopted drafts for the forms which should accompany specimens sent to the International Reference Centre for Soft Tissue Tumours in Washington. The second was the Study Group on Epidemiology of Cancer of the Lung, which has framed recommendations for further work by WHO.

Health Education of the Public

A more clearly defined picture emerged during the year of the part that health education can play both in programmes of public health and in pro-

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\(^1\) *Wld Hlth Org. techn. Rep. Ser.*, 1959, 168
convened in Geneva in November. The members of the Committee represented several branches of education and related health disciplines. They considered: the scope of the school-teacher's responsibility for maintaining and improving the health of children and for influencing community health; practical ways in which the school, from its own resources or through co-operation with parents, health agencies and other organizations, can help to meet the health needs of the school-age child; some ways in which teachers might incorporate education for health into the school programmes; the kinds of attitudes, knowledge and skills teachers need if they are to make the best use of their opportunities for education; principles for planning, organizing and administering the curriculum for preparing teachers for health education and effective methods for that preparation; and what further development, studies and research might be profitable.

Direct assistance to governments included the assignment of consultants in health education to ministries of health and to training institutes for health workers in Afghanistan, Burma, Finland, Haiti, India, Indonesia, Israel, Morocco, and Thailand.

Experience suggests that the most valuable action of the Organization in the future will be to give further support to health administrations, in the planning, organization and administration of health education services and in improving the training of school-teachers in health education; to increase the provision for specific and systematic health education measures in WHO-assisted projects; and to make studies and research on health education.

**Maternal and Child Health**

For many years UNICEF and WHO have provided assistance to governments for the development and improvement of maternal and child health centres, whose numbers are increasing steadily. Recently, the greatest increase has been in Africa and Asia, where most of the centres are in rural areas. A report on the growth and scope of the assistance given by WHO and UNICEF to maternal and child health centres was prepared for the UNICEF/WHO Joint Committee on Health Policy, which met in December 1959. This report deals particularly with the extent to which child care and nutrition education are given in the centres. It is based partly on the answers to questionnaires completed by all countries that have received assistance for such centres from UNICEF and WHO, and partly on information from WHO staff and consultants. The assistance has been for training programmes, including demonstration projects, refresher courses for various categories of personnel and paediatric education.

In spite of the expanded and improved services provided by health centres for mothers and children, the report stresses that, mainly because of the shortage of trained personnel, few of the centres carry out a balanced programme of child care that includes all the services considered to be essential. In general, it was found that children in the first year of life were better served in both prevention and treatment, more limited attention being given to the older child and his special health needs. The report mentions the desirability of including immunization programmes in routine health services for infants and small children. Although all health centres in the study reported that they gave some education in nutrition, its quality could be greatly improved by better training.

A report on the care of children in institutions and day-care centres and on other methods of care of children outside their own homes was presented by WHO to the UNICEF Executive Board in March. This was in response to a request from UNICEF that the United Nations Bureau of Social Affairs and WHO should examine what aid UNICEF might be able to give to such services. The paper set out the health aspects of social services for children, called attention to some of the health, nutritional and mental problems, and indicated the opportunities for international assistance.

The study to determine whether the current definitions of prematurity are appropriate in different areas was continued. The average normal weight at birth is relevant to a practical definition of prematurity; and institutions in all regions have cooperated in collecting information on birth weights, using special cards. The first batch of completed cards was received during the year, and the work of analysing them was started. The results of the study are to be presented to an expert committee in 1960.

Direct assistance to governments for the improvement of different aspects of maternal and child care has continued, often in co-operation with UNICEF. Particulars of the projects concerned are given in Part IV. The work on maternal and child health in the European Region is also reviewed in Chapter 16 (see page 80). In many areas the special services for mothers and children are being developed as part of a wider public health programme.

The integration of maternity care services into the general health service was one of the main subjects discussed at a conference on maternity care organized by WHO at Manila for countries and territories in the Western Pacific Region. There were participants from sixteen countries or territories, and represen-
tatives from UNICEF and the United States International Co-operation Administration attended. The conference also considered the basic elements of maternity care services in relation to current practices and local needs in different areas of the Region, the organization of services to meet those needs, the training of personnel, programme evaluation and the subjects on which research was desirable.

Immediately after the Ninth International Congress of Paediatrics in Montreal, a special session on paediatric education was jointly sponsored by the International Paediatric Association and WHO. The object was to provide, for the many representatives of medical schools who had attended the Congress, a session concentrated on the problems of paediatric education. The main questions discussed were the teaching of paediatrics to medical students and the preparation of paediatric specialists and of teachers.

Representatives of WHO took part in two other meetings on paediatrics, both organized by the International Children’s Centre: one was a meeting on co-ordinated research in social paediatrics, the other a course on social paediatrics for African physicians. The participants in the course later visited Geneva for discussions of problems of child care. The International Children’s Centre also sponsored a seminar, in which WHO took part, on calendars of vaccinations of infants and young children.

Progress in the study of diarrhoeal diseases is reported in Chapter 2 (see page 16).

The Organization was represented at the fourth session of the UNESCO International Advisory Committee on the School Curriculum.

Mental Health

Much of WHO’s work on mental health during the year has been concentrated on the long-term study of the epidemiology of mental disorders. It is widely recognized that accurate information on incidence, prevalence and causes is required for mental, as for other, illnesses as a basis for effective control and preventive measures. Attention is being focused on how the information can best be obtained and classified and on the problems that arise in the conduct and interpretation of epidemiological studies of mental illness.

The uses of the epidemiological approach in psychiatry, the classification of mental disorders, and the methods suitable for use in psychiatric epidemiology were discussed by the Expert Committee on Mental Health at its meeting in June. It also considered the type of staff needed for epidemiological studies in the field, and the training they should be given. Suggestions were made for epidemiological research in mental health and for survey work to be carried out in collaboration with regional offices and national health administrations. The first step in pursuance of those recommendations has been to undertake a study of the psychiatric hospital statistics in one area.

Earlier in the year problems of classification in psychiatry had been discussed at the Work Conference on Problems in Field Studies of Mental Disorders, which was convened in New York in February, and in which WHO participated. A detailed study of the classification of mental disorders was prepared for publication in the Bulletin. The application of methods of epidemiological inquiry to the study of mental disorder was the subject of a paper published by WHO in the new series, Public Health Papers. This states the aims of epidemiological studies, reviews experience and indicates some of the practical limitations of the use of epidemiological methods in the field of mental health.

As part of the work on the organization of mental health services, a study on psychiatric services and architecture has been published in the same series. The planning and management of psychiatric hospitals are examined and also the structure and functions of other psychiatric services, such as out-patient departments, psychiatric wards in general hospitals, rehabilitation facilities and other mental health services, and an attempt made to work out the organizational and architectural requirements in detail. The role of the community mental health hospital was discussed by an expert committee in 1952, and the study just published is in line with the committee’s recommendation that WHO should stimulate interest in the planning involved in providing an appropriate setting for the community mental health hospital. Before publication the paper was sent to twenty-nine psychiatrists in thirteen countries and to four architects in three countries whose comments were taken into account in preparing the final text.

As in previous years, much attention was given to the teaching and training of personnel for mental health work, and a study was made on the place of social psychology in the training of psychiatrists. In preparation for an expert committee on mental health which, in 1960, will discuss the undergraduate teaching of psychiatry and mental health promotion,


psychiatrists, clinicians and specialists in public health were asked to give their views on the teaching of psychiatry, mental hygiene and medical psychology; and the collection was begun of psychiatric curricula and study programmes.

A survey was started of the work being done and of the facilities and resources available in the mental health field. This information will be considered by the Expert Committee on Mental Health which will meet in 1960 to set up priorities for a sound and worldwide programme in mental health.

Studies were continued in countries of Europe and the Eastern Mediterranean Region on the problems of drug addiction and on the possibility of isolating preventable factors in the causation of addiction to drugs.

Several countries of Europe and the Eastern Mediterranean Region were visited in order to examine new manifestations of juvenile delinquency and recent developments in the treatment of juvenile offenders from the point of view of mental hygiene. This information will be used in the preparation of a report for the Second United Nations Congress on the Prevention of Crime and the Treatment of Offenders, which will meet in London in September 1960.

Material prepared on "Mental Illness and Mental Health in the World of Today"—the subject chosen for World Health Day in 1959—included a special number of World Health, several radio talks, and lectures delivered at a meeting held by the United Kingdom Committee for the World Health Organization and at a seminar sponsored by the Hygiene Committee of the German Society for the United Nations.

Nutrition

Protein malnutrition remains the most important nutritional disease in the world. Since 1955 a programme, jointly assisted by FAO, UNICEF and WHO, has been in progress for the production of protein-rich foods which are sufficiently low in cost, are readily digested, and can meet the nutritional needs of young children, who are particularly liable to suffer from protein deficiency. An account of this programme has been given in the Annual Reports for 1957 and 1958. In December 1958 the Rockefeller Foundation made a second grant, of $300,000, to enable research on protein-rich foods to be continued for another three years. The laboratory and clinical research carried out with the aid of these grants has been in parallel with a programme, assisted by UNICEF, to study the technological and industrial side of the production of the foods. An additional allocation of $200,000 was made by the UNICEF Executive Board in 1959 to allow these studies to be continued.

The Protein Advisory Group, set up by WHO in 1955 and consisting of members from the Expert Advisory Panel on Nutrition, held a further meeting in March 1959 and reviewed what has been accomplished in this programme. It has been clearly shown that mixtures of locally produced vegetable protein foods, acceptable and of low cost, can cure and prevent protein malnutrition. Materials like cottonseed flour, not previously used for human consumption, have been found very valuable as complementary protein in such mixtures, and therefore permit a new approach to satisfying the protein requirements of children in areas where kwashiorkor is prevalent.

The most effective food for the prevention and treatment of protein malnutrition is skim milk and the programme referred to above was introduced because in many countries supplies of skim milk are inadequate or too expensive to meet the needs of children. At the request of UNICEF, FAO and WHO made a survey in order to determine whether the distribution of dry skim milk is the optimum use of local and international resources, or whether support should be given to other ways of improving maternal and child nutrition; and to suggest, in the light of experience, the future lines of action of the international agencies with respect to the distribution of skim milk. They also considered ways in which the various current activities could be combined with other appropriate measures to make up satisfactory feeding programmes offering results of permanent value. Specific recommendations were made as to quantities, priorities, supervision, reconstitution and distribution. Those recommendations provide general guidance, but it was emphasized that their application to milk distribution programmes must take account of conditions in individual countries and the knowledge and experience of the local public health authorities. Towards the end of the year, however, it was intimated that the supplies of milk previously obtained from the Government of the United States would no longer be available. This creates an important problem, because many mothers throughout the world have come to rely on this milk as a supplementary food to ensure the adequate nutrition of their children.

An informal meeting of advisers on research in nutrition met in March 1959 and reviewed the broad field of nutrition research in relation to health, and its international aspects in particular. The present state of knowledge, the progress made to date in current research programmes, the main lines of
research most likely to be productive, were examined, and specific programmes of high priority were outlined. The programmes recommended are those which require an international approach and would be of great importance to many countries.

Increasing attention has been given to iron-deficiency anaemia, which in many countries ranks next to protein malnutrition as a cause of sickness and death. This condition is particularly prevalent in Mauritius and wide investigations have been made there in the last two years. Research on the problem has also proceeded in centres in India, with the assistance of grants from WHO. Further investigations, however, are needed before effective programmes can be formulated. Two haematologists visited a number of centres in Africa, India and Latin America to assess the possible resources for research and draw up a co-ordinated research programme. The aim of this programme would be to bridge the gaps in the present knowledge of iron-deficiency anaemia. When the etiological factors are better understood, there is good reason to expect that an adequate programme for wide-scale prevention of iron-deficiency anaemia may become possible.

Diarrhoeal disease is, in a number of countries, the most common cause of death of children under five. This condition may sometimes be caused by malnutrition, and is undoubtedly often associated with it. For the study of diarrhoeal diseases in childhood, WHO has a long-term programme in which the whole question of those diseases, their association with nutritional disease and the vicious circle that results, is being examined. A report on the preliminary work done on this programme is given on page 17.

The need for international nutrition work and the emphasis placed on it by the United Nations agencies have been increasing, and more money is becoming available for programmes to prevent malnutrition. Because of this expansion, and to ensure that nutrition programmes can, with the least possible delay, be put into operation and given satisfactory technical guidance, the respective responsibilities of FAO and WHO in the field of nutrition have been defined and agreement has been reached. The emphasis is on a joint approach rather than on a division of interests.

There has been in the course of the year a considerable increase in the WHO staff working on nutrition, at headquarters and in the regions.

**Food Additives**

WHO's work in food additives is carried on in co-operation with FAO and stems from a joint FAO/WHO conference in 1955 and from subsequent meetings of joint expert committees.

In December 1958 the Joint FAO/WHO Expert Committee on Food Additives considered specifications and standards of purity of selected food additives, with special reference to antimicrobial preservatives and antioxidants. Provisional physical and chemical specifications, including methods of identification and assay which were established by the Joint Committee, have been sent to bodies responsible for preparing regulations on food additives, to industries and to certain experts on the subject, for comments and suggestions.

All available pharmacological and toxicological data about the safety of antimicrobial preservatives and antioxidants for use in food have been extracted from the literature and prepared as data sheets. In addition, much information and comment have been collected from the replies to a circular letter sent out to scientists working in this field. A start has been made in compiling, analysing and evaluating this material.

Specifications and methods of identification and assay for a selected group of food colours were dealt with by the Joint FAO/WHO Expert Committee on Food Additives at its meeting in December 1959.

Following the recommendation of the joint FAO/WHO conference, WHO has collected from governments information as to their legislation on antimicrobial preservatives and antioxidants and emulsifiers. During the year this information was tabulated for circulation to government and other agencies concerned, with the relevant data sheets.

An examination has been made of food preservation in Eastern European countries, with particular regard to the accepted practices for the use of chemical substances in food, existing rules and principles and the research being carried out.

**Dental Health**

The progress made over the last five years in dental health and preventive dentistry in the South-East Asia and Western Pacific Regions was reviewed at the second inter-regional dental health seminar convened in Adelaide in February 1959 by WHO in collaboration with the Australian Government. Since the earlier seminar (held in New Zealand in 1954) definite improvements have been made in the organization of dental services in some of the countries represented. The purpose of the seminar was to discuss the chief current dental health problems in the two regions and the ways in which the national health administrations and the dental profession might co-operate to solve them. A wide range of topics was therefore covered — evaluation of present dental services and plans for future development,
programme planning and administration, surveying and reporting and classification of dental diseases, and the prevention and control of dental diseases, particularly of periodontal disease. Ways were suggested of encouraging a more vigorous growth of public dental services. In view of the serious amount of untreated dental diseases in the regions considered, the seminar emphasized that far greater numbers of dental personnel should be trained. The importance of legislation to permit the wider fluoridation of water supplies and the need for more work on educating the public in dental health were also emphasized. Reports presented at the seminar suggest that malnutrition and avitaminosis associated with inadequate or unbalanced diets are the main predisposing causes of periodontal disease. In Asian countries, the increasing consumption of refined carbohydrates is making dental caries a major health problem in children. A further report on this seminar is given in Chapter 18.

More information is needed on the prevalence of dental diseases in many parts of the world. The epidemiological studies started in India following the seminar on periodontal disease, held in Bombay in 1957, have continued, and a survey was undertaken by WHO in the Eastern Mediterranean Region. The statistics obtained in the three countries studied indicate that the problem in the United Arab Republic and Sudan may be as serious as in India, but that Iran has a singularly low incidence of periodontal disease which compares favourably with that of countries with well-established dental health services. If these findings are substantiated by further studies, Iran might well become an important area for further dental research on the subject.

The importance of obtaining dental health statistics that are comparable internationally has often been emphasized in recent years and for this purpose WHO has been actively collaborating with the International Dental Federation during the year. Some progress has been made but the subject is complex and requires further close study.

In order to assist countries that desire to train auxiliary dental personnel, a comprehensive list of teaching and dental equipment and supplies has been prepared. WHO presented a paper on the utilization of auxiliary personnel to the International Dental Public Health Conference, which was convened in New York in September by the International Dental Federation, the American Dental Association and the American Association of Public Health Dentists.

Health Laboratory Services

In its assistance to governments in connexion with health laboratories WHO has placed emphasis on the organization of a system of public health laboratories serving a whole country. Experience has shown that it is of fundamental importance to consider the laboratory service as an integral part of the national health service and not to consider each individual laboratory as an isolated project.

Technical assistance has been given to nine countries for the planning or organizing of their laboratory services and to three countries for their blood transfusion services. Information on various aspects of health laboratory services is being collected for further studies.

A scientific group on antibiotics research met in May in Geneva, and reviewed the major health problems associated with antibiotics and the relevant questions for basic and applied research. The group made recommendations for the future research programme of WHO on antibiotics. Two subjects were selected for a two-year plan of research and were accepted by the Advisory Committee on Medical Research which met in October 1959. The first, which is indispensable in the study of the frequency of resistance in micro-organisms throughout the world, is the standardization of methods for determining bacterial sensitivity to antibiotics. The second is the establishment of a repository of antibiotics and of the cultures that form them, in order to avoid duplication of work and to facilitate research in this field.

Further work was done on the collection and preparation for publication of papers on recommended methods for the laboratory diagnosis of certain diseases. An article on the laboratory diagnosis of Shigella and Salmonella infections was published in the Bulletin \(^1\) during the year, and articles on the laboratory diagnosis of Bordetella infections (whooping cough) and of pneumococcus infections were prepared for issue in the same publication early in 1960; papers on Haemophilus, leptospirosis and Neisseria were received.

Standard lists of the chief items of equipment required for different types of laboratory have been drawn up to help countries that are providing or expanding their laboratory services. WHO was represented at the meeting on laboratory glassware and related apparatus organized in London in November by the International Organization for Standardization (ISO).

\(^1\) Bull. Wld Hlth Org., 1959, 21, 247
Iran is pursuing its malaria eradication programmes successfully, but insecticide resistance is calling for constant vigilance. The pictures on this page show some of the work being done on this problem by the malaria centre at Kazerun, in south-western Iran.

(1) Mosquitos bred in the centre’s insectarium are drawn off and placed in a testing tube.

(2) The mosquitos in the tube are counted and the number registered.

(3) An insecticide-impregnated paper is placed in a second tube to which the mosquitos will then be transferred.

(4) Doctors of the centre in conference during an inspection visit by the Director of the Teheran Institute of Parasitology and Malariology.

(5) In a village near Kazerun, mosquitos are introduced into a funnel-shaped recipient placed against a wall sprayed with DDT. Soon the mosquitos will be transferred to a net-covered paper cup and the percentage dying within a given period will be noted.
Liberia is still at the "pilot-project" stage designed to establish the best and cheapest methods of interrupting transmission, the first step to eventual eradication. The project illustrated, assisted by UNICEF and WHO, began in 1958.

(1) A mobile team, assigned to visit a number of villages scattered in forest country, consults its itinerary before setting out.

(2) Along the way, the team leader examines water in a tree hole where mosquitoes might breed.

(3) This woman has whitewashed her own and her daughter's face to frighten away the spirits that are making them ill, but she agrees to try the team's medicine.

(4) On reaching a village, the team examines all the inhabitants and finds many cases of malaria.

(5) At project headquarters, team members attend an entomology course given by a visiting expert.
MALARIA ERADICATION:
AMERICAS, SOUTH-EAST ASIA
AND WESTERN PACIFIC

El Salvador. The malaria eradication programme includes studies of the biological effectiveness of residual insecticides when sprayed on adobe, board, thatch and other local building materials. (1) An entomologist and his assistant set up their equipment for testing the susceptibility to a new insecticide, malathion, used to spray the houses in the background.

Sarawak. (4) Supplies for eradication teams being carried up river by canoe.

Nepal. Every effort is made to interest the local population in the work which is still at the pre-eradication stage. (2) A WHO team member demonstrates insecticide spraying equipment and (3) women look eagerly, although inexpertly, through a microscope.
Rural Sanitation

The organization of sanitation services and training of sanitation personnel were again predominant in WHO's environmental sanitation programme. These are the fundamental elements of all successful schemes of environmental sanitation and they are an essential part of the Organization's long-term programme for the improvement of man's environment.

This principle has been well accepted since the early days of the Organization, but its relevance in rural sanitation was forcefully brought out in 1959 in the course of a review of UNICEF-aided projects in environmental sanitation. A critical study of these projects showed that no substantial progress or expansion on a country-wide basis was achieved unless both good organization and adequate staff were available. The lack of suitably trained executive and supervisory staff, working through an organized sanitation machinery in the health administration, proved to be the main obstacle to the conduct and extension of rural sanitation projects. But the study shows also that, in every country in which they have been undertaken, those projects had their effect. Several of them have been successful in their immediate aims (notably in Greece, Mexico, Panama, Paraguay), and all have helped to stimulate governments and to demonstrate to health administrations the value of a strong sanitary engineering service for planning, supervising and carrying out environmental sanitation work. This applies especially to rural sanitation facilities, which are usually not the responsibility of the public works agencies of governments.

Regional programmes for the next two years show that the present trend is for WHO to continue to assist governments in strengthening and developing their central and provincial sanitation services. This is being done in two ways.

One is the direct assignment of sanitary engineering advisers to health ministries, or of visiting professors and tutors to universities or sanitarians' schools. During 1959, WHO sanitary engineers were working with central ministries of health in Burma, Colombia, Ghana, Guatemala, Indonesia, Morocco, Panama, Paraguay, Peru, the Philippines, Saudi Arabia, Seychelles, Syria, Taiwan, Tonga and Viet Nam. Professors of sanitary engineering and sanitary tutors were assigned to universities and schools in Afghanistan, Ceylon, India, Libya, Nepal, Nigeria, Saudi Arabia, Thailand, United Arab Republic (Province of Egypt) and Zanzibar.

The other method is the participation of sanitary engineers and of sanitarians in the demonstration work of rural health, bilharziasis control and public health administration teams assigned to district or provincial health establishments. In 1959 such projects were in operation in Afghanistan, Argentina, Ethiopia, Honduras, India, Iraq, Mexico, Uruguay and the West Indies Federation.

In continuation of its series of publications addressed to public health administrators and to sanitary engineers responsible for general sanitation work, WHO published in 1959 a monograph *Water Supply for Rural Areas and Small Communities.*

Two articles on sewage disposal were published in the *Bulletin.*

Studies have continued on the relation between environmental sanitation and diarrhoeal diseases, and on the use of engineering works and water management in the control of bilharziasis. This work is reported on in Chapter 2, page 16.

Community Water Supply

After a detailed study and appraisal of WHO's total programme in environmental sanitation, a comprehensive report on the work and achievements was presented to the Twelfth World Health Assembly. The report showed that some substantial advances had been made; yet, in comparison with the overwhelming needs in many populous countries, the sanitary improvement achieved leaves no room for complacency. The Assembly, faced with this situation, sanctioned a programme for the improvement of community water supplies, which would be a useful first point of attack and might open the way for later programmes on other forms of environmental improvement. In the same resolution (WHA12.48) the Assembly established a Special Account for the Community Water Supply Programme.

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2 Bull. Wld Hlth Org., 1959, 20, 509-533; 535-562
Work since the Assembly’s decision included an inter-regional seminar on the organization and financing of community water supplies, held at Amalfi in December for countries on the Mediterranean, and the sending of a team of consultants to India to prepare plans for improving the Calcutta water supply. In the Region of the Americas some work had already been done in 1958: a consultative committee was set up and a training course for water-works operators was organized in Trinidad. In 1959 such activities increased throughout the Region. ‘Technical, Financial and Administrative Aspects of Water Supply in the Urban Environment in the Americas’ was the subject of the technical discussions at the eleventh session of the Regional Committee (XI Meeting of the Directing Council of PAHO). All regional committees emphasized the importance of improving community water supplies and considered ways by which programmes for that purpose might be developed.

One of the significant points of the community water supply programme is that it emphasizes collaboration with departments of public works and with public administration and financial authorities. It is by them that water supply systems are financed, constructed and managed, it is they who must be stimulated to action. At the very outset of the global programme the trend is already in this direction.

Water quality is another side of a water supply programme. In 1958 WHO published international standards for drinking-water, which have already been accepted in some countries. The Twelfth World Health Assembly has used these standards in the official interpretation of the term ‘pure drinking-water’ in Article 14 of the International Sanitary Regulations and has thus given them official force at ports and airports. The study group that drafted the standards pointed out that more information about water quality was needed, and suggested twenty-five questions for research. A world-wide survey has been made by WHO to find where research is being done, and, at the same time, studies on the suggested topics have been encouraged. In May 1959 a list was published containing the names of 136 investigators who are engaged with 165 subjects of research on drinking-water quality. It represents work in fifty laboratories or institutions in thirty-four countries.

Vast populations in many countries exist in rudimentary shelters without any facilities for healthy living. Many others live in overcrowded, dilapidated dwellings, which create many health hazards. The United Nations Bureau of Social Affairs and the United Nations regional economic commissions have been very active on housing. WHO has been working closely with them, and has taken a continuous part in the ACC Inter-Agency Working Party on Housing. In 1959, this group formulated definite proposals for a long-range programme of concerted action on low-cost housing and related community facilities. It is also examining how it can best help national health administrations to deal with the health problems arising from improper housing.

WHO continues to co-operate with the United Nations and specialized agencies in programmes of concerted action on water resources and their utilization, on urbanization and on industrialization.

WHO has assisted the United Nations in the preparation of a guide for governments on the use of ground-water resources, and of a glossary of water-resources terms in several languages; and has also helped to plan and organize the work of a survey mission on urbanization which will prepare the way for a programme of concerted action. Work with the Economic Commission for Europe (ECE) on the problems of water pollution in Europe may lead to a rational plan for dealing with the international aspects of stream pollution.

The Twelfth World Health Assembly considered the recommendations made by the Executive Board in January on the report of the Expert Committee on Hygiene and Sanitation in Aviation and its annexed Guide to Hygiene and Sanitation in Aviation. The Assembly approved the comments on the Guide made by the Committee on International Quarantine and requested the Director-General to recommend it to health administrations for guidance in fulfilling their obligations under the International Sanitary Regulations, particularly as regards providing safe food at airports and on aircraft, and satisfactory protection from malaria vectors at airports. The Guide is to be published separately and illustrated. A vigorous long-term programme for the improvement of sanitation at international airports is to be undertaken with the International Civil Aviation Organization, which has been associated with WHO in the preparation of the Guide.

The work of the Joint FAO/WHO Expert Committee on Milk Hygiene and the Organization’s part in the two meetings held during the year of the FAO/UNICEF/WHO Inter-Agency Working Group on

Work with other Agencies

Much of WHO’s work on other forms of sanitation has been with the United Nations or its agencies.

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1 World Health Organization (1958) International standards for drinking-water, Geneva

Milk and Milk Products are described in Chapter 2, page 13.

Vector Control and Pesticides

Because of the continually increasing importance to field control projects of resistance to insecticides, the Organization has extended and intensified its work on resistance. Kits to measure in the field, by standard test methods, the extent of the resistance problem and the adequacy of residual applications, have been distributed to all parts of the world as follows: for resistance tests on adult mosquitoes — 650; on larval mosquitoes — 450; on body lice — 550; and for bio-assay of residual deposits — 360. Provisional test methods for measuring resistance in fleas, sandflies and bed-bugs and for measuring behavioural resistance in adult mosquitoes have been determined, but only limited numbers of test kits have been distributed. Test kits for tentative methods applied to black-fly larvae, black-fly adults, cone-nosed bugs, tsetse flies and houseflies are being prepared and investigated. This work was reviewed by the Expert Committee on Insecticides at its meeting held during the year.

A revision of the paper “Recommended methods for vector control” has been reviewed during the year by the Expert Committee on Insecticides and will be issued in 1960. This paper has proved useful to field personnel in vector control programmes and as a basis for exchange of information on control procedures between research groups in different parts of the world.

The disinsection of aircraft has been studied during the year; the procedures at present in force have been discussed with Member governments, research institutes, aircraft manufacturers, and airline operating companies, to consider how they may be improved. The results of this work will be considered by an expert committee in 1960.

In different parts of the world there has been research for the improvement of sprayers and dusting apparatus used in malaria eradication and other vector control programmes. The results have been encouraging and several newly designed components and modifications are being tested in the field.

The recommendations of the Expert Committee on Insecticides which dealt, at its meeting in November 1958, with the chemistry and specifications of pesticides, have been included in a revised manual of Specifications for Pesticides which will be issued early in 1960. The manufacture and procurement of pesticides for public health use everywhere are now based largely upon the recommendations in the manual.

Studies on the toxicity of pesticides used in public health programmes have continued and special attention is being given to new compounds that have shown promise as substitutes for the chlorinated hydrocarbons. A particular success has been the adoption of malathion for louse control.

A scientific group on research in insecticide resistance and vector control met in January to draw up an intensified programme of search for immediate counter-measures to resistance, including the testing of new insecticides. Seven institutes in different parts of the world are collaborating in the search for substitute compounds and their directors attended a scientific group on research on the evaluation and testing of insecticides convened by WHO in November. A comprehensive integrated programme of work was agreed on, in which it is hoped to test and evaluate, in the laboratory and in the field, some 200 to 300 new insecticides a year.

Environmental Biology

There are now at least fifty species of insects of public health importance that show resistance to one or more of the insecticides used in field operations. Many of these species are important disease vectors and their presence in the areas of field control operations has jeopardized the success of these campaigns.

The scientific group in January 1959 critically reviewed the broad recommendations of the 1957 Technical Conference on Insecticide Resistance and recommended aspects of the problem on which long-term investigations might produce information of practical importance for dealing with the resistance problem. A programme based on the findings of the group has been proposed under which grants will be made for research in genetics and cytology, biochemistry, physiology, ecology and potential modifications to the environment. Assistance to long-term investigations on resistance is no innovation since six grants were given in 1957 for this purpose by WHO and four grants in 1958.

During the year, visits have been made to and reports received from research workers on insecticide resistance and vector control in Australia, Belgian Congo, Bulgaria, Central African Republic, Republic of the Congo, Czechoslovakia, Greece, Liberia, Nigeria, Poland, Romania, Tanganyika, Union of South Africa, United Arab Republic (Province of Egypt), and Yugoslavia. These visits have provided further sources of data for the Information Circulars on Insecticide Resistance (issued six times a year) and
a wider distribution of the information in the circu-
lars; and in this way have strengthened co-operation
and collaboration between scientific workers in
most countries of the world.

The Organization has provided technical co-ordi-
nation and has made suggestions for the scientific
bases of practical standard test methods for detecting
in the field physiological or behaviouristic resistance
in various insect vectors of disease. Provisional
methods for use with adult sandflies, fleas and bed-
bugs have been worked out during the year and
preparations have been made to extend those methods
to adult and larval black-flies, tsetse flies, houseflies
and cone-nosed bugs.
A country cannot have a comprehensive national health service fully adapted to its special needs and characteristics until it is able to train its own health workers effectively. An important part of WHO's assistance in strengthening national health services must therefore be given to the training of teachers, not only in the subjects that they will have to teach but in effective methods of teaching, for good knowledge of a subject is in itself not enough without the ability to transmit that knowledge to the student. Only a minority of teachers have this natural aptitude and the skill has usually to be acquired by training. Without it, teaching is economically and educationally wasteful because good material is constantly being lost through defective communication, and students are deprived of the daily stimulus of interest in their work and the give-and-take of lively discussion. It has been observed in a number of medical schools that failures in examinations are common when teaching standards are low, as learning degenerates into the mere accumulation of undigested facts in a notebook.

The programme of teacher training with which WHO is specially concerned falls into two categories. The first is designed to provide special instruction for teachers who already possess a high degree of scientific or professional attainment and require only additional training and practice in teaching methods. An effective approach to this problem would be to establish in each region one or more teacher training centres to which students could be sent either in the course of post-graduate studies or for a special period of instruction.

The second category is for those who require a course of training to enable them to teach efficiently the large numbers of auxiliary health workers who are essential for the development or maintenance of health services in many countries under present conditions.

The whole subject of the training of auxiliary workers is to be discussed by an expert committee in 1960; in preparation for that meeting WHO has studied the problems involved and drawn up a comprehensive scheme of training which, with the assistance of the regional offices, is being tested in about forty countries selected to represent the different conditions that must be provided for. The results of those tests will be considered by the expert committee.

Training Courses

In all the regions shortage of trained staff is a serious hindrance to the growth of comprehensive and efficient national health organizations, and is likely to remain so for some years. The project list in Part IV shows the number and variety of projects whose sole or main purpose is education or training: they include assistance to or promotion of medical schools or schools of nursing, courses for other kinds of training, provision of national or regional training centres, travelling seminars and interchange of visits. Experience has shown that some types of specialized training can best be provided at certain centres which receive international assistance, as the subject may be too specialized to warrant its inclusion in the normal national curricula, or the facilities required may not be readily available in all countries. WHO has provided assistance for several such courses and some of them have been repeated annually for some years. Examples are the anaesthesiology courses in Copenhagen, which are attended by WHO fellows from all regions, the courses on radiation protection at Saclay, France, and Harwell, England, and the courses given at the Pan American Zoonoses Center and at the Latin American Center for Classification of Diseases.

There are certain difficulties peculiar to international courses, of which the language problem is the most obvious, and many of them apply also to national courses which students from other countries are assisted to attend. A typical national course, for example, particularly in a developed country, will assume that its students are being trained to work among people of that country's standards of living and culture and will have the support of the health and medical organizations that are there available. Such a course will not provide the most suitable training for students from countries of a different culture or in which the supporting facilities are not yet provided.
It is already clear that more attention to the selection of candidates would increase the value of most courses. To do this effectively, it is necessary that the selectors must have before them a clear statement of the purpose of the course and that preparations must be made well in advance, to give time for a judicious selection. It is important also to be sure that the practical and theoretical sides of the instruction given are properly related to each other and are suited to the needs of the students selected.

On the other hand, it has been found that the presence of foreign students often increases the value of the course to students of the country where the course is given: the teaching is widened to meet the needs of the foreign students, and in postgraduate public health courses, for example, the members of the class also profit from their different health experience, point of view and cultural approach.

Second World Conference on Medical Education

"Medicine — a Lifelong Study" was the general theme of the Second World Conference on Medical Education, which was held in Chicago in August, under the auspices of the World Medical Association in collaboration with WHO, the Council for International Organizations of Medical Sciences, and the International Association of Universities. The Director-General delivered an address of welcome and several members of WHO headquarters and regional staff took part in the proceedings, which occupied seven days. Reports of the Conference have been widely published, particularly in national professional journals.

Visiting Teachers

WHO has continued to assist in the development of teaching by assigning teachers and advisers in particular subjects, one of whose duties is to prepare local staff to carry on the teaching functions which the visiting professors are temporarily discharging. In 1959, a total of 1158 months was served by 129 teachers in 19 disciplines in 27 countries (see table below).

### PROFESSORS ASSIGNED TO MEDICAL, PUBLIC HEALTH AND OTHER SCHOOLS IN 1959

<table>
<thead>
<tr>
<th>In medical, public health and nursing schools</th>
<th>By Subject</th>
<th>Professors</th>
<th>Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomy</td>
<td>2</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Biology</td>
<td>1</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Environmental sanitation</td>
<td>16</td>
<td>141</td>
<td></td>
</tr>
<tr>
<td>Health education</td>
<td>1</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Internal medicine</td>
<td>1</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Medical physics</td>
<td>1</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Mental health</td>
<td>1</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Nursing</td>
<td>73</td>
<td>725</td>
<td></td>
</tr>
<tr>
<td>Nutrition</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Obstetrics and gynaecology</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>1</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Paediatrics</td>
<td>2</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Pharmacology</td>
<td>1</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Physiology</td>
<td>3</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>Preventive and social medicine</td>
<td>6</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>Public health</td>
<td>1</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Radiology</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Social and occupational health</td>
<td>7</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>Surgery</td>
<td>1</td>
<td>1</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>In other educational institutions</th>
<th>Professors</th>
<th>Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auxiliary personnel</td>
<td>8</td>
<td>78</td>
</tr>
<tr>
<td>129</td>
<td>1158</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>By Country</th>
<th>Professors</th>
<th>Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>8</td>
<td>73</td>
</tr>
<tr>
<td>British Solomon Islands</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Burma</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>Cambodia</td>
<td>7</td>
<td>56</td>
</tr>
<tr>
<td>Ceylon</td>
<td>5</td>
<td>31</td>
</tr>
<tr>
<td>China</td>
<td>4</td>
<td>37</td>
</tr>
<tr>
<td>Cyprus</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>4</td>
<td>48</td>
</tr>
<tr>
<td>Fiji</td>
<td>2</td>
<td>24</td>
</tr>
<tr>
<td>India</td>
<td>19</td>
<td>174</td>
</tr>
<tr>
<td>Indonesia</td>
<td>5</td>
<td>53</td>
</tr>
<tr>
<td>Iran</td>
<td>8</td>
<td>79</td>
</tr>
<tr>
<td>Iraq</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>Israel</td>
<td>4</td>
<td>39</td>
</tr>
<tr>
<td>Lebanon</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Libya</td>
<td>5</td>
<td>54</td>
</tr>
<tr>
<td>Nepal</td>
<td>5</td>
<td>60</td>
</tr>
<tr>
<td>Nigeria</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Pakistan</td>
<td>4</td>
<td>30</td>
</tr>
<tr>
<td>Philippines</td>
<td>3</td>
<td>19</td>
</tr>
<tr>
<td>Singapore</td>
<td>4</td>
<td>45</td>
</tr>
<tr>
<td>Somalia</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>Sudan</td>
<td>6</td>
<td>67</td>
</tr>
<tr>
<td>Thailand</td>
<td>5</td>
<td>38</td>
</tr>
<tr>
<td>United Arab Republic</td>
<td>15</td>
<td>112</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>4</td>
<td>39</td>
</tr>
<tr>
<td>Zanzibar</td>
<td>1</td>
<td>12</td>
</tr>
</tbody>
</table>

129 | 1158 |
Fellowships

Another method of improving the education and training of medical and allied personnel has been to provide opportunities for studies and observation abroad.

Since 1947 more than 10 000 fellowships for studies and observations abroad have been awarded. The total for the year 1959 (1 December 1958 - 30 November 1959) is 1431. Of these 56 per cent. went to physicians, 12 per cent. to nurses and midwives, 7 per cent. to sanitarians, and 25 per cent. to other health personnel. Of the fellows, 22 per cent. were women.

The average period of study abroad was 5.6 months. Of the fellows, 22 per cent. attended courses organized or assisted by WHO, 27 per cent. were admitted to other courses in academic institutions, and 51 per cent. had only a period of practical training or observation abroad.

The average age of the fellows was 37 years. Most of the fellows came from various health services, but 18 per cent. were on the staff of teaching institutions and 6 per cent. from research institutions. A further 5 per cent. of the fellows were young persons studying for basic professional qualifications abroad, for which no training facilities existed in their countries.

The table below analyses the 252 fellowships awarded to staff of teaching institutions, showing the type of institution and category of staff.

Fellows came from 112 countries and visited 89 countries. On an average a fellow visited 1.5 countries.

Major countries of study (those receiving more than 5 per cent. of the fellows) were: the United Kingdom, the United States of America, France, Denmark, Sweden, India, the Netherlands, and the United Arab Republic (Province of Egypt).

Details of the subjects of study are given in Annex 11. To summarize, 60 per cent. of the fellowships were for the study of public health organization and health promotion, 22 per cent. for the study of communicable diseases, and 18 per cent. for basic medical sciences and education.

The constant concern to ensure that the fellowships programme serves the purposes for which it is intended has been mentioned in earlier Annual Reports. WHO's method of appraising fellowships has been worked out by trial and error. To compare this experience with that of other organizations and to review the general question of appraisal of fellowships, a study group was called in 1959. It discussed the various objects of fellowships appraisal, planning and criteria for the purpose, the methods used, and aspects of appraisal that required further investigation. The study group annexed to its report a list of suggested criteria by which the efficacy of fellowships might be assessed.

Fellowships are not the only way in which WHO enables persons to travel abroad for educational purposes. A number of meetings are called yearly by WHO, the main purpose of which is the exchange of information between scientists from many parts of the world. Particulars of such meetings are given in the project list in Part IV.

FELLOWSHIPS TO STAFF OF TEACHING INSTITUTIONS
(1 DECEMBER 1958 - 30 NOVEMBER 1959)

<table>
<thead>
<tr>
<th>Type of Institution</th>
<th>Full Professors 1</th>
<th>Others 2</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schools of:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medicine (including post-graduate)</td>
<td>39</td>
<td>121</td>
<td>160</td>
</tr>
<tr>
<td>Public health and/or tropical medicine</td>
<td>4</td>
<td>26</td>
<td>30</td>
</tr>
<tr>
<td>Nursing and midwifery</td>
<td>7</td>
<td>36</td>
<td>43</td>
</tr>
<tr>
<td>Engineering and sanitation</td>
<td>1</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Other teaching institutions</td>
<td>4</td>
<td>9</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>197</td>
<td>252</td>
</tr>
</tbody>
</table>

1 Deans, directors and chargés de cours
2 Assistants, agrégés, and dozents
CHAPTER 6

MEDICAL RESEARCH

In resolution WHA11.35 the Eleventh World Health Assembly requested the Director-General to conduct a study of the role of WHO in research and to prepare a plan of research based on that study. The study and plan with cost estimates were to be transmitted to the twenty-third session of the Executive Board and to the Twelfth World Health Assembly.

The study on the role of WHO in medical research was presented to the Board, but it was not possible to prepare the detailed plan of research in the short time available. The Board considered the study in detail, endorsed the principles outlined in it and authorized the Director-General to continue the planning and to submit his proposals, with budget estimates, to the Twelfth World Health Assembly.

The plan of research was evolved in two phases. First, a review was made by the Secretariat — with whatever consultant help was needed — of all research recommendations of previous expert committees and study groups. Then a series of meetings of what have been called scientific groups was convened to evolve in some detail proposals for research suitable for international action in accordance with the principles endorsed by the Board.

The plan for research thus submitted to the Twelfth World Health Assembly made no claim to comprehensiveness, but was devised as a logical expansion of the established WHO programme; it took into account the limitations which the present stage of scientific development imposes on the investigation of certain problems and was based on an estimate of the personnel and material resources likely to be available.

The choice of the scientific domains for the proposed WHO research programme was based on the following considerations:

In the world as a whole, communicable diseases are still the greatest hazard to man's health and in many parts of the world they are clearly the outstanding health problem. WHO has for a number of years promoted the co-ordination of research on communicable diseases and there is therefore a sound basis for expansion. Within this large domain of the communicable diseases, special attention has been given to research on problems of the virus diseases — because their significance is increasing — and on those of diseases prevalent in tropical countries.

In the highly-industrialized countries chronic diseases — metabolic, degenerative and neoplastic — have become health problems of prime importance. Research in cancer and cardiovascular diseases was therefore a natural choice for the plan of the initial year.

Many health problems arise from the rapidly expanding use of fissionable materials for peaceful ends, and the consequent increasing exposure of man to ionizing radiations, so that medical research on those problems is one of the highest priorities of our age. Closely connected are the effects of ionizing radiations on generations unborn and therefore research in radiation biology and medicine and human genetics has been included in the initial programme.

Next to the communicable diseases, problems of nutrition are of the widest significance for the health of the world. Nutrition is also closely concerned in some of the important problems of cancer and cardiovascular diseases, and of certain infections and infestations. WHO has already engaged in some relevant research and the programme proposals for the initial year are its logical continuation.

The scientific domains mentioned are interrelated in many ways: there are, for instance, the borderlands between virus and cancer research, between cancer research and ionizing radiations, between ionizing radiations and genetics. The connexions between research in nutrition and other fields have already been mentioned.

The Twelfth World Health Assembly approved in principle the plan of research proposed for the initial year 1960, decided that an Advisory Committee on Medical Research should be set up to provide the Director-General with the necessary scientific advice and also requested the Director-General to continue research planning, with the assistance of the Advisory Committee, and to report to the twenty-fifth session of the Executive Board on the plans and priorities proposed.

Research planning therefore continued throughout the year. Five scientific groups had met in 1958 and there were twenty-five such meetings in 1959, in which a total of 222 consultants and temporary
advisers from all parts of the world took part in the extensive planning.

The Director-General also proceeded to set up the Advisory Committee on Medical Research. The Assembly had decided that its chairman should be appointed by the Director-General but made no provision as to its size; the Director-General decided that it should consist of eighteen members in addition to the chairman.

Members of the Advisory Committee were appointed for four, three or two years, one-third to each group, so as to assure rotation of membership after the first two years. Dr Arvid Wallgren, Professor Emeritus of Paediatrics, Karolinska Institut, Stockholm, was appointed Chairman.

The Assembly made provision in the regular budget for the intensified medical research programme and also set up a Special Account for Medical Research to which should be credited any voluntary contributions that might be received. The Special Account is to be used to supplement the provision made in the regular budget for the World Health Organization's extended assistance to medical research programmes.

These decisions of the Twelfth World Health Assembly have made medical research a major regular programme activity of the Organization. The Director-General has accordingly terminated the provisional Special Office for General Medical Research Planning (whose function was merely to expedite the implementation of resolution WHA 11.35) and formed, as part of the headquarters organization, reporting directly to him, the Office for Research Planning and Co-ordination, to act as the Secretariat of the Advisory Committee on Medical Research.

The Advisory Committee on Medical Research met for the first time from 7 to 16 October. It reviewed the Organization's current and proposed research programme, which had been based on the reports of the several scientific groups, and in this way the Director-General has been able to use the advice of the Committee in drafting his proposals for the research programme and budget, for 1960 and 1961.

Besides the priorities in subject matter, certain priorities also had to be established for the types of research to be undertaken within each subject. The main emphasis has been given to a group of functions that may be called services to research. Those are services designed to assist research workers, in their several fields throughout the world. Among them is the standardization of nomenclature, techniques and equipment in order that findings and results arrived at in different countries may be comparable. Closely connected with such standardization is the expansion of the WHO system of international reference centres for the identification of certain types of viruses and malignant tumours. International scientific communications will be further promoted by a series of small meetings of research workers in selected fields and by an exchange of scientists concerned in WHO-supported research projects.

Original investigative work will also be supported by technical advice and grants in aid. Within this category, first priority is accorded to co-ordinated collaborative research in selected subjects, by scientists in different laboratories and countries, working according to agreed and uniform protocols. In the same class are certain epidemiological field studies, field trials of vaccines or drugs, and certain population studies covered by the programme.

To ensure the proper allocation of grants in aid of individual research, a procedure has been prescribed to govern applications for, and the award of, research grants; and an information booklet and application forms have been prepared for interested scientists and organizations.

The training of research workers will be an increasingly important part of the programme and two types of training awards are being provided. The Senior Research Training Award is designed to bring forward the future leaders of medical research. Candidates will be chosen by a group of men of recognized distinction in research, and applicants must give evidence of proven research ability. The Junior Research Training Award will give a chance to promising young graduates to show whether they can develop into investigators.

An international programme of medical research on this scale has not been previously undertaken. The administrative organization necessary to the programme must be built up carefully, for the established patterns of national research organizations are seldom appropriate.

At the end of 1959, nevertheless, programme planning and administrative and organizational arrangements were sufficiently advanced for the intensified research programme to start at the beginning of 1960.
Work on the health aspects of ionizing radiation and radioactivity, and on problems of human genetics, increased during 1959. This increase was due to experience that the Organization has gained in dealing with such questions, to the rapid growth in the number and complexity of health problems connected with radiation and to a better appreciation of the public health responsibilities that arise from those problems.

The work falls under three broad heads: (1) health problems arising from or connected with the use of ionizing radiation or radioactive materials for various purposes; (2) medical and health uses of radiation and radioactive isotopes; and (3) human genetics in relation to radiation.

The Expert Committee on Radiation, which met in Geneva at the end of September 1959, discussed medical supervision in radiation work and considered the basic health questions that are associated with occupational exposure to ionizing radiation. It examined many aspects of occupational contact with radiation and radioactive materials with a view to helping countries to develop policies in this field. Representatives of ILO and of the International Atomic Energy Agency (IAEA) attended the meetings.

The need for personnel trained in radiation health becomes more acute as the use of ionizing radiation and radioactive materials grows and as the use of atomic energy expands in many countries. For this reason, in WHO's programme stress has again been laid on training. In addition to the award of fellowships, which are particularly important in providing a thorough educational background and training for advanced technical work, two special training courses on the public health aspects of radiation protection were again organized this year in Europe. One was held at Saclay with the co-operation of the Ecole nationale de la Santé publique and the Institut des Sciences et Techniques nucléaires (Commissariat à l'Energie atomique), and the other at Harwell, with the co-operation of the United Kingdom Atomic Energy Authority. An inter-regional seminar on the public health aspects of radioactive-waste disposal was held at Saclay in November for public health administrators, sanitary engineers and others who have public health responsibilities in this matter.

A representative of the International Atomic Energy Agency gave a talk at this seminar and an observer from the European Nuclear Energy Agency was present.

WHO has worked closely with IAEA on training in the various public health aspects of radiation. A seminar on medical radioisotope scanning was organized jointly by the two organizations in February 1959. At a seminar on atomic energy and its educational problems, sponsored by IAEA and UNESCO, a representative of WHO presented a paper on "The Role of International Organizations in Nuclear Education" and took part in the discussions.

Apart from the activities mentioned, WHO and IAEA have continued joint work during 1959. A representative of WHO took part in the discussions of the IAEA Panels on the Transportation of Radioisotopes and Radioactive Ores and Residues of Low Specific Activity and on the Transportation of Large Radioactive Sources and Fissile Materials, and attended the meetings of the IAEA Panel on Radioactive Waste Disposal into the Sea. In August 1959 WHO and the IAEA jointly sponsored a study group on the use of radioisotope teletherapy units and supervoltage radiation in radiotherapy. This study group made recommendations for practical guidance in the treatment of cancer by radiotherapy. Representatives of WHO were present at the IAEA Scientific Conference on the Disposal of Radioactive Wastes and worked on a panel which prepared a medical addendum to the IAEA manual Safe Handling of Radioisotopes.

Much of the Organization's work on radiation and health has been done in collaboration with other international bodies. At the suggestion of the United Nations Scientific Committee on the Effects of Atomic Radiation, WHO is working on medical radiation and on epidemiological studies of radiation-induced disease in co-operation with the International Commission on Radiological Protection and the International Commission on Radiological Units and Measurements, two non-governmental organizations in official relationship with WHO. WHO is cooperating with FAO on radionuclides in food and, as part of this work, representatives of WHO presented a paper on "The Hazard to Man arising from
Radioactive Contamination of Food and Water” to the FAO Expert Committee on Radioactive Materials in Food and Agriculture. Plans are also being made for a joint United Nations/WHO seminar on the adaptation and use of national vital and health statistics for genetic purposes. WHO participated in the discussions of the Radiation Committee at the 43rd International Labour Conference and an observer from WHO attended the Symposium on Technical Methods in Health Physics, organized by the European Nuclear Energy Agency and the Danish Atomic Energy Commission at Risø, Denmark.

Research in radiation and in human genetics has been an important part of the programme for 1959. WHO took part in a meeting at the Fondation Curie, in Paris, on the Treatment of Radiation Injury, and in a symposium, organized by the IAEA and UNESCO, on the immediate and low level effects of ionizing radiation. The broad aspects of radiological public health have been examined, with particular reference to the role of domestic animals and to the contribution that the veterinary surgeon might make to research in this field. Three meetings were held during the year in connexion with WHO’s intensified programme of medical research: at Ann Arbor in April, there was an informal meeting of advisers on research in human genetics, and two scientific groups were convened in Geneva — the first, in April, to consider radiobiology and research aspects of the treatment of radiation injury, and the second, in May, to consider new methods of research in human genetics.

A meeting of consultants on the public health aspects of radiation was organized in Copenhagen in April; they considered the health implications, for the community and for the individual, of the increasing use of ionizing radiation, the future problems and responsibilities of national public health departments, and the type of research work that might best be promoted by WHO.

During 1959 a member of the staff visited Sudan, Lebanon and the United Arab Republic (Province of Syria) to advise, in Sudan, on the provision of an institute for the treatment of cancer by radiotherapy and, in the three countries, on radiation and radiation protection.
CHAPTER 8

HEALTH STATISTICS

WHO has continued to assist Member countries to obtain the fullest possible statistical data on which to base their health work and for that purpose to expand and improve their health statistical services. Information about the leading causes of death in their country can help health authorities in planning action to reduce mortality. A large proportion of the total deaths in any country is due to comparatively few causes of death, so that specific action to reduce mortality from those causes might have a marked effect in lowering general mortality.

For the purpose of a study published in 1959, twelve countries were selected, in which statistics of causes of death have been regularly issued for some time and where the standard of medical practice is such as to produce reasonably reliable certification. The mortality data for those countries were analysed to show the ten leading causes of death in each, first for all ages and then for six age-groups. In the twelve countries as a whole the four most frequent causes of death were heart diseases, malignant neoplasms, vascular lesions affecting the nervous system, and accidents. The relative importance of the ten leading causes of death was not the same in all twelve countries or in different age-groups. Analytical tables, with comments, were published in the Epidemiological and Vital Statistics Report.1

Statistics of causes of death are not available for every country; sometimes they are available but of doubtful quality. It is therefore not possible to analyse cause-of-death statistics for many geographical areas in a way which would bring out differences which might lead to discovery of the etiological factors most important for public health work. Such an analysis might be misleading because of incomplete or incorrect cause-of-death statistics, which could not be validly compared from one area to another.

In the Annual Epidemiological and Vital Statistics the arrangement of the material has been modified so as to facilitate its use by statistical workers and national public health officers, but not so as to lose continuity with the data already published. To facilitate comparison and the study of time trends, relative figures, such as rates and percentages, have been given more fully than in previous volumes. The report for the year 1956 will be published early in 1960.

The Eleventh World Health Assembly asked the Director-General to make recommendations as to how WHO can best assist countries to organize and develop their health statistical services. One of the points specially mentioned in the Assembly's resolution is the dissemination of information on various statistical systems, and a survey has therefore been started of the practices and procedures used in different countries for compiling vital and health statistics.

For international use, statistics must be based on uniform principles so that they are comparable. Following up work in previous years, a survey was carried out on teaching and training in the medical certification of cause of death. This survey provided data for discussion in the Working Group on Education and Training on Medical Certification, which met in May at the Latin American Center for the Classification of Diseases, Caracas, Venezuela, to review the present level of training in medical certification, particularly that given to medical students. The Working Group also discussed educational methods and techniques.

One of the obstacles to the planning of programmes for African economic and social development is the lack of demographic and other statistics. During the year WHO took part in several meetings convened by international organizations to discuss methods of obtaining the necessary statistics in the special conditions found in tropical Africa. A seminar on African demography was organized by the International Union for the Scientific Study of Population, and the Economic Commission for Africa convened its first conference of African statisticians, to review the present position with regard to statistics in Africa — including vital and health statistics. The Sub-Committee on Geographical Pathology for Africa of the International Union against Cancer held a second session. The discussion of recent cancer surveys in Africa showed that much progress had been made in the use of statistical techniques and that further such progress would be possible. Plans

1 Epidem. vital Statist. Rep., 1959, 12, 116-170
for the improvement of vital and health statistics in Jordan and in the Northern and Southern Provinces of the United Arab Republic were discussed with the authorities of the two countries.

A paper on morbidity in under-developed areas, presented by the WHO representatives at the International Population Conference convened by the International Union for the Scientific Study of Population, called particular attention to the reduction of morbidity, and the consequent increase in the working capacity of the population, in areas where public health campaigns had been carried out. This effect was in several respects more significant than the reduction in mortality and the resulting increase in population.

An active part was taken in the meeting sponsored by the United Nations in connexion with its Programme on Measurement of Levels of Living, to which reference has been made in previous Annual Reports; and methodological studies were continued, especially the search for suitable "indicators" of health. In a Working Party on Statistics for Social Programmes, convened by the United Nations in Geneva in September, the WHO representatives reviewed the significance of the various items relating to health, and suggested that a manual of household surveys should be prepared, to which each specialized agency would contribute descriptions of techniques and criteria relating to its own field.

Studies have been made of various aspects of the Organization's own programme. These have included studies of systems for collecting data on dental health and of methods for securing international comparability in statistics on dental caries. Statistical information was collected for a study on prevention of accidents in childhood. Record cards and recording procedures suitable for other technical branches of the Organization's work have been devised and sound statistical techniques for their purposes have been worked out. For instance, a manual on statistical methods applicable in malaria eradication campaigns was prepared for the use of malaria teams in different parts of the world: clinical, therapeutic and epidemiological material collected by WHO field workers in many specialties has been statistically analysed to determine its significance and with a view to publication.

Statistical advice has been provided during the year for expert committee meetings and study groups on the epidemiology of cancer of the lung, mental health, tuberculosis, and food-borne infections and intoxications.

In order to facilitate the work of a study group on causes of stillbirth, which is expected to meet in 1960, a review was undertaken of the experience of a number of hospitals and maternity and child health centres in classifying causes of stillbirth according to the International Classification of Diseases.
CHAPTER 9

BIOLOGY AND PHARMACOLOGY

Biological Standardization

The number of biological substances for which international standards or international reference preparations are available at the international laboratories for biological standards in London and Copenhagen now exceeds one hundred. The Expert Committee on Biological Standardization, which met in September, established International Reference Preparations of the antibiotic Viomycin which is active against the tubercle bacillus, the antistaphylococcal antibiotics Kanamycin and Vancomycin, and the antifungal antibiotic Amphotericin B; and International Standards for Antistreptolysin 0 serum and Swine Erysipelas vaccine.

Progress was made in the standardization of vaccines and of diagnostic reagents. The requirements for smallpox vaccine that had been formulated by a study group in 1958 \(^1\) were studied by the Expert Committee on Biological Standardization, which suggested a few amendments, and agreed that the formulation of those criteria was a useful contribution to the effective control of smallpox vaccines produced in laboratories in all parts of the world. The Expert Committee took steps towards providing international standard preparations of this vaccine and of anti-vaccinia gamma globulin. Arrangements were also made for the preparation of two large quantities of typhoid vaccine, one acetone-killed and dried and the other heat-killed, phenolized and freeze-dried, which will be tested in field trials for the purpose of establishing an international reference preparation of typhoid vaccine of known efficacy in the field (see also Chapter 2, page 15). Two proposed international reference preparations of poliomyelitis vaccine were distributed to a large number of laboratories for comparative testing.

WHO's assistance to medical research is likely to include the distribution to laboratories of reference materials such as reagents used in the diagnosis of disease. Among those are diagnostic sera for the identification of more than one hundred different respiratory, enteric and other viruses. International standardization is necessary in order to base the calibration of such sera for potency and specificity on common points of reference. Preliminary steps were taken to deal with the standardization aspects of this extended WHO service.

A study group on general requirements for the sterility of biological substances was convened in April. It formulated general criteria for the absence of harmful micro-organisms which should be satisfied by biological preparations used in human medicine. The Expert Committee discussed the criteria and considered them satisfactory.

Pharmaceuticals

A Supplement \(^2\) to volumes I and II of the first edition of the International Pharmacopoeia was published in 1959 in English and French editions and was presented at the XIXth International Congress of Pharmaceutical Sciences. It includes ninety-four monographs on medicinal substances and pharmaceutical forms, with a number of appendices which describe new methods of analysis and give the posology for adults and for children, and graphs and tables for the preparation of solutions isotonic to human tissue, blood and lachrymal fluid. A Spanish edition is in preparation. The text of the Supplement was previously circulated to Member States and other authorities for their consideration, and the information received was examined by members of expert committees and other specialists before the final text was prepared. Volumes I and II of the International Pharmacopoeia have been published in German, Japanese and Korean. The specifications of the International Pharmacopoeia are used in different countries as references in the establishment of their national specifications; which makes for uniformity of requirements, facilitates international commerce and contributes to the protection of the public health.

The work of drawing up specifications for pharmaceutical preparations is of growing importance in view of the increase in the number of new pharmaceutical substances that are introduced year after year into therapeutics. National authorities and a

\(^1\) Wld Hlth Org. techn. Rep. Ser. 1959, 180

larger number of experts than before, including manufacturing firms, collaborated in the preparation of a second edition of the International Pharmacopoeia. Collaborative assays are being undertaken in order that specifications may be based on modern methods of analysis, and that all specifications recommended in the first edition may be tested in different laboratories. The preparation and distribution of technical information on assay methods has been continued, to assist the maintenance of a standard of quality and potency in pharmaceutical preparations sufficient for the protection of public health. Studies have been made on the laboratory and administrative control of pharmaceutical preparations in different countries. Co-operation has been continued with UNESCO, FAO, the International Organization for Standardization, the International Union of Pure and Applied Chemistry, the World Medical Association and the International Pharmaceutical Federation.

The seventh, eighth and ninth lists, comprising 124 names, of proposed international non-proprietary names for new pharmaceutical substances recently introduced into therapeutics were issued, and a third list of 269 recommended international non-proprietary names. They were selected in collaboration with the members of the Expert Advisory Panel on the International Pharmacopoeia and Pharmaceutical Preparations designated for the purpose. The names are intended to prevent the confusion arising from a multiplicity of common names for the same medicinal substance. Some of the names concern drugs liable to produce addiction and are used for their international control. To date 764 pharmaceutical substances have thus been given proposed international non-proprietary names; and a considerable number of those names are used officially, for labelling and in regulations.

**Addiction-producing Drugs**

WHO is required to give to the several United Nations organs concerned with the international control of narcotic drugs medical advice on the chemical, physiological, medical and administrative aspects of drug addiction and addiction-producing drugs. At the invitation of the Economic and Social Council or its Commission on Narcotic Drugs WHO is therefore engaged on a series of studies, the most important of which are mentioned below. These entail work lasting a number of years and have been mentioned in previous Annual Reports.

The work continued in 1959 on the medical problems and possibilities of the prevention of drug addiction included the presentation to the Commission on Narcotic Drugs of a report on drug addiction in Denmark, with special reference to preventive measures and their results. The latter report shows how the use of the card index of drug addicts compiled by the Danish National Health Service has enabled the authorities to centralize and improve the control of narcotic drugs, principally by making it possible to trace the largest category of addicts — those who obtain prescriptions from several doctors and present them to different pharmacies. The concluding section of the report deals with the control of addiction among physicians.

Early in the year WHO presented to the Commission on Narcotic Drugs a technical study on medical aspects of the carriage of narcotic drugs in first-aid kits of aircraft engaged on international flights. The study, undertaken on the invitation of the Council of ICAO, led to the conclusion that narcotic drugs in limited quantities are required in the emergency first-aid kits of aircraft engaged on international flights, and that their theft or diversion to improper use can be prevented by suitable precautions (which are suggested in the report). The Economic and Social Council accepted this view at its twenty-eighth session in July 1959 and in resolution 730 G (XXVIII) asked the United Nations with WHO, ICAO and the International Criminal Police Organization to prepare for recommendation to governments a set of requirements on the use of narcotic drugs in these first-aid kits. A meeting of the organizations concerned, to discuss these requirements, has been arranged for January 1960.

At the same session, the Economic and Social Council invited WHO to report on the use of cannabis for the extraction of useful drugs, particularly those of the antibiotic type. This request arose from certain reports which suggested that antibiotics might be extracted from the resinous parts of cannabis.

As part of a study of the medical aspects of the chewing of khat leaves, the investigation was continued of the chemical and pharmacological properties of the leaves.

In preparation for the plenipotentiary conference on the Single Convention on Narcotic Drugs, the Organization, on the invitation of the Commission on Narcotic Drugs, has revised the list of preparations exempted from international narcotics control, and has commented on the third draft of the Single Convention on Narcotic Drugs. There have also been frequent technical consultations with the United Nations organs and others on the current lists of internationally controlled drugs.
The Expert Committee on Addiction-producing Drugs, which met in October, examined experimental and clinical evidence on the addiction liability of new drugs with morphine-like analgesic action. On its recommendation, the Director-General decided that eight new substances with morphine-like effects should be placed under international control and the relevant decisions were notified to the Secretary-General of the United Nations. The Committee also drew attention to the lack of a common basis for compiling statistics of drug addicts and to the need for more research on a number of problems of drug addiction. As in previous years, the Expert Committee's report, especially the part of it dealing with the international control of narcotic drugs and the Single Convention on Narcotic Drugs, will be dealt with by the United Nations narcotics control organs.
Since 1956 the State Government of Madras, the Indian Council for Medical Research, WHO and the British Medical Research Council have been collaborating in a research project to determine how satisfactorily home treatment of tuberculosis with modern drugs can replace hospitalization — an urgent problem in a country where there are at least a hundred active cases for every tuberculosis hospital bed.

(1) A patient being prepared for x-ray examination (tomographs) after a year’s treatment.

(2) A WHO doctor with two of the health visitors, one of whose important tasks is to ensure, by unannounced visits, that patients carry out their treatment schedules correctly.

(3) A patient is shown radiographs taken before and after treatment.
Since late in 1957 UNICEF and WHO have been assisting the Government of Kenya in a programme of tuberculosis case-finding and contact-tracing followed by chemotherapy and chemoprophylaxis. During 1959 mobile teams, having completed a reconnaissance survey in Nairobi, began work in the villages.

Picture (1) shows the laboratory established in Nairobi. Pictures (2), (3) and (4) were taken during a team visit to the village of Lusigetti (population 6000), 30 kilometres from Nairobi: villagers queue for registration and are individually examined. Finally, pictures (5) and (6) show how sputum samples are collected in specially constructed isolation booths and examined in the project laboratory, where a powerful system of ventilation operating over tables fitted with glass hoods gives maximum protection against infection.
These pictures were taken during a study tour organized by WHO. For five weeks in September-October public health specialists from twenty-three European countries studied the organization and administration of the health services in the Union of Soviet Socialist Republics.

(1) Visiting the paediatric hospital in Leningrad.

(2) The Sklifosovsky Institute, which serves as Moscow’s emergency hospital and also conducts important research and teaching activities.
CHAPTER 10

PUBLICATIONS AND REFERENCE SERVICES

Some years ago, several members of the Executive Board expressed the view that there was a need for a new WHO journal or series as a vehicle for material of broad public health interest. In reply, it was stated on behalf of the Director-General that this view corresponded closely to a trend of thought that had been developing within the Secretariat. Although the Board took no further action on this suggestion, it was agreed that the Director-General should study the matter. As a result of this study, it was concluded that the present range of publications did not provide completely for all types of material that could usefully be published by the Organization. It was accordingly decided, as an experiment, to launch a new series entitled Public Health Papers. The first number of this series was published during the year. The series is described in an explanatory statement printed on the inside front cover of each number as:

"a medium for the publication of occasional papers that have usually been prepared as contributions to the study by the World Health Organization of a particular health question, and that have been considered to be of interest to a wider circle of readers than those for whom they were originally written".

The declared purpose of Public Health Papers is:

"to stimulate international thinking, discussion, and planning by the publication of the personal ideas, observations, and suggestions of individuals or groups".

It is further pointed out that:

"Reports of work completed under the auspices of the World Health Organization and recommendations of formally constituted international groups are to be found in the Organization's other publications..."

The first number of the new series is a study of Psychiatric Services and Architecture prepared jointly by three WHO consultants. The second, also by a WHO consultant, is on Epidemiological Methods in the Study of Mental Disorders. The third number is an account of health services in the USSR by the participants in a study tour sponsored by the Organization. While the first three numbers consist of single documents, subsequent numbers may contain several contributions on related themes.

All numbers of Public Health Papers are available by purchase from WHO sales agents, but they are also sent without charge to health administrations and schools of public health throughout the world. In addition, each number is sent to members of the corresponding expert advisory panels.

Another new publication issued during the year was the definitive version of the First Report on the World Health Situation (Official Records No. 94), Vaccination Certificate Requirements for International Travel, containing information previously issued as a supplement to the Weekly Epidemiological Record, was for the first time made available as a separate annual publication. Subscribers to this publication periodically receive printed sheets containing particulars of amendments to these requirements.

The periodical formerly known as the Chronicle of the World Health Organization appeared for the first time with the new title WHO Chronicle and with a redesigned cover, and it has now completed its thirteenth annual volume. The multiplication of the Organization's activities, especially in the regions, has made increasing demands on space, and the length of the WHO Chronicle has approximately doubled over the past ten years.

The format and cover of the Bulletin were completely redesigned, starting with Volume 21, and it now has a larger page area with smaller print in double columns. The new presentation has the advantage of being at the same time more easily legible and more economical, while there is more scope for the convenient placing of tables and of graphs, maps, and other illustrative material. Special numbers—on influenza; malaria and insecticides; prophylactic and therapeutic substances; tuberculosis; diarrhoeal diseases; and mental health—were published in the two 1959 volumes.

When the Organization first published in 1951 the International List of Venereal-Disease Treatment Centres at Ports, complaints were received that the price per copy was too high. The second edition of
this list to be published by WHO, was issued under the new title *World Directory of Venereal-Disease Treatment Centres at Ports*. Although it contains more material than its predecessor, a more economical presentation has made it possible to reduce the sales price by approximately half.

The fourteenth comparative survey of health legislation—on communicable diseases in schools—was published in the *International Digest of Health Legislation*, which completed its tenth volume during the year.

There has been increasing difficulty in keeping pace with demands made on the publishing services, and it was decided that, among the technical publications, priority should be given to periodicals and to the *Technical Report Series*. The total number of issues of the *Technical Report Series* published in the years 1957-1959 was 70, an average of 23 per year. Considering that this series is issued in three languages, a total of 70 titles per year is involved.

In the previous three-year period the average was only 10 issues per year, or a total of 30 titles. In such circumstances, the *Monograph Series* has suffered, and translation and editing of some monographs has had to be postponed for many months. The following monographs were published during the year:

**English**
- No. 42 — *Water Supply for Rural Areas and Small Communities*
- No. 43 — *Cholera*
- No. 44 — *Water Supply for Small Communities*
- No. 45 — *Insecticides and their uses in health work*
- No. 46 — *Water Supply for Rural Areas and Small Communities*
- No. 47 — *Technical Report Series: Health Legislation*
- No. 48 — *Water Supply for Rural Areas and Small Communities*
- No. 49 — *Insecticides and their uses in health work*
- No. 50 — *Water Supply for Rural Areas and Small Communities*
- No. 51 — *Insecticides and their uses in health work*
- No. 52 — *Water Supply for Rural Areas and Small Communities*
- No. 53 — *Insecticides and their uses in health work*
- No. 54 — *Water Supply for Rural Areas and Small Communities*
- No. 55 — *Insecticides and their uses in health work*
- No. 56 — *Water Supply for Rural Areas and Small Communities*
- No. 57 — *Insecticides and their uses in health work*
- No. 58 — *Water Supply for Rural Areas and Small Communities*
- No. 59 — *Insecticides and their uses in health work*
- No. 60 — *Water Supply for Rural Areas and Small Communities*
- No. 61 — *Insecticides and their uses in health work*
- No. 62 — *Water Supply for Rural Areas and Small Communities*
- No. 63 — *Insecticides and their uses in health work*
- No. 64 — *Water Supply for Rural Areas and Small Communities*
- No. 65 — *Insecticides and their uses in health work*
- No. 66 — *Water Supply for Rural Areas and Small Communities*
- No. 67 — *Insecticides and their uses in health work*
- No. 68 — *Water Supply for Rural Areas and Small Communities*
- No. 69 — *Insecticides and their uses in health work*
- No. 70 — *Water Supply for Rural Areas and Small Communities*

**French**
- No. 31 — *Compostage et assainissement*
- No. 32 — *L’enseignement du génie sanitaire*
- No. 33 — *Biologie des treponématoses*
- No. 34 — *Les hôtes intermédiaires de schistosoma*
- No. 35 — *Résistance des arthropodes aux insecticides*

**Spanish**
- No. 33 — *Higiene de la carne*
- No. 34 — *La enseñanza de la higiene y de la sanidad en Europa*
- No. 35 — *Biología de las treponematosis*
- No. 37 — *Los huéspedes intermediarios del esquistosoma*
- No. 38 — *Resistencia de los artrópodos a los insecticidas*
- No. 39 — *Evacuación de excretas en las zonas rurales y en las pequeñas comunidades*

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1 The first, second and third editions were published by the Office International d’Hygiène Publique in 1933, 1955 and 1939.

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Discussions with several of the regional offices on means of improving the distribution of WHO publications were continued. In one region a scheme for reduced subscription rates in local currencies is already in force, and in another a similar scheme has just been announced. As an experiment, 500 copies of a special cheap edition of a monograph were provided for sale within the first-mentioned region, payment to be made direct to the regional office in local currency. Two staff members from headquarters visited one of the regional offices to study and make recommendations on its linguistic services.

The Director of the Division of Scientific and Technical Information of the International Atomic Energy Agency visited headquarters to study the corresponding services at WHO headquarters, and detailed information on WHO publishing practices was sent to ICAO in reply to a questionnaire. There were frequent discussions with FAO on common publishing problems, especially in relation to joint FAO/WHO publications. At the request of the Universal Postal Union, WHO agreed to accept responsibility for printing the special labels that had been agreed upon for the international postal transport of perishable biological materials.

Sales of WHO publications continued to show a progressive increase, the total receipts for the year *amounting to $76,440, an increase of 29.3 per cent. over the previous year. In addition a sum of $23,440 was invoiced but had not been received at the end of 1959. Negotiations were completed or initiated for the appointment of six new sales agents.

Extension of the technical work of the Organization led to increased use of the library. Thus the number of readers increased from 10,167 in 1958 to 11,361 in 1959, the number of loans from 11,586 to 12,335 and the number of copies of periodicals circulated from 33,302 to 39,496. Basic collections of textbooks and monographs and new current periodicals had to be acquired in subject-fields new to the Organization.

A thorough overhaul of the collection of serials became necessary. At the beginning of the year over 2000 medical and scientific periodicals, in addition to over 1600 annual reports, statistical bulletins and official governmental gazettes, were being received. It had long been impossible to house more than a small proportion of this collection in the reading room, and the recording, processing, binding, and
storage had begun to present serious difficulties. During 1959, therefore, the first stage of a comprehensive survey of the collection of serials was completed. In this review, the use being made of each periodical was assessed and it was found that with virtually no impairment to service 127 current periodicals and all but the most recent years of a further 279 could be eliminated. The occasion was taken, too, to offer to appropriate libraries old sets of certain periodicals of only marginal interest to the Organization. As at 30 November 1959, 1780 medical and scientific periodicals were being received, of which 406 were acquired by purchase, 1000 were received in exchange for WHO publications, while the remaining 374 came by donation.

One part of the serial collection was considerably expanded during the year. To extend and complete the collection of calendars, prospectuses, announcements and similar publications issued by medical and public health schools and faculties, a circular letter was sent to all institutions listed in the second edition of the World Directory of Medical Schools requesting them to place the WHO Library on their regular mailing list for such material. A very satisfactory response to this request was received and to date the calendars of approximately 500 medical schools have been acquired for the collection.

Three medico-bibliographical supplements to Library News, the monthly list of recent acquisitions to the WHO Library, were issued during the year. The first, prepared for the occasion of the tenth-anniversary year of WHO, was a bibliography of nearly 400 works—monographs, theses, articles and important editorials—on the World Health Organization, published from 1946 to the end of 1957. The second was a revision of the annotated list, originally issued in 1953, of the indexing and abstracting journals available in the WHO Library. In this new edition an attempt was made to compile an annotated list covering all the more important indexing and abstracting periodicals in medicine and the allied sciences published currently throughout the world. The list of 310 titles gives such information as the name and address of the publisher, the 1959 annual subscription price, the frequency of publication, the number of periodicals regularly scrutinized, the number of abstracts or title entries published, etc., and is supplemented by an index to the principal subjects, to the countries whose literature is abstracted and to the names of publishing or sponsoring institutions or societies. The third supplement was devoted to a revision of the list of periodicals available in the WHO Library, and it contains the titles of some 2500 current and older periodicals.
CHAPTER 11

PUBLIC INFORMATION

The Twelfth World Health Assembly was more widely reported in the European press than previous Assemblies, and this is thought to be due mainly to the growth of general public interest in the Organization. Many of the press clippings received during the year on WHO’s work have dealt with topics such as tuberculosis vaccination programmes, birds that transmit virus infections, antileprosy campaigns, the contamination of milk by radiation, and the misuse of penicillin. On the other hand, the response of the press to information put out about the world malaria eradication campaign has been disappointing.

The Organization has pursued its policy of stimulating writers to produce independent reports and articles on international health work, and has assisted journalists or authors from France, the Soviet Union, Sweden and the United Kingdom to visit headquarters and certain field projects to collect at first hand material about the malaria eradication programme. By this means authoritative articles have been published in leading newspapers in these four countries, and a number of radio talks have been given by the writers concerned. The August issue of the German magazine, *Magnum*, contained 12 pages of articles and illustrations dealing with WHO’s work.

Two of the six issues of *World Health* in 1959 were special numbers on mental health and on health in Africa; a third issue dealt particularly with the training of doctors. An extra 16 500 copies of the mental health number were printed but it was not always possible to satisfy the demand. Twenty thousand extra copies were printed of the African number, of which 15 000 were paid for and distributed by UNICEF. The issue on the shortage of doctors was read with particular interest in European countries, especially by teachers, doctors, nurses and medical students.

Although the *World Health* mailing list was thoroughly revised in 1958, the number of individual requests received since has brought the printing figure back to the earlier levels: 55 000 English, 21 000 Spanish and 17 000 French. Even then it has not always been possible to satisfy requests from societies, groups and associations for further copies.

Press cuttings show that material from *World Health* is being increasingly used, and often themes from it are taken up and given individual treatment in illustrated papers and the daily press in many parts of the world.

Tape recordings have been regularly contributed to radio stations in Austria, Canada (CBC), Federal Republic of Germany, and the United Kingdom (BBC), and in different parts of north and west Africa. As in previous years, the United Nations radio network has been the principal outlet for WHO material, but a number of recordings have been sent also to United Nations information centres in Moscow, Paris and Prague.

It is now evident that, in spite of the growth of television, sound radio continues to reach a very large public, and an effort will be made during the coming year to find more outlets for recorded material and to stimulate the production of local and national radio programmes on health subjects.

Three short films were released by the Organization during 1959: *Waters of Affliction* (English and Arabic), a colour film about bilharziasis on the island of Leyte in the Philippines; *Lutte contre la Lèpre*, a black and white film in French, dealing with the antileprosy campaign in the former French Equatorial Africa; and a colour film, produced in 1958, on the work against eye diseases in Morocco. This last film, entitled *Open Your Eyes*, has been made in Arabic, English and French. It is now being distributed in Morocco and the Eastern Mediterranean Region and, jointly by WHO and UNICEF, in the Americas.

The most recent figures for television showing of the tenth anniversary film *People Like Maria* indicate that it has been seen by 26 million people. Copies on 16 mm film are now being distributed in circuits outside the commercial cinema. WHO films have been supplied to British, French, American and Scandinavian television networks for use in programmes about the work of the Organization, and have also been shown at festivals in the Federal Republic of Germany, Italy and the Soviet Union. A three-minute film of the opening of the Twelfth World Health Assembly has been made available to television stations in seven countries through an international newsfilm agency and through the United...
Nations in New York. A half-hour colour film on international action against disease has been produced by an industrial company's film unit in London with the co-operation of WHO headquarters and field staff.

Agencies of the United Nations family are now planning to increase co-operation on public information generally and on film production in particular. The United Nations Film Board, now the United Nations Visual Information Board, has proposed that a 30-minute film on the universal theme of water should be produced jointly by a number of United Nations bodies and has made WHO responsible for carrying through the production in consultation with the other organizations concerned. A script has been prepared and generally approved by the Visual Information Board.

It is hoped that other joint information projects will follow, in visual and in other media, on subjects of common interest to a number of agencies.

A WHO exhibit prepared for the Salon de la Santé in Paris in April 1959 was subsequently shown in several French provincial towns.

The public information photo library now contains some 9000 negatives, and 32 000 prints have been distributed during the year. New photo stories have been prepared on: African health; community development in an Indian village; malaria eradication in several countries; various aspects of mental health in different parts of the world; and Portrait of a Healthy Country, Denmark.

As a result of the much larger number of photos published in World Health in its present format, many more requests for prints have been received from magazines and illustrated papers. Several photo agencies in America and in Europe now regularly distribute WHO pictures to their customers.

A special effort has been made during the year to interest the editors of illustrated journals in health subjects and to persuade them to send their own photographers to collect material of this kind; and a number of editors have visited Geneva to select pictures from the WHO files.

Reports and press cuttings from countries in all stages of economic development indicated that the theme for the 1959 World Health Day—Mental Illness and Mental Health in the World of Today—had aroused widespread interest.

The theme for World Health Day (7 April) 1960 is "Malaria Eradication—a World Challenge".
CHAPTER 12

CONSTITUTIONAL, FINANCIAL AND ADMINISTRATIVE DEVELOPMENTS

Constitutional and Legal

Membership of the Organization

In 1959 Colombia and the Republic of Guinea became Members of the Organization. On 14 and 19 May respectively, their Governments deposited instruments of acceptance of the WHO Constitution with the Secretary-General of the United Nations. A list of the Members and Associate Members at 31 December 1959 is given in Annex 1.

Amendments to the Constitution

The Twelfth World Health Assembly decided to increase from eighteen to twenty-four the number of Members entitled to designate persons to serve on the Executive Board. The requisite amendments to Articles 24 and 25 of the Constitution, adopted by resolution WHA12.43, will come into force when two-thirds of the Member States of WHO have accepted them by the deposit of an instrument of acceptance with the Secretary-General of the United Nations. At 31 December 1959 ten Members had done so.

Privileges and Immunities

Afghanistan and Nicaragua acceded to the Convention on the Privileges and Immunities of the Specialized Agencies together with its Annex VII.

The Financial Position

The amount of the effective working budget established by the Eleventh World Health Assembly for 1959 was $14,287,600. As a result of the adoption of resolution WHA12.44 in which the Twelfth World Health Assembly approved supplementary estimates for 1959 in the amount of $662,366, the effective working budget was increased to $14,949,966. This compares with the amount of $13,566,130 available to the Organization under the regular budget in 1958.

Under the Expanded Programme of Technical Assistance the total earmarkings to WHO amounted to $5,731,774 (including a lump-sum allocation of $724,000 towards the Organization's administrative and operational services costs under the programme) as compared with the total amount of $6,230,293 made available to the Organization in 1958. Developments in the Organization's participation in the Expanded Programme of Technical Assistance are described in Chapter 20.

Under the Malaria Eradication Special Account, the total value of contributions received by 31 December 1959 amounted to $11,569,277. At 31 December 1958 the amount was $5,284,511.

In resolution WHA11.35 the Eleventh World Health Assembly authorized the Director-General to establish a special account for research planning and "to take the necessary steps to receive the contribution of $300,000 from the United States of America". This contribution has been utilized for the purposes stated in the resolution.

In accordance with resolution WHA12.17 of the Twelfth World Health Assembly a Special Account for Medical Research was established "to be used to supplement the provision under the regular budget for an extension of the World Health Organization's assistance in medical research programmes". At 31 December 1959 the total amount of the voluntary contributions credited to this Special Account was $500,000.

Under resolution WHA12.48 of the Twelfth World Health Assembly, the Director-General established a Special Account for the Community Water Supply Programme.

Under Financial Regulations 6.6 and 6.7, the Director-General established a Special Account for the Eradication of Smallpox to be credited with the value of gifts which can be used by the Organization
in providing vaccine on request for the antismallpox programme. The Executive Board at its twenty-
second session accepted gifts of smallpox vaccine from the Governments of Cuba and the Union of
Soviet Socialist Republics. As at 31 December 1959 the reported value of the gift from the Government
of the USSR was $285 000; the value of the gift from the Government of Cuba had not been reported.

The Budget for 1959

Taking into account the supplementary estimates approved by the Twelfth World Health Assembly, the
total amount of the approved budget for 1959 was $16 028 026. The difference between this amount and
the total effective working budget of $14 949 966, i.e. $1 078 060, was appropriated as an Undistributed
Reserve equalling the assessments on China and the Members that had not yet resumed active participa-
tion in the work of the Organization. The distribution of the approved budget for 1959 among the various
appropriation sections is shown in Annex 7. In this annex are also shown the amounts advanced by the
Director-General from the Working Capital Fund to meet unforeseen additional expenses, the amounts
transferred by the Director-General with the con-
currence of the Executive Board between sections
of the Appropriation Resolution, and the amounts
added under the approved Supplementary Estimates.

Contributions and the Working Capital Fund

The payment of contributions for 1959 was again
very good and the collection of arrears was satis-
factory.
The obligations incurred during 1959 and the
status of collections of contributions and of advances
to the Working Capital Fund at the end of 1959 will
be shown in the Financial Report (a supplement to
this volume) which will be submitted, with the Report
of the External Auditor, to the Thirteenth World
Health Assembly.

Scale of Assessment

The Twelfth World Health Assembly approved the
scale of assessment for 1960 in accordance with the
principles set out in resolution WHA8.5. It further
decided that for 1961 and future years the scale of
assessment should be expressed in percentages
(resolution WHA12.7).

Administration

Structure and Staff

To meet the further expansion of the Organization’s
regular and malaria eradication programmes, the
size of the staff increased to a total at the end of the
year of some 1900. Details of the composition of the
Secretariat at 30 November 1959 are given in
Annexes 8, 9 and 10.

As predicted in the Annual Report for 1958, certain further organizational changes at head-
quarters were made during the year. The Division
of Epidemiological and Health Statistical Services
became the Division of Health Statistics, and Inter-
national Quarantine was transferred to the Division
of Communicable Diseases. The Division
of Therapeutic Substances became the Division of
Biology and Pharmacology, and Health Laboratory
Services were transferred from this Division to the
Division of Organization of Public Health Services.
The preliminary stage of the Organization’s new
work for medical research came to an end when the
World Health Assembly approved in principle, in
resolution WHA12.17, the Director-General’s pro-
posals, and the Special Office for General Medical
Research Planning became the Office for Research
Planning and Co-ordination. The work of the
Tuberculosis Research Office in Copenhagen was
transferred to headquarters.

Accommodation at Headquarters

The shortage of office accommodation at head-
quarters, which was already acute in 1958, became
serious in 1959 as the result of the steady expansion
of staff. Fifty-eight offices were therefore rented in
a building at some distance from the Palais des
Nations.
The inter-organization committee of the United
Nations, ILO and WHO, established to study the
needs of these organizations for space in the Palais,
and to which reference was made in the Annual
Report for 1958, agreed upon the expected require-
ments. The United Nations then, at the request of
the Administrative Committee on Co-ordination,
made a technical examination of the feasibility of
extending the Palais des Nations sufficiently to satisfy
these needs. This study indicated that no plan for the
extension of the Palais would satisfy the aggregate
needs that had been established, and that the only satisfactory method of meeting these needs would be the construction of a separate building to house WHO.

This situation was reported to the twenty-third session of the Executive Board, which requested the Director-General to make a full report to the Twelfth World Health Assembly, together with a plan of action for meeting the problem. The Assembly examined the Director-General's report on this subject and the recommendations of the Executive Board, and decided that it was necessary to construct a headquarters building for WHO and that plans, specifications and more detailed estimates of the cost of such a building should be submitted to the Thirteenth World Health Assembly. The Assembly expressed to the Host Government and the Canton of Geneva its appreciation of the offers made to assist such a project by providing a building site and credits to the total of Sw. fr. 30 000 000. It delegated to the Executive Board the authority to approve the building site and the contractual arrangements to be made with the Swiss authorities. It further authorized the Executive Board to lay down the conditions for an international architectural competition as a basis for the selection of the building plan. It also requested the Executive Board and the Director-General to study the question of a suitable reimbursement to WHO by the United Nations and to bring the matter to the attention of the United Nations. The Secretary-General has been informed of this request and the General Assembly decided at its fourteenth session to study the matter at its fifteenth session.

In accordance with the rules decided on by the Executive Board, a committee of five architectural experts met and drew up a list of fifteen architects of twelve nationalities who should be invited to take part in the competition. All the fifteen accepted the invitation and the competition was opened on 14 November.

Supply Services to Member States

The Executive Board at its twenty-third session in January 1959 amended and restated the policies that should govern the supply services to Member States. From 1 January 1960, WHO is empowered to finance emergency purchases for Member States, against subsequent reimbursement by them, up to a limit of indebtedness of $25 000 for any one Member State. Emergency purchases are defined as “essential supplies and equipment required to combat an unforeseen, serious and immediate threat to public health”.

The service charge of 3 per cent., which in accordance with resolution EB21.R38 does not apply to emergency purchases, is now also waived where the purchases are being made in furtherance of an activity planned or carried out with the assistance of WHO. A brochure giving particulars of the supply services has been issued to Member governments.
PART II

THE REGIONS
CHAPTER 13

AFRICAN REGION

The marked expansion of WHO’s work in Africa which was noted in the Annual Report for 1958 has continued and indeed accelerated, particularly in West Africa. This is a natural development from the growing attention that governments are giving to problems of health, particularly to the control of communicable diseases and, more recently, to the difficult but more fundamental task of improving the health conditions of the human environment. Progress continued to be made in developing national health programmes and in extending the public health services (specially rural health services) to absorb and administer special projects and campaigns against specific diseases.

Inter-country projects have again proved an economical and effective way of dealing with many health problems of the Region that affect several countries or territories, and the number of such projects has increased, particularly those dealing with malaria.

Regional advisers and members of the regional office staff have paid many visits to countries and territories in the Region, and have thereby maintained touch with health departments, and obtained up-to-date and first-hand information about health conditions. Through such visits fresh requests to WHO for assistance can be more rapidly and effectively discussed and, where WHO-assisted projects are in operation, the Regional Office is better informed of their progress and can give more direct and more practical advice.

The expansion of health services mentioned above has intensified the need for trained personnel of various types and grades, and training programmes were therefore again a very important part of the work in the Region. Assistance to teaching and training programmes was given high priority. In the regional fellowships programmes, 117 fellowships were awarded, of which 60 per cent. went to medical officers for training or refresher courses in such subjects as malaria, the various aspects of nutrition and maternal and child health, public health administration, endemo-epidemic diseases, environmental sanitation, health education of the public, and clinical medicine in the fields of anaesthesiology, radiology and surgical specialties. Of the remainder, approximately 17 per cent. went to paramedical personnel such as medical assistants or malaria surveillance supervisors, 10 per cent. for nursing training, 9.5 per cent. for the training of health inspectors or sanitarians, 2.5 per cent. to entomologists and 0.8 per cent. for undergraduate medical studies. A total of 569 fellowships has been awarded since the Regional Office for Africa was first established in 1951.

Other fellowships or grants were given for attendance at study courses, such as the training courses in social paediatrics organized by the International Children’s Centre, in Paris from April to July, and in Leopoldville during July and August; the courses in maternal and child health, also organized by the ICC, in Paris in May and June and in Dakar from October to December; and the one-year training course in anaesthesiology, held in Copenhagen.

The greater part of the assistance given to countries and territories in the Region was again for the control of communicable diseases. Next in importance was assistance in projects which may be classed under the general head of public health services—maternal and child health, nursing, nutrition and environmental sanitation—in most of which health education of the public plays an important part.

Work continues on the special difficulties that retard in Africa the progress of the world programme of malaria eradication. Surveys and research have been undertaken in many countries to find the right combination of methods suitable to each area. In certain areas, including the Southern Cameroons, the southern part of the Federation of Rhodesia and Nyasaland, Kenya, Swaziland, the Union of South Africa, and Mauritius, it has been possible to interrupt transmission by the use of residual insecticides, and to discontinue spraying and replace it by surveillance. Good progress is being made in the plans for a co-ordinated inter-country eradication campaign, in which WHO is co-operating with the governments concerned. It will reach more than four million people scattered over a vast area in the Union of South Africa, Swaziland, Bechuanaland, the Federation of Rhodesia and Nyasaland, and Mozambique. Teams are being trained and funds have been allocated by governments for this campaign.
In other areas the effect of suppressive drugs is being investigated, including their administration in salt used in cooking. Anopheline resistance to insecticides of the dieldrin/BHC/chlordane group has been confirmed in Liberia, Northern Nigeria, the Sudanese Republic, the Republic of Dahomey, and Northern Cameroons; but no resistance to DDT has so far been reported from any part of the African Region. Many of the antimalaria projects received support from UNICEF.

Excellent results have already been obtained by the Governments of the Belgian Congo and Uganda in the eradication of the vector (*Simulium*) of onchocerciasis. In Kenya, the vector has been eliminated over an area of almost 20 000 square kilometres. In West Africa, where control of the disease is proving more difficult, research continues.

In the control of bilharziasis, WHO assists chiefly by promoting research and training personnel. Several surveys have been carried out by WHO teams of epidemiologists and engineers. The centres at Salisbury (Federation of Rhodesia and Nyasaland), Leopoldville (Belgian Congo) and in Paris and Copenhagen which study, identify and classify the vector fresh-water snails found in the African Region have again been supported.

Leprosy control campaigns are expanding rapidly. The number of cases in Africa is estimated at about 2 300 000, and more than a million are already under treatment; and it is expected that nearly all of them will be reached at a reasonably early date. Treatment is given with sulfones and the percentage of arrested cases is already high. The cost varies from $2 to $8 per case per year. At the present rate of progress it is quite possible that leprosy can be practically eliminated in the course of one generation.

A conference on the various aspects of leprosy campaigns was convened jointly by WHO and the Commission for Technical Co-operation in Africa South of the Sahara at Brazzaville in April, and is described fully on page 59.

Nearly all countries in the Region have asked for the services of one of the two tuberculosis survey teams for East and West Africa. The material collected by these teams, which was formerly sent to the Tuberculosis Research Office in Copenhagen, will in future be sent to the Tuberculosis Co-ordination Centre which is being established at Nairobi, Kenya. In several territories, including Kenya, Nigeria and Mauritius, mass chemoprophylaxis campaigns against tuberculosis are already under way or are being planned.

Smallpox is still endemic in certain parts of Africa and epidemics are not unknown; in some other areas it has been eradicated. For 1958, a total of 19 218 cases was reported for the whole Region. Several requests have been received from governments for assistance with campaigns for the eradication of smallpox, and a meeting was held at Brazzaville in November to ensure co-ordination of the work.

Work on nutrition has increased; there is good co-operation with UNICEF and FAO, with whom a joint review has been made of many questions of nutrition.

Co-operation has continued with other international organizations represented in Africa, including UNICEF, FAO and CCTA, and with national organizations such as the East Africa High Commission and the United States International Co-operation Administration. Contact was made with the new United Nations Economic Commission for Africa, at Addis Ababa, with which close working relations will be developed.

The Regional Committee

The Regional Committee for Africa held its ninth session at Nairobi, Kenya, from 21 to 26 September.

Eight Member States were represented: Belgium, France, Ghana, Republic of Guinea, Liberia, Portugal, the Union of South Africa and the United Kingdom of Great Britain and Northern Ireland; and three Associate Members; the Federation of Nigeria, the Federation of Rhodesia and Nyasaland, and Sierra Leone. The Malagasy Republic, which had expressed the wish to be represented, was granted for the purposes of the meeting rights and obligations similar to those of an Associate Member. A representative of the United Nations Children's Fund, and representatives and observers from several inter-governmental and non-governmental organizations, were also present. The Deputy Director-General took part in the meeting.

After discussing and approving the report of the Regional Director, the Committee reviewed the revised programme for 1960 and approved the draft programme and budget estimates for 1961 for submission to the Director-General.

On the subject of environmental sanitation, the Committee urged Member States and Associate Members to establish national sanitation boards representative of all the relevant government departments and having comprehensive responsibility for planning national water supply programmes. It recommended that revolving funds or similar devices should be adopted to finance water supply programmes; and it endorsed the proposed international
standards for drinking-water. On malaria eradication the Committee recommended more frequent exchange between countries of information on antimalaria campaigns and recorded its appreciation of the invaluable help given by UNICEF and WHO to antimalaria campaigns in the Region.

It was decided that the tenth session of the Regional Committee should be held at Accra, Ghana, at a date to be decided later, and that the eleventh session should be held at the Regional Office, Brazzaville, during September 1961.

The subject of the technical discussions at the ninth session was, “The Medical Aspects of Urbanization in Africa in the Countries South of the Shara”. It was agreed that urbanization is the result of two forces acting in the same direction: there is a move from the country, where work is only seasonal, as well as a draw to the town, which appears to offer greater economic opportunities. Three major requirements of public health were formulated: (1) the provision of adequate and healthy housing within the means of the lowest paid worker; (2) the supply of good drinking-water; and (3) the satisfactory disposal of waste products and storm water.

The subject chosen for the technical discussions at the 1960 session was, “The Main Problems of Environmental Sanitation in Africa”.

Administrative and Organizational Developments in the Regional Office

There have been no changes in the structure of the Regional Office and the process of recruiting the basic staff required for WHO's programme in the Region has continued. Suitable technical staff have not been easy to find. Consequently, there has not yet been a full complement of staff. However, most of the vacant advisory posts in the Regional Office have now been filled and field staff have also been appointed, although difficulties in recruitment have again delayed the development of project work.

Present Trends and Future Developments

As will be clear from the earlier parts of this chapter, WHO's programme in Africa has reached a stage of very rapid expansion, and this trend can be expected to continue.

Co-operation in health work between African countries is accepted in principle and followed in practice, as is shown in work for the control of yaws, malaria, leprosy, tuberculosis, bilharziasis and, more recently, of onchocerciasis.

The very substantial increase in the number of requests received from governments arises from a realistic appraisal, by the authorities concerned, of the primary needs of their peoples and of the technical and material resources which international assistance can offer. International technical meetings have provided opportunities for the exchange and discussion of ideas which have in turn found practical expression in requests for technical assistance. The health authorities of newly autonomous countries are now engaged in a careful evaluation—in some cases with help from the Organization—of their country's needs and resources. This in turn is likely to lead to further requests for assistance according to a planned system of priorities, in which account will have been taken of the country's capacity to "absorb" assistance and of its medical and auxiliary manpower.

The increase in the WHO fellowships programme is keeping pace with the general expansion in health work in the Region, and, as already mentioned, a large proportion of the fellowships are for public health subjects and for public health administration.

Some Aspects of Work in the Region

A complete list of the projects current during the year is given in Part IV. The following have been selected for fuller description.

Conference on Leprosy in Africa, Brazzaville

Of the ten to twelve million sufferers from leprosy in the world, it is estimated that some 2 300 000 are to be found in Africa south of the Sahara, and in some parts of the African Region the incidence of leprosy is very high. Leprosy in Africa is therefore a public health problem of the first importance, and one that, in recent years, has been attacked energetically, thanks to the introduction of sulfones and the organization of mass campaigns. It is estimated that about half the 2 300 000 mentioned above are now receiving treatment and it is hoped that operations can be extended rapidly to cover most of the remainder.

The time was therefore opportune for a conference at which persons responsible for directing national campaigns against leprosy, and scientific workers who are collaborating in those campaigns, might

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1 World Health Organization (1958) International standards for drinking-water, Geneva
meet, to compare and discuss the different methods used, co-ordinate the work in different countries and territories, study its integration in the general public health services, and determine what is required in the training of staff, how best to rehabilitate patients and restore them to their place in society, and the possibilities of prophylaxis.

The Conference, organized jointly by the Commission for Technical Co-operation in Africa South of the Sahara and WHO, was held in Brazzaville in April, with forty-three participants from twenty-six countries and territories in Africa South of the Sahara and from three countries in the Eastern Mediterranean Region. There were observers from nine non-governmental organizations in official relationship with WHO.

In preparation for the Conference, visits were paid in 1957 to several African countries and territories, to collect information that would help in defining the agenda and to secure the collaboration of certain specialists. Eight experts from different countries were subsequently asked each to summarize one of the agenda items in a working paper.

The conclusions of the Conference may be summarized as follows:

For mass treatment, it was agreed that diamino diphenyl sulfone (DDS) was the best drug now available; it is inexpensive, effective, and well tolerated. Standard dosage and schedules of administration were recommended. For individual treatment, for cases intolerant of or resistant to DDS, alternative preparations were recommended; and criteria were proposed for trials of new remedies.

On the subject of recruitment and training of staff, it was agreed that leprology should be taught to medical students, in particular to African students, and that paramedical staff should receive polyvalent basic training, before the specialized training on leprosy work.

A special antileprosy service, under a qualified leprologist with good training and experience in health administration, was considered to be essential in African countries.

It was emphasized that a preliminary survey should precede any antileprosy campaign and should include preparation of the public by propaganda and health education. The choice between a "mobile" campaign, village centres or out-patient clinics would depend on the circumstances of the countries. The course of the campaign should be evaluated by mass surveys and the campaign should at the due time be incorporated in the general health services. Advantage should be taken of all gatherings of the population (e.g. in the course of work against other diseases such as yaws) to search for cases of leprosy. Countries should co-ordinate their programmes in boundary areas.

The Conference considered that the isolation of contagious cases, when it is voluntarily accepted, is a useful measure, but that the most effective means of checking the spread of the disease is to decrease the reservoir of infection by general treatment with sulfones. It was agreed that national legislation on communicable diseases could include suitable provisions on leprosy and that out-of-date legislation be reviewed. The separation of children from their parents, for example, was not feasible in mass campaigns in Africa and in any case often had unfortunate results.

A classification was recommended for disabilities due to leprosy, the ways of preventing disability were considered; occupational therapy should be carefully studied, and the services necessary for rehabilitation should be adequately provided.

The report of the Conference has been distributed to all participants and to the governments of countries and territories in Africa.

Environmental Sanitation, Ghana

The Government of Ghana asked WHO to assist in making a thorough survey of the general problems of environmental sanitation and then in planning and carrying out a comprehensive programme for the gradual improvement of sanitary conditions. Two practical questions immediately apparent were the planning and provision of sewerage systems for the larger urban centres of Ghana—such as Accra, Takoradi and Kumasi—and the planning and execution of a programme of water supply for the whole country. It was also necessary, for the execution of any important programme of sanitation, that there should be a Department of Sanitary Engineering in the Ministry of Health to co-ordinate the work of the several departments of the Government that were concerned in matters affecting environmental sanitation.

WHO provided a sanitary engineer who arrived in Ghana in November 1958. One of his first undertakings was to study proposals submitted by two firms of consultant engineers for sewerage and sewage disposal for the city of Accra. The WHO engineer advised that the sewage should be disposed of by a long sea out-fall. This would cost less to provide and maintain and could be run without the qualified professional staff which would be necessary for an activated sewage disposal plant. This advice was taken, and a firm of consulting engineers will shortly be appointed to make the final and detailed design of the sewer network and the sea out-fall.
The Government has made financial provision for the first stage of the work, so that work can start as soon as the designs are finished and the contract for construction has been awarded.

It is understood that the Government is considering the creation of an autonomous Board which will be empowered to deal with new engineering projects of sewerage and drainage, and to administer such projects when they are completed.

Particular attention has been given to water supplies. The WHO engineer has visited most parts of the country and has throughout given advice on how to improve the quantity and quality of the present supplies. A survey of all the present water supplies of the country is almost completed. The data so obtained will be very useful for the Government in planning and carrying out an extended programme to improve the water supplies throughout the country.

The WHO engineer is working in the Ministry of Health and any matter relating to environmental sanitation is now referred to him for his comments and recommendations. In this way, there is in practice a co-ordination of the several government departments that are directly or indirectly concerned with public health and sanitation—such as the Ministry of Works, the Tema Development Corporation, the Department of Social Affairs and Community Development, city councils and local authorities.

This project is an example of the results that can follow from the advice of one expert. The problem of finding a counterpart to take over the work when the WHO engineer finishes his assignment may be solved when a Ghanaian civil engineer who has just graduated in the United Kingdom finishes his post-graduate studies in sanitary engineering in the United States of America. To advance the work started under this project WHO has also awarded two short-term fellowships to health superintendents.

Public Health Laboratory Services, St Helena

In answer to a request for help in establishing general hospital and public health laboratory services on St Helena, WHO provided a laboratory technician for the two years 1958 and 1959 (St Helena 3).

During that time the existing laboratory facilities have been increased. The laboratory can now do most of the routine tests needed by the doctors to aid them in diagnosis and treatment (serology, bacteriology, parasitology, cultures, biochemistry), and any other tests or projects that should be required by future medical officers could be set up with a minimum of further equipment. Chemical examinations of the blood now include examinations for cholesterol, alkali reserve (CO₂ combining power), calcium, phosphorus and phosphatases, amylase, and chlorides.

Chlorination of water was started in July 1959, and samples are taken weekly.

As in other WHO projects, an important part of the work has been the training of a counterpart to continue the services started under the project. The WHO technician taught her counterpart the principles and methodology of the work, and the common sources of error in the tests undertaken, and provided reading matter and lists, the texts of lectures and other reference material for use in training staff. For some time the counterpart has done all the chemical work in the laboratory.

Rural Health Services, Eastern Region, Nigeria

The long-term objective of this project (Nigeria 10) is to provide and improve rural health services, particularly maternal and child welfare services, throughout the Eastern Region. This is to be done by strengthening the training of the various categories of health workers required and by a gradual extension of health centres in the rural areas where the successful anti-yaws campaign has made the public receptive to work in public health and preventive medicine.

As a preliminary step, the Government of the Eastern Region established at Oji River a central headquarters for the co-ordination and control of all rural health development, and placed it under the directorship of a rural health adviser; training schools were next set up at Aba and Oji River to provide the necessary staff for the existing and future health centres in the Eastern Region; the latest step has been to provide a demonstration and training area in rural health in the Nsukka administrative division.

The object of this Nsukka rural health demonstration and training area, which may be considered the keystone of the project, is to give all categories of medical and health workers, including doctors and nurses (sisters) the opportunity to learn the problems of rural health work and their solution. To this end a system of decentralized, integrated health services is being built up for the administrative division of Nsukka. There is a divisional headquarters, or base health centre, in Nsukka Town and local health centres in villages of the four administrative districts, the whole headed and supervised by a medical officer of health who is assisted by a health sister and a health superintendent. At the base health centre there are to be a central hospital and laboratory, students' quarters, a lecture room and other training facilities and the necessary administrative services.
The front-line workers of this rural health system are the community nurses, midwives and sanitary overseers who make up the health teams in the local health centres. They are to be supervised by health assistants, one for each district. Any problems beyond their ability to solve are referred to the base health centre for the attention of the medical officer of health. A network of health services will eventually cover the whole area and ensure health protection and promotion of health for its population. It is planned to complete this rural health system in five years, and it will then serve as the training field for the comprehensive scheme of rural health services for the Eastern Region.

The public health administrator, the first WHO expert to arrive (in December 1957) assisted the Government to draw up a practical programme of work, concentrating in the first place on the organization of the Nsukka training area. Among other things he helped to train the former "yaws scouts" to take over, as "health orderlies", other responsibilities, such as liaison between the health centres, follow-up health measures and supplying information to the registrars of births and deaths. With this help, the public health administrator introduced an experimental registration of births and deaths in two district council areas, which will provide useful experience for future work on vital statistics in rural areas in Africa. He assisted in the training of the various categories of health workers in the Nsukka demonstration and training area, and also did some research on placental malaria and its influence on the birth-weight of infants and their survival rate. His findings have been published. This officer was transferred to the Regional Office in March 1959. His successor continued the work that had started and helped to introduce an extended school health service in which the health centre team participates.

The first maternal and child health officer of the WHO team arrived in February 1958, but unfortunately was killed in an accident within a month of her arrival. She could not be replaced until July 1958. Her successor made a careful study of the maternal and child health services in the Eastern Region and assisted in all the relevant work of the rural health training area in Nsukka. He also helped in the training of the community nurses, midwives and dispensary attendants at Aba School of Hygiene, and at Oji River and Nsukka; and visited regularly children's clinics in Onitsha, Enugu and Abakaliki. He introduced regular immunization of children against whooping cough and tetanus, using Nsukka as a pilot area.

The WHO health inspector tutor, after a period at Nsukka, moved to Aba, in the autumn of 1959, to assist in planning the training of health inspectors and sanitary overseers, in which he will take part. A WHO public health nurse has still to be recruited.

It will be seen from the foregoing that in spite of delays a useful start has been made to set up, in the Nsukka area, services for the rural population of the Eastern Region, with a complete synthesis of the curative and preventive aspects of medicine.
WHO is assisting the Government of Panama to strengthen rural health services and to develop administrative methods suited to local needs. The health centre at Chorrera, where these photographs were taken, includes a dispensary, a maternal and child health clinic, a school clinic, a dental clinic and a laboratory. It is also an important training centre.

(1) The wife of a farm worker, expecting her sixth child, is interviewed by one of the assistant directors of the centre before a thorough medical check-up, which will include a visit to the dentist.

(2) A seventy-three year old rural midwife attending classes at the centre practices severance of the umbilical cord on a rag doll.

(3) Teen-age volunteers helping at the centre come twice a week to classes given by one of the trained nurses.

(4) Staff of the health centre and school teachers discuss the teaching of health education in the local schools.
TRAINING OF NURSES AND MIDWIVES IN IRAN

Projects for the training of urgently needed nurses and midwives continued in Iran during the year.

(1) First-year student nurses attend a lecture on pre-operation duty given by the WHO instructor.

(2) A group of student nurses with their instructor attending a patient at the Firousabadi Hospital in Teheran.

(3) A third-year student nurse explains a health education poster to a woman patient.

(4) An instructor at the School of Midwifery demonstrates care of premature babies.

(5) A WHO midwife demonstrates the mechanism of a breech delivery.

(6) Midwifery students attend the maternal and child health centre in Teheran as part of their field training.

(7) A student, accompanied by a fully trained midwife from the maternal and child health centre, attends a young mother two days after delivery.

(8) Preparing a bath for the baby.
The conditions in which these children are playing contribute greatly to the spread of trachoma.

Children applying kajal. This eye cosmetic, popularly believed to protect against trachoma, may actually help to pass it from one person to another if the same finger is used.

Village children line up for examination by the doctor heading the visiting trachoma team.

This lady was at first reluctant to let the doctor examine her, but tact won her over.

Another team member, a dresser, shows mothers how to apply antibiotic ointment.

Mass antitrachoma campaigns are being organized in five states of India where pilot projects have shown prevalence rates reaching in some villages 90 per cent. These pictures were taken in such a village.
CHAPTER 14

THE AMERICAS

In 1959 the unified functional programme of international health in the Americas continued to expand. Progress during the year included an improvement of national and some local health services, a steady advance in the control and eradication of the prevalent communicable diseases, and an increase in the numbers of professional—and particularly auxiliary—workers trained for different kinds of health activities.

This progress is reflected in the quantity and quality of health activities undertaken by governments in the Region, additional to those set out in the Summary of Four-Year Reports on Health Conditions in the Americas, which was presented to the XV Pan American Sanitary Conference in 1958. Because statistical information is sometimes still incomplete, emphasis was placed on advisory services to assist countries in the improvement of their departments of statistics, and the training of personnel. During 1959, consultants in this field were appointed for Zones I and VI.1

Parallel to this progress in health, and perhaps as an indirect measure of it, the growth of populations in the Americas continues at unusual rates, which range in different countries from 1.8 per cent. to 3 per cent. a year. The consequent increase in health needs has not been matched by a corresponding increase in the resources necessary to solve the problems of the present and future populations or in the funds allocated to this purpose. Planned economic development has now become the primary concern of governments, but the health activities that are an essential component of the economic process must be incorporated therein if there is to be a proper balance between needs and opportunities for meeting them, on the one hand, and capital resources and the purposes to which they are devoted, on the other. The strengthening of basic health services will stimulate an increase of the total resources available to the people for promoting and improving their well-being. This policy, a reflection

1 Zone I: Venezuela, the departments of France in the Americas, Surinam and the Netherlands Antilles, West Indies Federation and territories of the United Kingdom in the Americas (except British Honduras), Puerto Rico and the United States Virgin Islands

Zone VI: Argentina, Chile, Paraguay and Uruguay

of the trend which the Region is following, was emphasized in all the activities promoted during 1959.

The work of the Organization can be considered under four broad heads: (a) improvement of national and local health services; (b) education and training; (c) eradication and control of communicable diseases; and (d) research.

Improvement of integrated health services. Programmes continued to expand in fifteen countries, at both the national and the local level. In addition, in Cuba, a PAHO consultant assisted the Government in the reorganization of the health services and in laying the foundation for a demonstration unit.

In all programmes, special attention was given to maternal and child health, environmental sanitation, communicable disease control and training. Short training courses were provided for large numbers of professional and auxiliary health personnel.

Besides the semi-urban and rural work in environmental sanitation, which formed part of the integrated health programmes, the Regional Office initiated advisory services to governments on community water supply, in accordance with two resolutions adopted during the year—resolution WHAl2.48 of the Twelfth World Health Assembly and resolution XVI of the XI meeting of the Directing Council of PAHO (eleventh session of the WHO Regional Committee for the Americas). The provision of safe water supplies is related both to health and to economic development. During 1959 the Organization gave technical and financial advice to the Governments of Argentina and Peru for the programmes at El Chaco and Arequipa respectively. The creation of a Special Water Fund was authorized by the Directing Council of PAHO (WHO Regional Committee) and a contribution to it of $200 000 was announced by the Government of the United States of America. Plans are being made to use this fund for consultant services, pilot projects, special studies and training of professional personnel.

Education and Training. The Organization continued to collaborate in the improvement of medical education—giving priority to preventive medicine, paediatrics and the basic medical sciences—and of professional and auxiliary training in public health
and nursing. Special mention should be made of the seminar on the analysis of the teaching of public health, for the schools of Latin America, which was held in November in Mexico. The Organization also took an active part in the Fifth Regional Congress on Nursing held in October in Buenos Aires, Argentina, and in the seminar on the teaching of internal medicine, organized by the University of El Valle, Cali, Colombia, at which the incorporation in the curriculum of the principles of preventive medicine was discussed. The seminar on diarrhoeal diseases organized by PAHO for the north-east area of Brazil followed the same general pattern as those sponsored in Chile and Mexico. The discussions at this seminar resulted in concrete measures for the attack on those diseases which, if all the public health implications are considered, are a major cause of death. The Organization also participated in the seminar on the teaching of public health in schools of veterinary medicine, held in Kansas City, Missouri, United States of America.

The training of professional personnel was further developed by fellowships, of which 361 were awarded up to the end of September.

Following a resolution adopted in 1956 at the IX meeting of the Directing Council of PAHO, the Bureau surveyed the countries of Central America, Paraguay, Uruguay, Argentina and Chile, to study what assistance was needed to improve the administration of health programmes, in which subject all the governments expressed great interest. This survey will be completed by extension to the rest of the Region. In the meantime requests have been received from several countries for training courses and advisory services. This work is being closely co-ordinated with the Office of Public Administration of the United Nations.

_Eradication and Control of Communicable Diseases._

The malaria programme continued to receive high priority because of malaria's wide prevalence in the Region and its economic significance. The Organization's part in this work in 1959 consisted in technical advisory services, training, organization of conferences and seminars, research, and close co-ordination with other agencies. All the countries of the malarious area of the Region had programmes in different stages of the attack phase of eradication, except Cuba, which started a pre-eradication survey during the year, and Haiti, where the programme was temporarily suspended for financial reasons.

Twelve courses in various aspects of malaria eradication were held at the centres in Venezuela, Mexico, São Paulo and Jamaica, where training was given to 91 medical officers, 52 engineers, 37 entomologists, 75 sanitarians and sector chiefs and six workers of other categories. Of this total, 82 were from outside the Region. In addition, the Organization administered a number of short travel grants for personnel of other regions to observe selected programmes in the Americas.

The Government of Brazil and the Organization sponsored a seminar on evaluation techniques in malaria eradication, at Petropolis, Rio de Janeiro, from 29 November to 7 December, which was attended by directors of malaria services and chiefs of evaluation sections, as well as by medical personnel of the Organization. The purpose of this seminar was to examine and assess the techniques currently used for evaluating the results of the programmes and to reach agreement on the methods to be employed in the future.

The seventh meeting of the directors of malaria services of Central America, Mexico and Panama was held in Panama City in April. Annual reports of each programme were examined in detail and plans were agreed for increased co-ordination between neighbouring services. Technical discussions were held on susceptibility and resistance, and on health education in malaria eradication campaigns. Border meetings were held between Colombia and Ecuador and between Colombia and Peru.

Entomologists of WHO and PAHO and of the United States International Co-operation Administration met in Guatemala City in February to review the methods and techniques employed in the susceptibility testing programme, and a document was prepared which has led to better standardization in the performance and interpretation of the test for susceptibility in the adult mosquito. A special meeting of entomologists and insect geneticists was held in January 1959 at the Regional Office at which several lines of research on susceptibility and resistance were discussed.

The Organization collaborated in four programmes of malaria research during the year.

Following the recommendations of the group of entomologists and insect geneticists, arrangements were made with the School of Hygiene and Public Health of the Johns Hopkins University to form colonies of susceptible and resistant vectors from the Americas. Several colonies are already available to supply material for research to interested laboratories.

In co-operation with the National Institutes of Health of the United States Public Health Service, studies were continued on a number of the newer antimalaria drugs.

In collaboration with the Government of Mexico, studies continued on the toxicity of dieldrin to
man, and of the protective measures to be used against it.

In consequence of the appearance of doubly-resistant *Anopheles albimanus* in Central America, studies on the effectiveness of two of the organophosphorus insecticides were undertaken in El Salvador, and are being continued.

Co-ordination has been maintained with other agencies collaborating in malaria eradication programmes. Two meetings of the inter-agency co-ordination groups, attended by representatives of UNICEF, the United States International Co-operation Administration and the Organization, were held during the year. In addition to the formal meetings, frequent consultation continued both at headquarters and in the field.

The national commitments for the regional malaria eradication programme amounted to $20,197,196: the international contributions totalled $11,413,507: $1,476,063 from the PAHO Special Malaria Fund, $210,444 under the Expanded Programme of Technical Assistance, $4,951,000 from UNICEF, and $4,776,000 from the United States International Co-operation Administration.

During 1959, Guatemala and Honduras were declared free from *Aedes aegypti* and Cuba started its programme of *Aedes* eradication.

Although substantial progress has been made in countries of the Region where smallpox is still epidemic, greater effort is needed to eradicate the disease from the Region and at the same time to continue vaccination programmes, and so maintain a high level of immunity in the countries where it has already been wiped out. The number of cases notified in the Americas in 1959 was about 3000 as against 3600 in 1958.

Leprosy surveys were completed in Central America, Mexico, Colombia and Ecuador during the year and basic programmes to start in 1960 were prepared for its control on modern public health lines.

Active control of yaws was expanded in the Caribbean area and about 1,000,000 persons were treated with penicillin.

The increased interest of Latin American countries in live poliovirus vaccines, in trials of which the Bureau has collaborated since 1958, led to the convocation of the First International Conference on Live Poliovirus Vaccines, held in Washington, D.C. in June 1959, and sponsored by WHO and PAHO with the financial assistance of the Sister Elizabeth Kenny Foundation. The Conference heard reports of programmes from all parts of the world. The data presented indicated that up to June 1959 more than 6,000,000 children had been immunized throughout the world without showing any adverse effects attributable to the vaccine. The proceedings of the Conference have already been published and widely distributed.

In Costa Rica a programme for the immunization of all persons under ten years was started in 1959 and has already covered more than half of the population.

Research. Besides the activities of the Organization on applied research in malaria, mention should be made of the trials of a vaccine against typhus fever with the E strain of *Rickettsia* carried out in Arecípa, Peru, in collaboration with the Peruvian Government and Tulane University; in nutrition, the Institute of Nutrition of Central America and Panama (INCAP) carried out trials of vegetable mixture No. 9 as a means of increasing the nutritive protein value of the diet; the Pan American Zoonoses Center in Azul, Argentina, did research work in connexion with the control of rabies, brucellosis and hydatidosis; and at the Foot and Mouth Disease Center in Rio de Janeiro, Brazil, strain 0 of the virus was adapted to chick, rabbit and mouse embryos. Research continues on two other strains with the aim of producing an attenuated live virus vaccine.

The Regional Committee

The XI Meeting of the Directing Council of the Pan American Health Organization, which was also the eleventh session of the WHO Regional Committee for the Americas, was held in Washington, D.C., from 21 to 30 September 1959. The meeting was attended by representatives of all Member States, except Bolivia, Costa Rica, and Paraguay, and by representatives of France, the Netherlands, and the United Kingdom of Great Britain and Northern Ireland, representing certain territories in the Region. The Government of Canada designated an observer. The United Nations, UNICEF, FAO, the Organization of American States, and seventeen non-governmental organizations in official relationship with WHO were also represented.

Mr M. P. Siegel, Assistant Director-General, was present.

The Director of the Pan American Sanitary Bureau, Regional Director of WHO, submitted his annual report for the year 1958, which was examined in detail. Some delegates spoke on the Report, describing the health advances achieved in their countries.

In compliance with a resolution of the XV Pan American Sanitary Conference in 1958, the Council held a special meeting at which a gold medal and a scroll recording his designation as Director Emeritus
of the Pan American Sanitary Bureau were presented to Dr Fred L. Soper.

A full day was spent on technical discussions on "Technical, Financial, and Administrative Aspects of Water Supply in the Urban Environment in the Americas". The topic selected for the technical discussions in 1960 was "Technical, Administrative, Legal, and Financial Aspects of Garbage and Refuse Disposal".

The Council studied in detail the problems of environmental sanitation and recognized that the considerations stated by the Twelfth World Health Assembly in its resolution WHA12.48 were particularly applicable to the Region. It therefore endorsed that resolution, recommending that governments should give priority in their national programmes to the provision of water supplies. It requested the Director to co-operate with governments in such work, to establish a PAHO special account for the purpose and to make adequate provision for it in future programme and budget estimates in order that the Organization could maintain its leadership in a co-ordinated regional programme of community water supply and provide governments with the necessary technical and advisory services. It further authorized him to accept contributions for this work from public or private organizations, invited all multilateral and bilateral agencies concerned to co-operate in the programme and asked international and national financial institutions to accord high priority to loans for water supply programmes.

The Council examined the status of smallpox eradication, noting with satisfaction that in some countries of the Americas smallpox had already disappeared, and that other countries of the continent were conducting energetic nation-wide and intensive campaigns against it. It was recommended that governments should give special attention to programmes for maintaining high levels of immunity, that those that had not already done so should undertake nation-wide programmes of smallpox vaccination, and that they should study methods of producing and storing vaccines and supply PASB with the information necessary for an up-to-date record of the vaccine available for use in any new outbreak or any other emergency.

The council heard the report of the Bureau on the status of malaria eradication in the Americas and the reports presented by all the representatives, and considered that the programme of malaria eradication was already well advanced, but that it was necessary to employ the most careful epidemiological techniques to ensure that malaria had been completely eliminated from any territory. The Director was requested to study the possibility of establishing a register of areas where malaria is eradicated, and the criteria that should be satisfied before an area is included in that register.

A further resolution recommended that governments should promote the creation of co-ordinating committees, of nation-wide scope, for the study of mycoses and for making epidemiological surveys in order to measure the problem.

The Council studied the status of Aedes aegypti eradication in the Americas. It accepted the reports of Guatemala and Honduras that their territories were free from the mosquito, called upon the other countries and territories that are still infested to intensify their eradication activities, and recommended that those countries from which the vector has already been eradicated should maintain a strict vigilance in order to prevent reinfestation.

On the problems arising from the advertising of medicinal products, the Council instructed the Director to study the present control of advertising directed to the general public and to recommend to Member governments that they should prohibit false or misleading advertising of such products.

Agreement was expressed with the idea of an International Health and Medical Research Year, and Member governments were recommended to submit their comments and specific suggestions to the Director-General, and to start preparing plans that would assure full and effective national and local participation in an international health year if the World Health Assembly should approve the proposal.

The proposed WHO programme and budget for 1961 for the Region was transmitted to the Director-General for his consideration when preparing the budget for that year. The Council approved the programme and budget of PAHO for 1960, and authorized appropriations for a total amount of $4,100,000.

With regard to the provisional draft of the proposed programme and budget of PAHO for 1961, several delegations pointed out the difficulties their countries are having at the present time in meeting their assessments, and they therefore requested that no further increases be made in the programme in 1961.

To improve the financial situation of PAHO and the status of the Working Capital Fund the Council approved the assignment of a portion of the budget for gradually increasing the Working Capital Fund to the authorized level. It asked the Director of PASB to give Member governments more information about the financial situation and requested governments, by legislation if necessary, to adjust the dates of their payments to the fiscal year of the
Organization and to provide for more effective liaison between the national public health organizations and the international health agencies. The Director was also requested to invite governments, through their national Technical Assistance Boards, to expand the public health programmes, and to approach the Organization of American States with a view to obtaining larger contributions to public health work from the Programme of Technical Co-operation.

The documents submitted by the Director-General on the United Nations Special Fund were studied and governments were invited to take this fund into account as a possible source of international assistance and to present appropriate projects in accordance with the established procedure. The Director was requested to co-operate with the governments in planning such projects (particularly surveys necessary for the development of water supply programmes) and, through appropriate channels, to co-operate with the Special Fund for the provision of services and the execution of health projects.

The Council noted that there has been a reduction in the funds available under the Expanded Programme of Technical Assistance for health activities in the Americas, and that some governments, in submitting their consolidated programme requests to the Technical Assistance Board, had increased other programmes at the expense of the amounts available for health work; it endorsed resolution WHA12.22 of the Twelfth World Health Assembly and recommended that governments should give full consideration to health work and include a larger amount for health projects in their future annual requests to the Technical Assistance Board.

The representative of the United States of America announced that his Government had decided to contribute to PAHO in 1960 the sum of $200,000 to the water-supply programme (as mentioned above), and the sum of $2,000,000 to the Special Malaria Fund. The Council expressed its thanks for these important voluntary contributions.

Colombia and El Salvador were elected to the Executive Committee (Working Party of the Regional Committee) to replace Guatemala and Peru, whose periods of office had terminated. The invitation from the Government of Cuba to hold the XII Meeting of the Directing Council, twelfth session of the WHO Regional Committee, in Havana was accepted with appreciation.

Administrative and Organizational Developments in the Regional Office

Considerable progress was made towards acquiring a site for the construction of a building for the Regional Office. On 19 August 1959 the United States Senate approved legislation authorizing the acquisition in Washington, D.C. of a site in a central location and with easy access to other international agencies, embassies, hotels, transportation and other facilities. The same legislation is now before the United States House of Representatives and it is expected that it will be enacted during the 1960 session of the United States Congress.

In order to alleviate the present congestion in the three headquarters buildings, it was necessary to rent additional office space about three blocks away. For similar reasons new office space was acquired for the Zone II Office in Mexico City.

A survey was started to determine what assistance might be given to the health ministries of the Region in the administrative management of health activities. Opportunities for training in public health administration were investigated, particularly in some regional institutions of higher education, to determine whether the needs of public health administrators and administrative officers in health services could be thus met. This work is being closely co-ordinated with the Office of Public Administration of the United Nations.

Some Aspects of Work in the Region

A complete list of the projects current during the year will be found in Part IV. The following have been selected for fuller description.

Public Health Services, Colombia

Since August 1956, the Colombian Government, with assistance from UNICEF and WHO, has been engaged on a comprehensive programme for the development of public health services (Colombia 4).
physicians, a sanitary engineer and three nurses, all specialized in public health—has been working in Colombia.

UNICEF is providing supplies and equipment for the health centres included in the pilot project and for the training side of the programme, and is contributing to the stipends of the auxiliary personnel who are being trained in Colombia.

By the end of 1957 a planning and co-ordination office had been set up in the Ministry of Health and had started a reorganization of the Ministry and of the advisory services for the National Department of Health. The Advanced School of Hygiene in Bogotá was reorganized and gave courses for fourteen nurses and twenty sanitary-inspector-supervisors. A short training course for fourteen nursing auxiliaries was given at Pamplona, Norte de Santander.

In 1958 the personnel trained in these courses were already working in the nine pilot municipalities of the departments of Norte de Santander and Boyacá. The installation of UNICEF equipment in the pilot health centres was begun, and the project made rapid progress.

WHO consultants collaborated in 1958 in the preparation of programmes of field practice for the twenty-one doctors who attended the second course of public health orientation and for the sixteen students of the eighth post-graduate course of public health and obstetrics nursing at the Advanced School of Hygiene. These programmes were discussed with the directors and nurses at the pilot health centres of Sogamoso and Cúcuta. Eleven weeks of field practice followed the academic part of the two courses. The second course of training for sanitary inspectors began in October 1958; the third course began in April 1959 with twenty-four students and the fourth course in June 1959 with twenty-nine students.

Among the fellowships for work connected with the programme was one awarded in August 1958 to the director of the public health and obstetrics nursing course, to enable him to observe courses in Chile, Peru, Costa Rica, and Panama.

During 1959 the plan for the reorganization of national health services was prepared in a final draft, and is now being studied by a planning committee appointed by the President of the Republic. The national Advanced School of Hygiene was moved to the Faculty of Medicine; its name was changed to School of Public Health and its faculty enlarged: a formal ten-month professional course began in September. The Organization is assisting the School through project Colombia 24. During the year two three-month courses for nursing auxiliaries were held, with a total of about 100 students.

A new course for public health and obstetrical nurses started in May.

An effective system for reports on environmental sanitation has been worked out. Reports on sanitation conditions come in from all the local and regional health establishments to the Ministry of Public Health and are reviewed there. This makes possible constant observation of the conditions on which sound planning for the future can be based.

There has been full discussion on the best way of expanding the programme and the Minister favours its extension to the other departments, with a centre in each to serve as a model and for training.

**Malaria Eradication, Mexico**

Between July 1955 and September 1956 comprehensive preparations were made for the nationwide malaria eradication programme in Mexico (Mexico 53). They included the training of staff of all grades, geographical reconnaissance, and epidemiological studies to define more closely the limits of the endemic areas. Spraying was then done in test areas for three months, to acquire practical experience which would permit more detailed planning for the attack phase. This began in January 1957, and is still in progress.

The progress of the campaign has been carefully evaluated at all stages by the Organization, assisted by the staff of the National Malaria Eradication Commission. The malarious areas are divided into zones, and the zones into sectors. A sector is a convenient geographical unit, in which one or more spraying squads work under a single supervisor. The data for evaluation are grouped according to sectors, so that epidemiological findings can be related to comparatively small areas.

For adequate evaluation, it is necessary to obtain data from all parts of the area treated and to encourage the co-operation of the population by health propaganda. Many voluntary collaborators are used in constructing the necessary network of “notification posts”. The collaborators who form these posts are supervised by full-time evaluation staff.

Tests for malaria are made on blood slides taken from fever cases among the population of the area. Most of these are obtained by the collaborators, but some are collected by the full-time evaluation staff and medical institutions. During the first half of 1959, a monthly average of 3.7 slides was taken for every thousand of the population, and this number is steadily increasing as more collaborators are recruited. From present knowledge it is estimated that, in areas where malaria has been endemic, at least ten per cent. of the population are likely to
have fever during the year: to cover them all would mean taking 8.3 slides monthly for every thousand of the population. It is hoped to approach nearer to this figure when there is a notification post in every locality.

The decline of *P. falciparum* infections and their disappearance by this stage from about half the population accords with what was expected when the operations were being planned. In another 18.5 per cent. of the population, *falciparum* infections have been absent during periods of nine to twelve months: malaria incidence as a whole shows a steady decline. On the other hand, in some areas that were formerly not considered malarious, malaria transmission appeared in 1958, because of heavy rains and floods. In those areas, interruption of transmission will have to be maintained until all infections (particularly with *P. vivax*) have died out.

In some places *A. pseudopunctipennis* developed resistance to dieldrin, but it is now being successfully dealt with by DDT. Some of the continued transmission may be due to influxes of population or to interference with the sprayed walls of houses. In general, although the use of insecticides will have to be prolonged in areas where transmission has not been interrupted, it is hoped that epidemiological studies will make it possible to delimit those areas closely so that the authorities can decide in what precise areas spraying must be continued and for how long. In areas where transmission is seasonal, epidemiological studies are being made which will show when surveillance should be started and what spraying policy should be followed.

**Public Health Services, Paraguay**

The Organization has collaborated with the Government of Paraguay since 1950 in strengthening that country's health services. The present programme (Paraguay 10) began in January 1955. It has been designed to provide complete health services by improving the existing services and by reorganizing and establishing regional and local services in accordance with the five-year plan prepared with the advice of the Organization in 1957 and put into operation in 1958. The plan includes the introduction of modern methods for the control of communicable diseases and in epidemiology, improvements in the central health laboratory, the drafting of a national sanitary code and related regulations, and expansion of training programmes.

Good progress has been made. By 1958, 57 per cent. of the technical staff, including seventy-five medical officers, ten dentists and six engineers, were employed full time, and nearly 150 persons had been trained in the courses organized for nursing auxiliaries and auxiliary workers in sanitation and health education.

In 1959 progress towards the objectives of the five-year plan continued, especially in the development of regional and departmental health centres. The Sanitary Code prepared with the assistance of the Organization was revised and will be sent to Congress shortly. The staff provided by WHO have collaborated directly with the Paraguayan staff in reorganizing the work of the health centre at Villarrica.

In nursing, the most important results are the improvement of nursing and midwifery services in the health centres of Asunción, San Lorenzo and Trinidad, the collaboration of the Centre of Auxiliary Nursing in evaluating the work of the recently trained auxiliary personnel in twenty health centres, the acceleration of work in the Section of Nursing and the preparation of a manual of nursing. The second eight months' training course for nursing auxiliaries was started on 20 April with thirty-seven students on fellowships provided by UNICEF.

The preparation of plans for rural sanitation for Villarrica, Concepción, Coacupé and San Lorenzo was advanced. The practical phase of the second course for sanitary inspectors was started.

The Department of Epidemiology was concerned mainly with work in the health centres for the control of communicable diseases. There was a considerable increase in the number of laboratory examinations.

**Advanced Nursing Education in Chile**

This project (Chile 29) has two principal objects: to build up in Chile a programme of training in nursing supervision and teaching; and to demonstrate, in selected institutions used for the practical training of students, nursing service of a high standard. The Organization has assisted the project by providing a nurse-educator, fellowships and supplies and equipment. Training has been given to nurses and midwives from Chile and to nurses from other countries of Latin America.

In the first two years, 1955 and 1956, training was given for supervisors and instructors in the nursing of communicable diseases. In 1957 the training was extended to cover also supervisors and instructors in medical, paediatric and public health nursing, and in the following year maternal and child health work was added to the programme.

Laboratory work is an important part of the training and attention has been given to the planning and improvement of field observation trips as well as to the course in the fundamental principles of
nursing care. In the course for instructors of nursing auxiliaries for example, out of a total of sixty hours, nine hours are given to laboratory practice in the school, nine to practical work in hospital, eighteen to public health practice and three to public health observation in hospital.

The same general plan of training was continued in 1959 but the teaching staff has been strengthened and the teaching has been improved. First courses in clinical nursing were given during the year and classes, group discussions and practical work were extended to the field agencies.

Eighteen students from the advanced education programme graduated in December 1958, at the end of the fourth course in advanced nursing education.

Seventeen nursing students, including seven from countries outside Chile, entered on the fifth course early in 1959.

At the end of 1958 an agreement was signed with the Government of Chile, extending the project for another year.

This programme was assessed at the end of 1959 and some modifications appeared to be desirable: certain changes in the curriculum; closer relations between the School of Public Health, the schools of nursing and the organization of registered nurses; more continuity of education from basic to post-basic courses; and closer co-operation with the national health services, so as to improve practical field work.
CHAPTER 15

SOUTH-EAST ASIA REGION

In South-East Asia special attention continues to be given to the control of communicable diseases, the promotion of rural health services and the training of various categories of health personnel.

Encouraging progress has been made in tuberculosis control and research. The comparison, by the Tuberculosis Chemotherapy Centre in Madras (India 53 and 102), of the results of sanatorium treatment and of domiciliary chemotherapy for pulmonary tuberculosis has shown that, with a properly organized service, most patients can be effectively treated at home. This is a finding of great promise for future work; the relevant report has been published in the *Bulletin.*1 The Indian National Tuberculosis Institute was set up in Bangalore in the course of the year to organize large-scale training for workers in the expanded national programme and to undertake basic epidemiological and field control activities.

Work in malaria is being given priority, and every country in the Region now has a malaria eradication programme. This is a major advance, and if adequate resources and facilities continue to be provided, the expenditure should prove well justified by the results. The Third Asian Malaria Conference, sponsored by WHO and held in March in New Delhi, dealt primarily with the organizational and administrative requirements of eradication programmes. The recommendations of the Conference were widely distributed.

There is a renewed interest in smallpox mass control and its eradication by widespread vaccination. One country in the Region, India, has taken action to plan a comprehensive vaccination campaign on a national scale, leading up to eradication. In Ceylon and Thailand smallpox is not a significant problem. Indonesia, Afghanistan, Burma and Nepal are not yet ready for large-scale intensification of present efforts.

There is also need for immunization campaigns against other communicable diseases of special significance to the Region. Very useful conclusions and recommendations, in particular as to priorities, have come from the technical discussions on this subject at the Regional Committee’s twelfth session.

Progress in the control of leprosy and trachoma has also been satisfactory.

So far, the lack of epidemiological data has severely handicapped effective immunization programmes; it is, therefore, of the utmost importance to promote the establishment of epidemiological units in the countries of the Region. Some progress in this direction has been made in 1959; consultants in epidemiology and fellowships for post-graduate training have been provided, especially in Ceylon and Indonesia. In Ceylon a fruitful partnership has been formed between the epidemiological and statistical units.

Good national or state-wide vital statistics will take many years to build up; but some progress is being made, and international nomenclature and procedures are being slowly adopted. The training of statistical personnel is less satisfactory, mainly because of the lack of highly-qualified statisticians competent to give such training. On the other hand, training for personnel of intermediate and elementary grades is much in demand and appears to be of some value.

Rural health projects, some of them related to community development schemes, have maintained steady progress, particularly in Afghanistan and in India; but they have often been hampered by shortage of trained staff. Because adequately trained and oriented staff are not available, the integration of health services at all levels is not being fully achieved; increased attention is therefore being given to rural training areas and to priorities in training suitable to the various categories of health personnel.

For the provision of maternal and child health services, all-purpose health centres continue to replace special maternal and child health centres. More attention has been given to improving undergraduate training and teaching the student methods of promoting children’s health and preventing children’s diseases. During the year a *Manual of Paediatrics for South-East Asia* was compiled and edited by the Regional Office, and has been published by a commercial firm.

Nursing training programmes have been established throughout the Region and provide basic training, refresher courses for different categories of nursing

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1 *Bull. Wld Hlth Org.* 1959, 21, 51
personnel and post-basic education. Some of these programmes are for the training of auxiliary personnel, who form an integral and permanent part of any modern nursing service. Experience has shown the value of having a national nursing adviser to assist the central authorities in promoting overall nursing policy and in co-ordinating nursing services and education programmes. Five countries have set up, or are organizing, divisions of nursing in the health directorate.

Scarcity of trained staff and lack of funds is also hampering the development of work in environmental sanitation, but WHO-assisted sanitation projects continued to operate satisfactorily, particularly in Afghanistan, Ceylon and India. Since October 1959 a consultant team has been assisting the Government of West Bengal in planning a comprehensive water supply and sewerage scheme for Greater Calcutta. A good number of public health projects in rural areas, such as the inter-agency community development schemes in India, involve work in environmental sanitation.

Health educators are assisting the Governments of Afghanistan, Burma, India and Indonesia with the organization of national programmes. In April 1959 a first meeting was held of health educators working in Indian states. Health education in schools has received special attention in Ceylon and India, and assistance was given to the All-India Institute of Hygiene and Public Health, Calcutta, to improve its teaching courses. Countries in the Region took a great interest in the preparations for the Twelfth World Health Assembly.

To meet the growing interest in nutrition, a regional adviser on nutrition has recently been appointed, for the first time, to the Regional Office.

The number of medical colleges in the Region and the number of students admitted are expanding so rapidly that there are signs of a deterioration in quality. This tendency, if not checked, might well result in a large number of inadequately trained doctors. Attention has therefore been called to the need for a more careful selection of entrants (the failure rate is at present too high); more attention to individual students and improved teaching facilities. Another undesirable aspect of this situation is that the teaching staffs are overworked, so that they abandon programmes of research.

Increasing numbers of medical colleges are establishing departments in preventive and social medicine, and the teaching of this subject is being spread over several years, sometimes over the full medical course.

In its educational programmes WHO is making increasing use of regional training centres: the All-India Institute of Mental Health, Bangalore, is a valuable centre for training in psychological medicine and mental health nursing; the Tuberculosis Chemotherapy Centre in Madras is being used as a regional training centre; and the School of Radiography in Ceylon, assisted by WHO, will also train technicians from other countries of the Region.

During the year, WHO assisted governments in the Region with about 130 field projects, in which 240 field workers were employed.

The Regional Committee

The twelfth session of the Regional Committee for South-East Asia was held in Kandy, Ceylon, from 23 to 29 September 1959. Representatives of nine countries were present. The United Nations, UNICEF, FAO and eight non-governmental organizations were represented, and two bilateral agencies sent observers. The session was attended by Dr N. I. Grashchenkov, Assistant Director-General of WHO.

The Committee considered the Eleventh Annual Report of the Regional Director, and there was general agreement that the economic situation in the Region, especially the shortage of foreign exchange, was severely hampering the growth of health services and that the increasing pressure for wider services made it difficult to concentrate resources. The acute need for improving sanitation and the continuing need for training programmes were recognized. Other matters mentioned were the need for organizing epidemiological units in health departments, for revising the system of health records in the Region, for encouraging domiciliary midwifery and for giving more attention to the prevention of accidents in the home.

The Committee approved, for transmission to the Director-General, the proposed programme and budget estimates for the South-East Asia Region for 1961, with slight modifications.

Technical discussions were held on the "Role of Immunization in Communicable-Disease Control". The resultant recommendations dealt with the important communicable diseases encountered in South-East Asia and programmes of immunization against them were assigned relative priorities. It was agreed that high priority should be given to the eradication of smallpox by organizing nation-wide mass vaccination campaigns and that mass immunization against whooping cough, diphtheria, tetanus and typhoid fever should also be started, in addition to the immunization against tuberculosis (BCG), already being given. In the meantime, immunization programmes against these diseases should be carried on by the present medical and public
health services. The problem of typhoid, the control of cholera, the role of BCG vaccination in the prevention of tuberculosis, the need to watch for possible changes in the pattern of incidence of poliomyelitis consequent on the introduction of a more virulent strain, and measures for campaigns against rabies were also discussed.

The Committee discussed filariasis, health education and rural environmental sanitation. It noted resolutions of special interest to the Region which had been adopted by the World Health Assembly and the Executive Board. Concern was expressed that the amount available for public health under Technical Assistance funds was diminishing each year. It was recommended that the holding of an International Health and Medical Research Year, in view of the expenditure which would be involved, should not, for the time being, be sponsored by WHO.

Three countries in the Region had contributed to the Malaria Eradication Special Account, and it was announced that two more had agreed to contribute. Countries in the South-East Asia Region were already committed to heavy expenditure on malaria eradication within their own borders; but it was felt that even small contributions would show that they were glad to help as much as possible in the world effort.

The Committee was concerned at the delay in starting the construction of the new Regional Office and gave full support to the Regional Director in any steps he could take to persuade the Government of India to accelerate the work; it also asked him to write to governments in the Region inviting them to contribute to the decoration and furnishing of the building.

Considering the possibility that the Fourteenth World Health Assembly would be held in New Delhi in 1961, the Committee authorized the Regional Director to fix the dates of its own 1960 session, which it had been decided previously would be held in Indonesia, so as to fit in with any revised schedule which might be necessary.

Administrative and Organizational Developments in the Regional Office

The administrative work of the Regional Office has increased so substantially that a review is being made of the procedures, methods and staffing pattern. To assist in this work, a management team from headquarters has made three visits to the Regional Office and it is hoped that the organization and staffing pattern of the Regional Office will be adapted to the increasing workload and the new duties. It is difficult to estimate by how much the work of the Regional Office has increased, but it would be safe to say that the workload is at least 30 per cent. greater in 1959 than in 1957 and probably from 12 to 15 per cent. greater than in 1958. Such an additional amount of work can only be taken up by improving existing methods and increasing staff as required.

In January 1959 the President of India gave administrative approval for the construction of the permanent accommodation for the Regional Office at an estimated cost of Rs. 3,032,300. The Government of India appointed an architect from the Ministry of Works, Housing and Supply, who prepared drawings that were approved in principle by the Organization. It was suggested that the architect might visit Manila to examine the new building of the Western Pacific Regional Office. The Organization agreed to provide foreign exchange against payment in rupees to cover supplies imported for the new building. Financial approval was obtained in October, and it is now hoped to start work on the building in April 1960.

Co-operation with the United Nations and other Organizations

Joint work with UNICEF continues, and between the staff of the Regional Office and UNICEF there is regular and close co-ordination. Satisfactory relations have been maintained with the United States International Co-operation Administration, whose participation in health projects in the Region is increasing, with the Colombo Plan Authorities, and with the Rockefeller Foundation and the Ford Foundation.

In New Delhi collaboration is maintained with the United Nations and other specialized agencies through a quarterly inter-secretariat meeting. Collaboration with resident Technical Assistance representatives has been reinforced by contacts with regional office staff and with WHO area representatives.

Some Aspects of Work in the Region

A complete list of the projects current during the year will be found in Part IV. The following have been selected for fuller description.

Rural Health and Training Unit, Gulzar, Afghanistan

This project (Afghanistan 26) first started in April 1956 as an environmental sanitation project assisted
by UNICEF and WHO. It was based at Shewaki and later extended to Chaurassia.

In July 1958 objectives of the project were redefined as the establishment of a rural health and training unit at Gulzar, the promotion of health education as an integral part of the local rural community development project and the further development of the environmental sanitation programme.

WHO's assistance to this project was at first limited to the provision of a sanitarian and a public health nurse. The present WHO staff comprises a senior medical officer, a sanitary engineer, a sanitarian and a public health nurse. UNICEF is assisting with transport, equipment and supplies.

By the end of 1959 the project was providing a sound rural health and training unit, giving field training, in association with local training schools, to categories of student health workers such as medical officers, midwives, sanitarians and auxiliary nurse-midwives. Besides basic instruction, training in health aspects of community development work is given to those who are to work in health units in community development projects, and to rural community development workers generally.

Practical work has been done in environmental sanitation: sanitary surveys in the practice area, typhus dusting on a substantial scale, construction of more than a hundred new latrines and improvement of existing latrines, and provision of piped supplies of potable water. A chain pump made entirely from local resources and capable of delivering 1200 gallons of water an hour was constructed on a well in the village of Benihisar. Such installations are steadily building up in the area a demonstration valuable both for information of the public and for teaching students.

Post-graduate School of Nursing, Rangoon, Burma

This project (Burma 25) followed naturally on the maternal and child health nursing project (Burma 6), which was completed in December 1954, and which showed that academic public health training was required for nurses working in programmes of maternal and child health and related public health subjects in Burma. WHO had already assisted in providing a nine-month course for training graduate nurse-midwives in public health, and an associated six-month course to prepare midwives as health visitors.

To strengthen and expand these programmes and to provide post-graduate courses to train nurse-midwives as nurse educators and midwifery tutors in the integrated health services, it was proposed to set up in Rangoon a post-graduate school of nursing, the first in Burma. But, as it was not yet ready to offer posts for public health nurses, the Government postponed for a time the course in public health nursing. The WHO public health tutor was consequently withdrawn in November 1955 for duties elsewhere.

A new plan of operations was signed a year later, for assistance with the preparation of public health nurses, general nurse educators, and midwifery tutors. It provided also for the training of tutorial staff and for advice on the administration of a postgraduate school of nursing and the selection and supervision of students. Two fellowships were provided, of which one was taken up in 1957.

The Government asked for two international tutors—a nurse educator and a midwife tutor. The nurse educator arrived in August 1957 and was joined by a national counterpart who returned in December 1957 from study on a WHO fellowship. A training programme was planned in detail, and until it could be put into operation assistance was given in revising the curriculum of the Rangoon School of Nursing. The first post-graduate class for nurse tutors was opened in June 1958, with eleven students from six areas in Burma. They were good students and successfully completed the examinations in May 1959. This group of tutors, the first trained in their own country, was given appropriate publicity in the press and on the radio. The nurse educator and her counterpart are helping their former students with advice and guidance in their new posts; they are also surveying provincial hospitals in search of candidates of suitable calibre for a second class.

The WHO midwifery tutor joined the project in September 1959. Details of the midwifery tutors' course are being planned, a field of practice is being prepared and suitable students recruited.

Assistance in Epidemiology to Health Directorate, Ceylon

In 1955, the Government of Ceylon requested WHO's assistance in setting up an epidemiological unit in the Directorate of Health Services, which should determine the incidence and distribution of disease in Ceylon, plan appropriate measures of control, and advise all branches of the medical science on the use of epidemiological methods.

For this purpose it was necessary to train a national epidemiologist who, in close association with laboratory, statistical, medical and public health services, would help to organize better diagnostic, notification and recording services, and so facilitate the selection for study of those communicable diseases that were of immediate public health importance. In February
1956 WHO provided an epidemiologist (Ceylon 38) and in September 1957 his counterpart was granted a one-year fellowship for advanced studies in epidemiology.

In close association with administrative, preventive, diagnostic and curative workers, a preliminary assessment was made of (a) the existing organization of health services and facilities for epidemiological investigations; (b) available data on the disease pattern of some communicable diseases; (c) the system of notification for infectious diseases; (d) facilities for the isolation of infectious diseases; and (e) facilities for teaching of epidemiology and infectious diseases. Joint field investigations were made subsequently of some of the major communicable diseases.

Within two years, the Epidemiological Unit had succeeded in making a place for itself by this work, and had established a basis for collaboration and team-work with the institutions and authorities concerned. In July 1959 a sub-division of communicable diseases was formally created which incorporated the new Epidemiological Unit, the services responsible for the specialized campaigns against venereal diseases, filariasis and malaria, and the veterinary public health service. The Epidemiological Unit is also closely associated with the Statistics and Quarantine Departments. In July 1959 the WHO epidemiologist completed his assignment, and his national counterpart assumed full responsibility for the work of the Epidemiological Unit. This completed the primary objective of the project.

Related work included the preparation of a scheme to provide for the notification of communicable diseases "on suspicion", in order to ensure prompt action by the local health authorities, prevent the spread of communicable diseases and provide information about their incidence in particular places and groups of the community.

The WHO epidemiologist made recommendations on ways of improving the diagnosis of communicable diseases and the manner of dealing with cases of communicable diseases in hospitals. This work is being continued by a specialist on infectious diseases who was appointed in July 1959 to the Angoda Fever Hospital to help improve the diagnosis, isolation and management of cases of communicable diseases, and the teaching on that subject. He is also training a counterpart.

Studies to determine the pattern and extent of major communicable diseases have been undertaken in collaboration with the superintendents of the health services, the hospital and laboratory services, and with the Medical Statistics Department.

Epidemiological investigations were made into outbreaks of smallpox, typhoid, bacillary dysentery, food poisoning and influenza; and studies of the typhus group of fevers, diphtheria, whooping cough, tetanus and poliomyelitis were initiated. In association with the public health veterinary officer, proposals were submitted for the further study and control of the zoonoses, under the next five-year plan. Special studies are being planned to discover the extent of such conditions as *Leptospirosis icterohaemorrhagiae*, Q fever, brucellosis, etc. A study, in collaboration with international laboratories, is also proposed of the prevailing adenoviruses and arthropod-borne viruses.

Lectures and demonstrations in epidemiology were given at the Kalutara training centre to several groups of medical officers of health and the public health inspectors. A syllabus and outlines of the principal lectures were prepared and mimeographed for distribution to the students.

**Tuberculosis Chemotherapy Centre, Madras, India**

The tuberculosis chemotherapy research project (India 53) was first planned in October 1955 at the request of the Government of India. WHO sponsored the visit to India of three representatives of the British Medical Research Council to advise on studies of mass domiciliary chemotherapy in the treatment of pulmonary tuberculosis. This was a problem of great importance for India, which has only 23 000 tuberculosis beds and, it has been estimated, at least two-and-a-half million active cases of tuberculosis; a national sample survey by the Indian Council of Medical Research indicated that there are one-and-a-half million infectious cases in the country.

The Indian authorities were concerned lest chemotherapy at home might prove inadequate in the treatment of the disease; in that case a high proportion of the patients treated might become chronic excretors of drug-resistant organisms. This would present a serious public health risk if chemotherapy in the home were given widely. It was agreed that it would be premature, with the knowledge then available, to undertake mass domiciliary chemotherapy even in a limited area. It was therefore decided to undertake in the first place controlled comparative studies of the treatment of patients and to supervise their contacts. The patients were to be selected in the course of routine diagnosis by the chest clinic service of a large city. After negotiation with the Madras State authorities it was decided to locate the Centre in Madras City.
The Centre was set up in 1956 under the joint auspices of the Indian Council of Medical Research, the Madras State Government, WHO and the British Medical Research Council.

The research work of the Centre is guided by a project committee consisting of four representatives of the Indian Council of Medical Research, the senior WHO officer of the team, a representative of the WHO Regional Office, a representative of the British Medical Research Council and a representative of the Madras Government. The British Medical Research Council, through its Tuberculosis Research Unit, is responsible for the scientific direction of the research, in accordance with plans prepared by the project committee.

WHO has provided eight international staff and a large amount of specialized equipment, transport and routine supplies. More than forty of the staff at the Centre are employees of the Madras Government and more than sixty are employed by the Indian Council of Medical Research. The Madras State Government has provided the premises. Supplies and drugs, much locally obtainable equipment and fuel and maintenance for vehicles have been supplied by the Madras Government and the Indian Council of Medical Research, and the latter set up a fund to provide for any essential financial assistance to individual families.

In May 1956 the Centre began to treat patients in a series of pilot investigations. The first study, based on a random allocation of patients to the two forms of treatment, started in September 1956. It was designed to yield information on the following aspects of the treatment of pulmonary tuberculosis in patients living in a bad urban environment:

1. The relative merits of home and sanatorium treatment with standard chemotherapy.
2. How far the infectivity of a series of patients treated at home can be reduced by standard chemotherapy.
3. The prevalence of tuberculosis in family contacts at the time when the primary case is diagnosed and the subsequent incidence of tuberculosis among them, with particular reference to the drug sensitivity of the strains.
4. The identity and virulence of the causative organisms and their comparison with strains of tubercle bacilli from England.
5. Some of the practical procedures for mass application of chemotherapy—for example, methods of sputum collection, of checking the self-administration of medicines and of general supervision of patients.
6. Diet and its relation to the response to chemotherapy.
7. The causes and management of treatment failures.

A full account of the first study is given in a report entitled “A Concurrent Comparison of Home and Sanatorium Treatment of Pulmonary Tuberculosis in South India” published in the Bulletin.¹ The findings show that in spite of the manifest advantages of sanatorium care—rest, adequate diet, nursing and supervised medicine-taking—the results of domiciliary chemotherapy are comparable to those of sanatorium treatment, and that it would therefore be proper to treat most patients at home, provided that an adequate service can be established.

The other studies that are being carried out are:

Study II — Treatment of tuberculous contacts of Study I patients;
Study III — Comparison of different regimes of domiciliary treatment;
Study IV — Treatment of tuberculous contacts of Study III patients.

Nutritional and sociological studies are in progress, as well as the laboratory research work.

This project is providing reference laboratory services, and is being used as a centre for training doctors and auxiliary workers from all the countries in the Region.

Malaria Eradication, Indonesia

This project (Indonesia 32) is an example of how international co-operation can meet the varied problems that arise in financing, staffing and organizing a technically complex programme among a large population, and often in difficult terrain.

About 75 million of the total population of 84 million people in Indonesia live in areas where they are exposed to malaria. The country has hundreds of islands and transport is often difficult. The substantial autonomy of the provinces, especially in health administration, calls for reconciliation of the demands of this autonomy with the technical requirements of a planned programme, in which steady expansion to contiguous areas is not necessarily related to the prevalence of malaria in an area. In spite of financial stress malaria has continued to receive first priority in health programmes. The recognized need for an autonomous malaria eradication board and a centrally supervised malaria

¹ Bull. Wld Hlth Org. 1959, 21, 51-144
eradication service is being adjusted to the recent changes in governmental administration.

A great deal of work in taxonomy has been done in the past, but for many areas there is still little information about the fundamentals of malaria transmission. An important vector species, *Anopheles sundaicus*, along the coast has developed resistance to DDT, and this has necessitated resort to dieldrin. The great scarcity of medical personnel in the country has been partly met by the employment of “kontrolirs” and “mantris” (auxiliary health workers), but they are inadequate in number and unequally distributed. Certain commodities, such as insecticides and vehicles, have been supplied by the United States International Co-operation Administration (ICA). The extent of their supplies and advisory service will be determined annually according to the funds available and subject to satisfactory performance.

The objective of the programme is the progressive eradication of malaria by stages within eleven years from 1959.

The effectiveness of residual insecticides against the vector species was shown earlier in the malaria control project (Indonesia 4) that was assisted by ICA and WHO. That project started on a small scale in 1951 and by 1958 about 15 million people were being protected by insecticidal spraying. When the Government adopted the objective of malaria eradication, the programme was reorganized to provide the accepted stages of preparation, attack, consolidation and maintenance, which are to be undertaken in sequence in demarcated zones, each with about 1.4 million population. By the end of 1959, about 11 million people will be included in the attack phase, after the necessary surveys, geographical reconnaissance and training of national personnel. Each zone will have three or four years of attack phase during which surveillance operations will be begun. When the surveillance data show that transmission has been interrupted, spraying will be discontinued, but surveillance will be continued for a further three years of consolidation. Later, surveillance will be maintained by the regular health services.

WHO has provided for this programme a senior malariologist, a malariologist working as epidemiologist, and an administrative officer at the centre; four malariologists and four sanitarians in the provinces; four malariologists, two entomologists, nine assistant malariologists and eight technicians for the study teams.

Four special study teams will investigate any important features of malaria transmission that may affect the spraying and evaluation procedures. Such studies will help to determine what structures should be sprayed to bring about complete interruption of transmission and what is the most suitable method of evaluation for the country.

The Malaria Institute in Djakarta, and similar institutions in the provinces in Semarang, Jogjakarta, Surabaya, Tandjung Kerang and Maccassar will be used for training the various categories of Indonesian personnel; senior staff will be sent for training at international training centres.
The European Region is very complex; its Member States present a wide range of cultural patterns and social systems, natural resources and climatic conditions, financial potentialities and—not least—health problems. Since its inception WHO has striven to shape its regional programme in Europe so as to respond to the great variety of demands that arise in such different situations. During the year under review, as in previous years, some of its activities have been designed to meet the needs of individual countries or groups of countries, and others have been directed to the problems of the Region as a whole.

The growing tendency to seek WHO assistance in health problems is by no means confined to the less developed parts of the Region. Examples are the revision of national mental health services and health problems created by the erection of an oil refinery. A request was also received for emergency assistance in connexion with an outbreak of paralysis, found by WHO consultants to be due to contamination of cooking oil with tri-ortho-cresyl-phosphate.

During the year, senior public health administrators of the Regional Office were stationed in Morocco and Turkey, two of the countries where there is the largest volume of country projects. It is already evident that these appointments will increase the usefulness of WHO assistance.

Activities planned for the benefit of specific groups of countries are mainly in the field of communicable diseases. The prime example is the co-ordinated effort for the total eradication of malaria from the European continent, which it is planned to achieve in the near future. During the year, the malaria service of the Regional Office was strengthened and other efforts towards the goal of eradication were intensified.

The increasing demand for projects specific to certain countries or groups of countries does not imply a diminishing need for—or interest in—activities designed to benefit the Region at large. In the first place it is only exceptionally that countries fail to make use of the educational opportunities offered to their health staffs by traditional types of seminars, study tours and conferences, which usually cover a rather broad range of public health administration and practice. Moreover, what might be called “avant-garde” activities, such as studies on cancer or cardiovascular disease, have proved to be of interest even to countries that do not yet give them high priority in their own health planning. Clearly WHO will be called upon to play an increasingly greater part in research on these subjects in the Region, and will need to develop its resources with this aim in mind.

As in past years, the education and training programme received much attention. A number of training schools and institutes were assisted in various ways; and the fellowships programme was further expanded. There is a general and gratifying interest in this side of the regional programme; all Member countries are eager to send their own nationals abroad for training, and are equally willing to receive foreigners and to provide the best facilities for their studies. Apart from intra-regional activities, Europe is an important placement area for fellows from other regions. This interest in the fellowships programme, and its present and expected scope, also present a challenge to the Regional Office to improve and expand its fellowships services so that the maximum profit may be gained from each individual fellowship.

The Regional Committee

The ninth session of the Regional Committee for Europe was held, by courtesy of the Government of the People's Republic of Romania, in Bucharest from 8 to 11 September 1959. The session was attended by members of twenty-eight countries. The United Nations (and UNICEF), one inter-governmental organization and ten non-governmental organizations in official relationship with WHO were represented. The Director-General attended part of the meeting.

The Committee reviewed the annual report of the Regional Director and the modified programme proposed for 1960, and endorsed the proposed programme for 1961 for transmission to the Director-General. In the discussions on the programme two opposing points of view were expressed. Some members stressed the importance of inter-country activities in the Region and even considered that they might become more important as new fields opened up. Others held that many countries in the Region were still in process of building up their health services and were in continuing need of direct
assistance from the Organization. Since many "inter-country projects" are in fact designed to give direct assistance simultaneously to a number of countries, the Committee asked that such projects should be clearly designated when the next proposed annual programme is presented to the Regional Committee. During the discussion representatives stressed the importance for future programmes of work on environmental sanitation, particularly on safe water supply and waste disposal, and proposed that a certain priority should be given for a study of sanitary inspection services. It was asked that the Regional Office should give greater attention to the international co-ordination of research projects. Finally, several representatives inquired whether reports, in print if possible, of meetings convened by the Regional Office could be more quickly and more widely distributed.

The Committee considered matters arising out of decisions of the Twelfth World Health Assembly and the twenty-third and twenty-fourth sessions of the Executive Board. Countries concerned were urged to make a final co-ordinated effort to eradicate malaria from Europe and attain the consolidation phase in their eradication programmes by 1962 at the latest.

On the question of environmental sanitation, and particularly the importance of safe water supplies, the close relationship between an adequate and safe water supply and hygienic waste disposal was pointed out in the discussion and was further stressed in the resolution adopted on the subject.

On the proposed International Health and Medical Research Year, the Committee unanimously adopted a resolution expressing interest in a planned and co-ordinated International Health and Medical Research Year with specific aims and objectives, and considered that, if the Assembly decided to hold such a Year, the costs should be included in the regular budget, but with provision for the acceptance of voluntary contributions.

The Committee studied the report of a meeting of consultants on the medical and public health aspects of radiation. It was agreed that much unnecessary exposure to radiation was due to the indiscriminate use of x-rays, particularly in fluoroscopy, that much more research was needed on the effects of radiation on the human organism and that WHO should promote such research. The Committee adopted a resolution drawing attention to the fact that in a number of countries health administrations were not adequately consulted by other agencies concerned with atomic energy, and emphasizing that all health personnel should receive training in this subject and that it should begin in their basic studies.

During the technical discussions on "The Place of Mental Health in a Public Health Programme" the following points were brought out: out-patient and domiciliary mental health services should be extended; district dispensaries, from which home treatment could be given, would permit their psychiatric staff to be well acquainted with the social environment of their patients; mental hospitals should be so situated as to facilitate collaboration with general hospitals; an important factor in modern psychiatric treatment was that the patient should continue his normal social life as much as possible, and this could be facilitated by domiciliary treatment, after-care and the provision of special day and night hospitals; mental disorders, especially in children, should be treated early; epidemiological studies were urgently required, for which WHO could provide valuable assistance.

The subject selected for the technical discussions in 1959 was "Public Health Organization as a Scientific Discipline".

The Committee confirmed its decision to hold its tenth session in Copenhagen and accepted the invitation of the Government of the Grand Duchy of Luxembourg to hold the eleventh session in Luxembourg in 1961.

Administrative and Organizational Developments in the Regional Office

As a result of the management surveys (which were completed late in 1958) to assess the staffing required for the Regional Office in its new circumstances, the structure of the Regional Office was amended. The malaria eradication staff has been reinforced by a medical officer and an administrative officer, who will be working mainly on malaria campaigns in the field, and the small conference unit has been transferred to the administrative section. Two public health administrators have been appointed to serve as WHO representatives in Morocco and Turkey respectively.

The turnover of staff continued to be high, particularly in the general service staff. A revised pay-scale for the general service staff became effective on 1 July 1959, and new staff will be given more active assistance in finding accommodation and in meeting their initial expenditures; these changes may help to bring the turnover down to a more manageable level.

Since the Government of Denmark had provided accommodation for both the Tuberculosis Research Office and the Regional Office, the transfer of the Tuberculosis Research Office to Geneva has relieved the difficulties of accommodation referred to in last year's Report.
Some Aspects of Work in the Region

A complete list of projects current during the year will be found in Part IV. The following have been selected for fuller description.

Malaria

During 1959 the regional eradication programme was intensified and WHO assistance for certain national programmes increased.

The aims were:

1. to reinforce eradication programmes by concentrating the assistance of the Organization on those countries nearest the goal, so that eradication might be achieved as quickly as possible over a wide geographical area, without regard to frontiers, as a significant and encouraging intermediate stage on the way to world-wide malaria eradication;

2. to intensify epidemiological studies and to reinforce the antimalaria services in those countries which are less advanced in their eradication programmes and which pose more serious problems;

3. to improve the co-ordination of the work in all countries by a regular system for evaluating the progress of campaigns and the results secured in each country.

As reported in the preceding section, the inauguration of the eradication programme has made it necessary to reinforce the regional office personnel by a second regional malaria adviser and a regional administrator.

The objectives stated in sub-paragraph (1) above should be achieved by 1962. The countries concerned are Albania, Bulgaria, Greece, Portugal, Romania, Spain, the Union of Soviet Socialist Republics and Yugoslavia: in all these countries, epidemiological conditions, the development of preventive medicine and of rural health services, and the intensive use of residual insecticides, had helped to reduce endemic disease before the start of the eradication programme. Today all these countries have changed their control programmes into eradication programmes. They are all well advanced and should have reached the consolidation phase by 1962 at the latest; indeed Bulgaria, Portugal, Spain and the Union of Soviet Socialist Republics have already reached this phase. Portugal and Spain have asked help from WHO to set up an epidemiological surveillance network in the zones of their territories which have reached the consolidation phase, and plans of operations for these two countries are now being drawn up. Plans of operations for malaria eradication have already been signed with the Governments of Romania and Yugoslavia.

Many countries of continental Europe, therefore, will soon reach the maintenance phase, in which the responsibility for antimalaria work will fall on the general rural health or preventive medicine services. It is necessary to give some thought to this development now, and, in particular, to define minimum standards of efficiency for those services so that they will be able to carry this serious responsibility. WHO has therefore placed this subject on the agenda for the regional conference on malaria to be held at Palermo in 1960.

The countries affected by the second objective are Morocco and Turkey. WHO sent a pre-eradication team to Morocco (see project Morocco 20, page 200) which made a study of the epidemiology of malaria there and drew up a draft plan of operations, but it was obvious that the execution of this plan could not be dissociated from the national five-year health plan which should be completed by 1964. However, this delay will allow of a better geographical co-ordination of the programme in North Africa, for Algeria is not yet ready to start a co-ordinated malaria eradication programme. In Turkey, as a result of the experience during the first three years of the eradication programme, the tripartite plan of operations has been revised and the assistance of UNICEF and WHO in advisory services and material greatly increased (see project Turkey 23, page 205).

The problem of anopheline resistance to the chlorinated insecticides has not extended beyond Greece and Turkey. The Organization has sent a mission to Greece which, in collaboration with the Government, has carried out tests with insecticides to study the possibilities of using organo-phosphorus compounds and their efficacy (see project Greece 28, page 197).

WHO's regional programme for malaria eradication in Europe was confirmed by the Regional Committee at its ninth session at Bucharest, which adopted a co-ordinated priority plan for malaria eradication in continental Europe.

Maternal and Child Health

The maternal and child health programme is designed to meet a wide range of needs in the Region and is aimed at strengthening national maternal and
child health services, integrated within general public health services, and includes projects to deal with more specific problems.

Continued assistance in strengthening national maternal and child health services was given to Poland, Turkey and Yugoslavia. All these projects were assisted by UNICEF and the Organization of the United Nations Technical Assistance Administration. In Yugoslavia an interesting attempt has been made to evaluate the progress made by the maternal and child health services during the last five years with the assistance of UNICEF and WHO. This was a joint effort of the Government, FAO, UNICEF and WHO. A WHO team of two paediatricians and a public health nurse, with a nutrition expert from FAO, assisted a national team. After visits to the field (from April to June), the WHO and national teams met again for one week at the Regional Office to complete their report. Valuable data have been collected and it is hoped that the experience gained will be useful in other similar evaluation efforts (see project Yugoslavia 16.9, page 208).

As regards specific health problems, continued assistance was given, in co-operation with UNICEF, to a number of projects for the care of premature infants and for the rehabilitation of children. Projects for the care of premature infants in Austria, Spain and Yugoslavia were assisted by fellowships to doctors and nurses who would be in charge of premature units. More attention will be given in the future to the difficult problem of the home care of premature babies.

In the rehabilitation of handicapped children, continued assistance was given to Greece, Spain and Yugoslavia and work was also started in Poland. In all these countries the aim is to establish a national comprehensive rehabilitation programme, the first phase of which involves the creation of demonstration units with provision for training personnel of different types and in sufficient number. In these programmes, contact is maintained with ILO, UNICEF and the United Nations Technical Assistance Administration, and it may well be that this collaboration will need further strengthening in the future.

For the first time in the Region, an inter-country activity was designed to bring together senior officials from the whole Region to study in two countries the organization and administration of maternal and child health work and the co-ordination between the different aspects of this work. The Travelling Seminar on Maternal and Child Health (EURO 170) visited Norway and Poland in June and twenty-five medical administrators in maternal and child health from twenty-four countries took part. The seminar was directed by a Stockholm professor of paediatrics.

In both countries, the group spent an introductory period in the national health department and then visited institutes and health centres in the country. During these visits there were full discussions between the participants of the various countries. The final report of this travelling seminar has been prepared. The seminar proved successful and was considered a very stimulating experience; but all participants agreed that more time should have been allotted to discussions.

The study of the causes of perinatal morbidity and mortality was continued as an inter-country activity (EURO 39.2). In several countries of the Region, perinatal mortality today far exceeds infant mortality and the study of its causes promises to be valuable for prevention. The work started modestly in 1953, but is gradually expanding into a study of all aspects of pregnancy wastage. A WHO consultant visited several European centres for such studies before going to the United States of America as a visiting scientist to the institute which co-ordinates similar work in that country. A meeting was held in December 1959 of representatives of some European research groups concerned with these problems. They discussed future work in Europe and the possibilities of co-operating with similar efforts in the United States of America.

Finally, the regional maternal and child health programme has its educational aspects and different types of fellowships form part of all country projects. Collaboration with the International Children's Centre has been maintained and fellowships have been awarded for attendance at some of the courses and seminars arranged by the Centre (EURO 191.1 to 191.5).

Health and Welfare of Seafarers

In February 1959 WHO convened in Marseilles a regional conference on the health and welfare of seafarers. Few industries have such a profound effect on the entire pattern of life of their workers as the merchant marine. Seafaring, one of the oldest professions in the world, has been and still is a dangerous occupation. The seafarer's constantly changing environment exposes him to health hazards not met by the worker with a fixed residence; he is often exposed to all kinds of communicable diseases and to risk of employment injuries, and he has certain mental health problems caused by his predominantly masculine environment and long separations from home. It has been realized for some time that relatively little is known about these problems or about the health and welfare services organized for seamen in the Region.
The main aim of the Conference on Health and Welfare of Seafarers (EURO 13.2) was to remedy this lack of knowledge. It was also hoped to contribute to the world survey on the nature and extent of the health problems of seafarers and the health services available, for which the Health Assembly had asked.

To obtain the widest possible range of opinion on such problems in Europe, the Conference included government medical officials responsible for the organization or running of national or local health services for seafarers, medical superintendents of shipping companies, ships' surgeons, and doctors with a scientific or professional interest in the medical problems of seafarers; one participant was from the United States of America. It would have been difficult and inadvisable to separate the health from the social aspect of the whole problem, and the United Nations Technical Assistance Administration, ILO and a representative of the United Seamen's Service were invited to contribute to the work of the meeting.

The Conference was held at the Station maritime of Marseilles and considered such topics as health and welfare on board ship and ashore, dental health problems, the mental health of seafarers, social work for seamen and their families, rehabilitation and health centres. The discussions provided much information on the situation in Europe and a summary report on the meeting was approved at the final session. Points agreed on were the need for reliable statistical data on morbidity and mortality among seamen, the importance of dental services, the need for research and action on questions of mental health and rehabilitation, and the value of setting up seamen's international health centres which would help to improve health conditions generally on the waterfront, and which could also be useful in collecting statistical data, taking action against alcoholism, and providing welfare services for seafarers, and thus lead to preventive measures in the future. The Conference was widely reported in the local and national press with favourable comment.

A final report on the Conference has been prepared for distribution to participants, Member States, and interested organizations.

Training Courses

In the European Region, a most important feature of the programme has been the organization of training courses. Sometimes WHO has itself sponsored a new course (or series of courses) in a particular subject, as an inter-country project; sometimes an existing national course has been assisted and expanded to make it suitable for WHO fellows from other countries.

The anaesthesiology training course in Copenhagen (EURO 52) has been organized by WHO in collaboration with the University of Copenhagen annually for the last nine years. In 1959 the number of WHO fellows who took the course—twenty-four from twenty-three countries—was the largest yet. One of the fellows is to organize a modern course on the subject on his return to his country in 1960. He is being supplied with slides and teaching material and given instruction on methods of organizing the course. New in 1959 was the one-year academic course on the administration of medical services, which began in Edinburgh in October (see also page 24 and project EURO 138.1, page 160). It is hoped to follow this by a similar course in French, to be held in Brussels in 1961, and by another in Russian. These courses are intended primarily for fellows who will teach the subject in their own countries. An advanced course in epidemiology and statistics at the London School of Tropical Medicine was originally a part-time course for British students but in 1959, at the suggestion of WHO, it was modified into a whole-time four-month course specially for WHO fellows. WHO paid the travel stipends and fees for six fellows to attend this course. There have been requests for a similar course in 1960.

The importance of evaluating such courses is touched on in Chapter 5 (on education and training) and an effort is being made to arrive at a standard procedure for all WHO courses in the European Region. A questionnaire has been prepared for this purpose which will be filled in by all WHO fellows taking courses that start after 1 September 1959 and which should provide fuller information about the value of the course than has been given in the "final reports" formerly sent in by the fellows.

Results of the evaluation carried out so far point to the need for very thorough advance preparations to ensure that the candidates are properly selected, and that, for short courses particularly, they are not handicapped by insufficient knowledge of the language in which the courses are given. It is also clear that the teaching programmes of international courses must be flexible if they are to cater adequately for fellows with inevitably different standards. Practical work must be closely linked to theoretical work; sightseeing tours to institutions may be of little value unless designed to bring out some point made in the course.

A frequent complaint relating to national courses refers to unrealistic conditions presented to fellows.
from technically under-developed countries who do not have the facilities for putting into practice what they have learnt in the more highly developed countries.

There is a continuing demand for individual fellowships, for doctors, for example, who wish to learn some highly specialized technique. If such fellows can be grouped together in an organized course they will be able to profit by discussion of the training among themselves and the institution that provides the course will have less trouble and expense than in arranging individual courses spread out over the year. In such fellowships preference is given to those who will return to their own country to teach the subject.

The methods of education used are also constantly reviewed. A symposium on the subject, held at the Regional Office in October, was attended by regional health officers and forty instructors from the course on anaesthesiology and from the course on rehabilitation that is planned for 1960. Guest speakers from Denmark, in physiology, pharmacology, neurology, rehabilitation, surgery, and anaesthesiology, took part in the discussion.
CHAPTER 17

EASTERN MEDITERRANEAN REGION

The tenth anniversary of the opening of the Regional Office for the Eastern Mediterranean fell within the period under review. Although throughout the decade the broad aims of the regional programme remained the same, a certain change in emphasis has gradually been brought about. National staff have taken over the work of individual projects in which WHO once assisted, in the control of communicable diseases and in maternal and child health for example, and WHO assistance is now directed more to questions of general organization and to other programmes—such as research, pilot projects and surveys and, where feasible, to programmes for the eradication of diseases.

Education and training have retained, and indeed increased, their relative importance; their scope ranges from the training of a single-purpose auxiliary health worker and demonstration projects in which health workers receive apprenticeship training, to assistance in highly specialized departments of post-graduate training institutions. Few projects do not include some form of education and training.

The number of fellowships awarded in the Region in 1959 is more than six times the figure for the Regional Office’s first year of operations, and in post-graduate awards the increase has been largely in the field of health organization and services. Most undergraduate fellowships are for medical studies. The needs still remain great, however, and a further expansion of the education and training programme is contemplated.

Administrative and financial difficulties in many countries still retard progress, particularly in the eradication of malaria, but the co-ordination, both within countries and between countries, which is essential to the success of eradication campaigns, is becoming increasingly satisfactory. The reinforcement of the Malaria Eradication Co-ordination Unit during the year, the administrative assistance provided for malaria eradication services, and the discussions and decisions at the Conference on Malaria Eradication in Addis Ababa in November have brought further advances. The decision of the Government of Pakistan to undertake a malaria eradication programme with WHO assistance has been an important recent development.

The irrigation systems that are being planned or constructed in certain countries increase the urgency of malaria eradication and also aggravate the bilharziasis problem. Bilharziasis control projects, including field and pilot studies, are under way in Iran and Iraq and a pilot project and training centre is being planned for the United Arab Republic.

The regional smallpox survey, which started in January, is a preliminary to the planning of national mass vaccination campaigns as integral parts of the regional smallpox eradication programme. Details are given later in this chapter.

Work has progressed in the tuberculosis chemotherapy pilot project in Tunisia; its initial results are expected in 1960 and should prove useful for the conduct of tuberculosis control programmes. A regional tuberculosis epidemiological and statistical unit is being planned for the same year, to assess the results of the regional tuberculosis prevalence survey, which was begun early in 1959, and to undertake other work hitherto done in the Tuberculosis Research Office in Copenhagen.

Community and industrial developments in the Region are increasing the need for adequate and safe water supplies, and for close consideration of occupational health problems. The health hazards of the increase in the use of radiation demand immediate attention. Such changes and new trends are also adding to mental health problems, and these too now receive greater consideration than before in the regional programme.

Much of the work in the Region has again been carried out in close co-operation with UNICEF.

The Regional Committee

Sub-Committee A of the Regional Committee met in Alexandria from 14 to 19 September 1959, and Sub-Committee B met in Geneva from 28 to 30 September.

Sub-Committee A was attended by representatives of Ethiopia, France, Iran, Iraq, Italy, Jordan, Lebanon, Libya, Pakistan, Saudi Arabia, Sudan, Tunisia and the United Arab Republic. Representatives of France, Iran, Israel and Italy attended Sub-Committee B. The Technical Assistance Board was
represented at both sub-committees. UNICEF, the United Nations Relief and Works Agency for Palestine Refugees, FAO and UNESCO, the League of Arab States and nine non-governmental organizations were represented at Sub-Committee A. The United Nations and seven non-governmental organizations were represented at Sub-Committee B. The Deputy Director-General attended both sub-committees.

In pursuance of resolution WHA7.33, the two sub-committees designated a representative to meet with the Regional Director to harmonize their decisions and prepare the final report on the session. The meeting was held after the close of the session of Sub-Committee B. In most cases, the resolutions of the two sub-committees were the same. The sub-committees approved the annual report of the Regional Director and endorsed the proposed programme and budget estimates for 1961.

In the discussions on the annual report of the Regional Director, the importance of education and training and the need to expand the fellowships programme were stressed. Research in preventive medicine in public health, on bilharziasis and malaria and on the health aspects of radiation was considered essential, and it was suggested that methods of health education suitable for countries in which there were population groups of different cultural and ethnic backgrounds should be worked out at the regional level. The fact that the prevalence of dental caries was much lower in children of Eastern Mediterranean countries than in children who had come from western countries was considered to provide an interesting basis for studies on some of the effects of living in a new environment. The need to establish rural health centres, to improve environmental sanitation, to develop vital and health statistics, was emphasized. The evaluation of national health programmes was highly recommended; and it was noted that preliminary results of an evaluation already undertaken in Iran were proving both helpful and encouraging. Regional co-ordination and co-operation on all questions was urged.

In the discussion on technical subjects, governments that had not yet undertaken or planned malaria eradication programmes were urged to do so. The necessity was reaffirmed of providing efficient administrative machinery for the direction of the programmes within countries and close co-operation between countries. Governments were called on to contribute to the Malaria Eradication Special Account.

It was considered important that campaigns for smallpox control or eradication should be administered and co-ordinated at the regional level. The use of lyophilized dried smallpox vaccine was recommended. Measures advocated for preventing the spread of smallpox across the land boundaries of adjoining countries included simultaneous vaccination programmes in boundary zones, and the establishment of efficient quarantine services.

It was recommended that priority should be given to national programmes for the provision of community water supplies and that those programmes should cover the administrative, legal, economic, fiscal and technical aspects of water supply. It was recognized that the disposal of waste water also required special attention.

On the use of ionizing radiation in medicine and public health, it was considered of paramount importance to educate personnel in the public health aspects of radiation and to take efficient protective measures against radiation; the importance of research on the somatic and genetic changes due to radiation and on radiobiology was again emphasized.

Further studies were thought to be needed on the active principles of khat and on the social, medical, legal and economic implications of its use.

Expenditure by the Organization or individual governments on an International Health and Medical Research Year was considered unjustifiable at the present time, when funds were insufficient for essential work.

Sub-Committee A held technical discussions on ankylostomiasis, and emphasized the need for a survey of the basic factors involved in its epidemiology, the management of sanitation, the production of effective and safe remedies for use in treatment campaigns, and the framing of procedures for evaluation and organization.

During discussions in Sub-Committee B on poliomyelitis, it was noted that serological surveys had confirmed its endemicity in a number of countries of the Region.

“Tuberculosis Control, with particular reference to Domiciliary Treatment” was chosen for the technical discussions at the 1960 session.

Administrative and Organizational Developments in the Regional Office

The organizational pattern of the Regional Office remained practically unchanged during the twelve months under review. It was decided to increase the staff of the Malaria Eradication Co-ordination Unit. The post of regional adviser on mental health was filled and regional advisers on nutrition, communicable eye diseases and public health laboratory methods were being recruited at the end of the year.
Some alterations have been made to the building occupied by the Regional Office, but the accommodation is not yet adequate.

Present Trends and Future Developments

During the year under review the governments in the Region increased their requests for assistance from the Organization. Requests for direct advisory services have come mainly from the countries whose health organization is less developed; those from more advanced countries tend to be for fellowships and educational projects. As has been already noted, most projects have an educational side, but projects in which education and training are the sole or main purpose are increasing in number. New inter-country proposals of this type include assistance to medical libraries, a medical education conference planned for 1961 and an inter-regional conference on auxiliary training, which is being planned for 1962.

Local participation is also increasing. In 1959 national staff have taken over many projects previously assisted by WHO, particularly in maternal and child health, and venereal and other communicable diseases.

Progress in the organization of integrated national programmes has been less satisfactory. There is a tendency to maintain special services instead of undertaking the organization necessary for their inclusion in the general health services. The development of integrated rural health services in particular is being retarded in this way.

There is a growing appreciation that it is essential to evaluate periodically the work done so far in the national health programme, so that plans for future improvements may take account of the actual results of the methods that have been used. The evaluation in Iran, mentioned above, was undertaken early in 1959 by national staff assisted by WHO and using methods approved by the Organization. This is the first project of its kind, and it is expected that the whole Region will be covered within the next few years. It is likely that the training of professional and sub-professional personnel will continue to form a chief part of the work of the Regional Office and that even such specialized subjects as health physics and radiation protection will be included in the training programme. The eradication of malaria and smallpox and the control of tuberculosis and bilharziasis will be carried on with still greater vigour. More assistance will also be given to countries of the Region in the provision of safe and adequate water supplies, and research will be given a more prominent place in the regional programme.

Some Aspects of Work in the Region

A complete list of projects current during the year will be found in Part IV. The following have been selected for fuller description.

Regional Smallpox Survey

The Twelfth World Health Assembly, in resolution WHA12.54, requested the Director-General to urge health administrations of countries where smallpox was still present to undertake eradication programmes, and asked him to offer them any necessary technical guidance and advice. In the Eastern Mediterranean Region steps had already been taken towards the implementation of such a scheme, because many parts of the Region still continued to harbour endemic smallpox. A thorough epidemiological survey of the endemic foci was necessary before a definite programme of eradication could be planned. A regional smallpox survey team (EMRO 16) was therefore formed and started work in December 1958. By the end of 1959 it had already completed a survey of Sudan, Saudi Arabia, Ethiopia (and Eritrea), and Yemen—all countries which still shows signs of endemic smallpox and in which outbreaks or epidemics flare up occasionally.

Lebanon, the Syrian Province of the United Arab Republic, and Jordan were also visited because, although smallpox is not endemic in these countries, they are exposed to the importation of smallpox cases from neighbouring endemic foci.

In some countries visited the percentage of inhabitants protected against smallpox by vaccination was found to be quite high; in others the percentage was very low, especially in remote rural areas where control measures had yet to be fully organized.

The regional survey team recommended and helped to plan mass vaccination campaigns as part of a regional eradication programme. The necessary permanent smallpox control measures, the appropriate type of vaccine (dried or glycerinated lymph) to be used in different climatic conditions, and techniques of vaccination, were reviewed, and discussed with the health authorities of the countries.

Dried lymph vaccine was recommended when necessary, and WHO assistance in its local production was offered in suitable cases. The team also helped
to plan health education campaigns whenever this was found necessary for the eradication programme.

Quarantine control measures for sea, air, and motor travellers were reviewed, and tightened as required. The regional team visited the main pilgrimage routes and examined the control measures.

Tuberculosis Control Demonstration and Training Centre, Ethiopia

Since March 1959 WHO has been helping the Government of Ethiopia to develop a national tuberculosis control service (Ethiopia 6). It has been necessary to build an adequate centre in which to demonstrate effective means of tuberculosis control, to train professional and auxiliary personnel and to co-ordinate and extend the national BCG vaccination campaign which has been started in Ethiopia in 1952.

The Government started the building in 1958, and it was ready for operation early in July 1959. WHO provided a medical officer (to direct operations until they can be transferred to a counterpart national team), an x-ray technician and a public health nurse as technical advisers to the project. WHO proposes to send a laboratory consultant in 1960 to assist the Tuberculosis Centre and the Pasteur Institute of Addis Ababa in improving the laboratory facilities, training, and methods.

The Government has already provided a medical officer trained in tuberculosis work, an x-ray technician, a laboratory technician, a chief nurse and two graduate nurses, and a number of clerical and auxiliary staff—twenty persons in all.

Equipment for x-ray work, laboratory equipment for direct microscopy, and vehicles have been provided by WHO; UNICEF has contributed tuberculin and BCG vaccination equipment, laboratory equipment for tuberculosis culture work, isoniazid tablets, and provision for contingencies.

In the first two months of operation over 4000 persons received the routine examination. There were also over 1110 group examinations. In those examinations 262 patients were diagnosed as tuberculous and registered in the Central Register. Ambulatory treatment has been planned. Of the 2733 persons tested, 1032 have received BCG vaccinations; 994 persons including those in tuberculosis hospitals are under diagnostic surveillance. The building of the culture laboratory of the Pasteur Institute has been completed. Full-scale work will be started when supplies are received. Training has begun, for which co-ordination has been arranged between various schools (Gondar Health Training Centre, Ethiopian Red Cross, and the School of Social Workers). There is an urban BCG team as well as two rural BCG teams actually working and it is proposed to provide permanent BCG centres in hospitals. Although the tuberculosis centre is some distance from the centre of the city, there has been an enthusiastic response from the public and good co-operation from the government officials.

Sanitary Engineering, West Pakistan

The Government of Pakistan has undertaken with the assistance of WHO a comprehensive programme of environmental sanitation in West Pakistan.

The project (Pakistan 22), started in February 1957, is primarily concerned with the improvement of water supplies and the disposal of sewage, excreta and other wastes. WHO has provided a sanitary engineer, who is working in close co-operation with the government services, fellowships for the post-graduate training in sanitary engineering of basically qualified engineers, and certain supplies and equipment. All other requirements are the responsibility of the Government of Pakistan.

The first step in this task was to make contact with the several agencies involved in water supply and sewage disposal and to assist them in their everyday problems. This is gradually leading to a better appreciation of the place and value of sanitary engineering, and of the need for trained workers in that specialty.

A plan for an environmental sanitation service for West Pakistan has been discussed and approved. A specific project on water and drainage in the Sind area has been planned and studied; in other areas surveys have been made of various problems and advice given on specific water and sewage schemes. In this way much valuable experience has been obtained of the organization and working of the other services, in particular of Public Works Departments, with which the Public Health Department must collaborate in this project.

The expansion of sanitary engineering work has also required an expansion of education and training, in order to provide the necessary national staff. Regular meetings of sanitary engineers have been held to discuss problems and exchange experiences. A seminar on water supply planning was held in May 1958 in Hyderabad, at which a tentative standard for water supply planning, prepared by the WHO sanitary engineer, was further elaborated. In late 1959 a meeting of sanitary engineers from Pakistan was organized to discuss the general problems of water supply. The participants made recommendations to the Government on the need for an adequate service and programme, the education and training
of sanitary engineers and water plant operators, and the prescription of water supply standards and water analysis practice.

Three engineers from Pakistan were sent abroad for a post-graduate course in sanitary engineering. One of them has already returned to Pakistan, and is to take charge of the Joint Office for Sanitary Engineering, described in the next paragraph.

In spite of what has been done in meeting project objectives and in obtaining recognition of the need for environmental sanitation, the organization of an adequate service has been delayed and it may be some time before formal sanction is given to a definite programme. But an important advance has been the establishment of a Joint Office for Sanitary Engineering, which combines the environmental sanitation section of the Health Directorate, and the Sanitary Engineering Planning and Design Division of the Social Welfare Works Organization. This office was formally inaugurated in July 1959. One of its first duties is to plan and design the schemes for a twenty-five million rupee programme of rural and urban water supply projects recently approved for West Pakistan.

Khartoum College of Nursing, Sudan

The graduation in 1959 of the first group of Sudanese nurses marks a big advance towards the establishment of basic professional training in nursing in Sudan. Five of the young women had a complete secondary school education; the sixth, on a WHO fellowship, has taken a Bachelor of Nursing degree at the Higher Institute of Nursing, University of Alexandria (EMRO 5) and will continue for post-graduate studies there for six months before returning to Sudan. These six nurses are expected to be the future nursing leaders in their country.

The teaching programme (Sudan 7) started in September 1956 and the number of suitable candidates who aspired to study nursing was discouragingly small during the early years; but for the academic year 1959/1960 eight students were admitted to the College, all of whom had completed four years of secondary education. This is the largest class so far, and brings to twelve the present number of students at the College.

As social patterns slowly change, larger numbers of girls are seeking admission to secondary schools and it is expected that in future there will be more entrants to the nursing profession, which is being increasingly accepted as a career for young women of Sudan, as is shown by the more enthusiastic interest and participation of the public in the programme.

Information material, photographs, sketches, and descriptive articles, were produced during the year and scenes from the school were included in a film on "The Modern Sudan". Recruitment programmes were carried out in various parts of the country and an "open house" was held for community leaders and for friends and relatives of the students and girls from the secondary schools. Such occasions were excellent publicity for the college.

The curriculum as a whole and the teaching outlines have been periodically revised in the light of experience and better adapted to the local needs. Residence rules and regulations for the students were drawn up.

A new educational unit and residence was under construction at the end of the year. Three wings were almost completed and the fourth is due to start in 1960. The buildings are close to the Khartoum Civil Hospital, which is being used to give the students clinic experience of various kinds. The new facilities, with teaching equipment, will provide room for sixty students. The College has an independent budget for the discharge of its functions.

At the time of reporting, six WHO nurses were teaching in the programme. They have been carrying much of the administrative responsibility as well as working professionally in the project. This stage will be gradually passed with the help of the nurses recently graduated and of the counterpart who is now taking post-basic study in public health nursing. It is also encouraging that in addition to the post-graduate student already mentioned four Sudanese student nurses on WHO fellowships at the Higher Institute of Nursing, Alexandria, are expected to be available within the next two years.

Conference on Trachoma, Tunis

Trachoma is a disease of particular concern in the Eastern Mediterranean Region as it is widespread in practically all the Member States and is highly endemic in some of them. The subject was discussed at the Regional Committee for the Eastern Mediterranean at its seventh session in 1957, and the influence of environmental sanitation on its control was considered again in 1958.

In October 1959 WHO organized a trachoma conference (EMRO 40) in Tunis for countries of the Eastern Mediterranean and European Regions. This was the second of a series of conferences for trachomatologists from countries in which the environmental conditions, disease problems and national resources are roughly comparable. Twenty-seven participants from twelve countries and eight observers attended the Tunis conference.
The discussions at the Conference dealt with the subject under the heads of ophthalmology, microbiology, epidemiology, environmental sanitation, health education, and planning, execution and evaluation of projects.

The Conference reviewed the classification of trachoma set out in the First Report of the Expert Committee on Trachoma and made recommendations for the clarification of the meaning of stage Tr I, the sub-division of stage Tr II, and the completion of stage Tr IV. The criteria of diagnosis and cure and the treatment methods proposed by the WHO expert committees on trachoma were endorsed.

The new preliminary experiments on the sensitivity of the virus of trachoma to various antitrachoma drugs were considered very valuable and further research on the subject was recommended. New knowledge about the trachoma virus and particularly about the methods of its cultivation in the yolk sac of the embryonated egg was eagerly discussed and it was considered that the standardization of methods, a clearer definition of terms used in the laboratory study of trachoma, the diagnostic value of inclusion bodies, the criteria for identifying the virus and its pathogenicity should be examined in further studies.

The epidemiology of trachoma was reviewed and various recommendations were made for obtaining more information on the subject, such as epidemiological and prevalence surveys and an up-to-date distribution map of trachoma. It was considered that further efforts should be made to find a generally acceptable formula to represent the index of severity of trachoma.

As regards environmental sanitation, it was agreed that flies played an important part in the transmission of associated ocular infections and possibly of trachoma, and that an adequate and easily accessible water supply was necessary to effective control. Health education, particularly of mothers, was of obvious importance in trachoma control programmes.

It was also considered that funds devoted to research were well invested and in the long run would save much of the money spent on control projects. Methods of control should be planned to ensure co-ordination between individual programmes. Suitable personnel should be carefully chosen and adequately trained. The technical and administrative as well as the budgetary aspects should be considered when programmes were evaluated.

Finally the Conference recommended: (a) that governments might consider the inclusion of certain types of conjunctivitis, notably those due to Neisseria, in the list of notifiable diseases; and (b) that there should be adequate undergraduate and post-graduate teaching of ophthalmology for medical and paramedical personnel.

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CHAPTER 18

WESTERN PACIFIC REGION

The general policy of assisting national health administrations in the development of their public health services was maintained during the period under review; special attention has been given to the training of all categories of health personnel, the control of communicable diseases, the development of specific services such as maternal and child health and nursing and the stimulation of environmental sanitation programmes. The trend towards integrated public health services has continued. Steps are also being taken to establish or strengthen rural health services; but the extent to which rural health services can be developed in areas where an economy at bare subsistence level predominates cannot yet be fully assessed.

There were still some delays in the provision of suitable counterpart personnel, but local participation has substantially increased, especially where assistance has been given for some years. During the year international personnel were withdrawn from five WHO-assisted projects, all of which are now continuing under the direction of the governments concerned.

In education and training the type of assistance required has differed in different countries. In some places there are medical schools where standards need to be raised and output increased, in some the need is to develop or strengthen a specific department, and in others assistance is required in upgrading a school to university level. The services provided have therefore varied from the assignment of lecturers for a period that will permit the training of staff competent to take their place, to visits of short-term consultants, exchange programmes and grants to permit wider training of auxiliary personnel in their own or neighbouring countries, and the award of fellowships. The report on the employment of returned fellows in the Western Pacific Region shows that ninety-six per cent. of them are doing work which is relevant to the studies undertaken.

Good progress has been made in malaria eradication during the year and the work has been considerably expanded with the additional funds provided by the Malaria Special Account; but many problems have still to be faced. Governments find that the change-over from malaria control to malaria eradication imposes a heavy load on their resources in money and staff, particularly senior staff, and if the programmes are to be carried to a successful conclusion the fullest co-operation and support of all government departments are essential. In the chief yaws-endemic areas projects are progressing towards the complete control of the disease, and in the other areas projects have been started or planned. The policy of combining eradication of yaws with the improvement of rural health services was continued.

Encouraging progress has been made in the bilharziasis project in the Philippines. Some years have been spent in investigating workable control methods, and in the period under review the results achieved so far have been assessed. The integration of bilharziasis control into the total health programme of a community's services will be tried out in two municipalities in Leyte. The results will be assessed after two years and it is hoped that they will provide sufficient information for a national programme.

During the past year there has been a growing recognition of the need for closer co-operation among the professional groups concerned with the health care of mothers and children. The Conference on Maternity Care which met in Manila in March 1959 was designed to enable representatives of the health team engaged in maternity care to exchange ideas, information and experiences; to discuss some of the principal problems encountered in the Region and how they might be dealt with more effectively; and ultimately to stimulate action for improved maternity care services.

The year's work in nursing has been encouraging. WHO has helped governments to evaluate the quality and adequacy of their training programmes and services in nursing and midwifery, and to make plans for improving them. Most countries in the Region now have programmes for training nurses and midwives, and the response to recruitment is much better. In countries where there are no fully qualified nurses and very few doctors to provide guidance, supervision and leadership the improvement in quality of services is far from satisfactory and much more assistance is needed.
Further study of environmental sanitation in the countries of the Region is clarifying the needs of the countries, and of the Region. A pressing necessity is that countries should realize the inadequacy of the existing sanitary conditions and should have expert advice on how they can be improved with the national administrative and economic resources. The best use of funds and energy can come only from the sound and steady growth of environmental sanitation services in both national and local governments; and this could be greatly facilitated by good short- and long-range planning within the governmental agencies concerned.

The Regional Committee

The tenth session of the Regional Committee for the Western Pacific was formally opened at the City Hall, Taipei, Taiwan, by His Excellency the Vice-President of the Republic of China. The session lasted from 16 to 22 September 1959.

The meeting was attended by representatives of all Member States in the Region except Laos, and of Member States responsible for territories in the Region. Representatives of the United Nations, UNICEF, the Technical Assistance Board, the South Pacific Commission, the International Committee of Military Medicine and Pharmacy and of five non-governmental organizations in official relations with WHO were also present.

The Committee noted with satisfaction the trend towards long-term health planning and the good progress made with the integration of WHO-assisted projects into the national health services. It considered that short evaluation summaries on projects in the Annual Report were of value both to the governments concerned and to other governments with similar programmes.

Particular attention was paid to the increasing co-operation with the South Pacific Commission and the growing understanding of the responsibilities of the Organization and the Commission for health in the South Pacific.

The Committee discussed briefly the problem of Japanese B. encephalitis and reference was made to the extensive research work being done in a number of countries. It was considered that it would be useful to hold a seminar or conference to exchange information on this and other types of arthropod-borne encephalitis.

The programme and budget proposals for the Western Pacific Region in 1961 were discussed by the Sub-Committee on Programme and Budget. In plenary session it was agreed that the programme and budget proposals should be transmitted to the Director-General without further comment.

The Committee recommended that the Regional Director should be asked to utilize savings for the priorities recommended by the World Health Assembly and for projects in developing rather than developed countries, as well as for the general priorities decided on by the Regional Committee at its ninth session.

The Committee noted with concern that the main vector of malaria in the Philippines had become resistant to dieldrin and that transmission was recurring in several areas from which the disease had been thought to be cleared. It adopted a resolution urging Member governments to make available personnel, money and material to support the programme and to ensure that the progress of the campaigns was rigorously assessed so that speedy action might be taken against such unexpected obstacles. The Regional Director was requested to keep governments informed of any further appearances of resistance in the Region, to circulate to governments as soon as possible information on the results of trials of medicated salt, to make budgetary provision for a malaria training course for students from French-speaking countries, and to collect and circulate to governments in the Region information on the economic benefits of a malaria eradication programme. The Committee drew the attention of governments to the fact that the theme of the next World Health Day, "Malaria Eradication — a World Challenge" would provide an opportunity to seek contributions for the Malaria Eradication Special Account.

The Committee noted the decisions of the Twelfth World Health Assembly concerning the provision of safe and adequate water supplies for communities. It recommended that the health authorities of Member States should stimulate the provision and orderly development of public water supplies, that the health authorities should be represented on the national and local policy-making bodies on such subjects as water resources, water usage and water supply development, and that they should prepare a long-term programme for the development of public water supplies, including small water supply projects for rural areas. It was suggested that public health workers and public works administrators should be among the participants in the proposed regional conference on community water supply.

In discussing the Special Fund established by the General Assembly of the United Nations, the Committee reminded Member governments that industrial or agricultural development projects often had obvious health implications which should not be overlooked. It expressed concern that the amounts allotted to health activities in the Region under the
Expanded Programme of Technical Assistance were less than those in previous years. It adopted a resolution urging Member States to take positive action to increase the amounts allotted to health activities.

Full consideration was given to the recommendation of the World Health Assembly concerning the eradication of smallpox. The Committee adopted a resolution emphasizing the urgency of world-wide eradication and recommending that the health administrations of countries where the disease was still present should make available a potent stable vaccine and, as soon as possible, organize and conduct eradication programmes. It urged on all Member countries the strict observance of quarantine regulations and stressed the importance of maintaining the highest possible level of immunity in the population.

By courtesy of the Government special field visits were arranged to health stations and centres near Taipei, where representatives had an opportunity of seeing some of the aspects of tuberculosis control work, including community participation in the case-finding survey.

During the technical discussions on tuberculosis control it was emphasized that tuberculosis control should form part of the integrated health services of a community, and should be based on precise knowledge of the prevalence and distribution of the disease. The subject was dealt with under three heads: prevention, prevalence surveys and domiciliary chemotherapy. The group concluded that recent findings on tuberculosis control would enable many countries to embark on control programmes.

The Committee selected “The Organization and Administration of Rural Health Services” for the technical discussions in 1960.

The eleventh session of the Committee will be held in the Regional Office in 1960, in Manila. The Committee accepted an invitation from the Government of New Zealand to hold the twelfth session in 1961 in Wellington. The Committee also considered and accepted an invitation from the Government of the Commonwealth of Australia to hold its fourteenth session in 1963 in Port Moresby, in the Territory of Papua and New Guinea.

**Administrative and Organizational Developments in the Regional Office**

The new building to house the Regional Office for the Western Pacific was finally completed in February 1959. It accommodates the entire staff of the Regional Office and other United Nations agencies that have asked to be accommodated. A visitors’ programme permits the public, especially schoolchildren, to have a guided tour through the building with talks on United Nations and WHO activities.

There has been no change in the organizational structure of the Regional Office. An area representative has been appointed for China, Hong Kong, Japan, Korea, Macao, Guam and the Trust Territories of the Pacific Islands and for the first time all areas of the Region are now covered. His duty station is Taipei.

The Regional Adviser in Tuberculosis has been transferred to the area representative post in Sydney, the two positions of regional adviser in tuberculosis and regional adviser in venereal diseases and treponematoses were combined, and a post of regional adviser in communicable diseases was established but has not yet been filled.

Because of the increasing financial assistance given by WHO to some of the malaria eradication projects, the post of administration officer became necessary. The officer will be assigned to malaria projects to advise governments on administrative and financial matters connected with the eradication programme.

**Present Trends and Future Developments**

The programme will continue to develop along much the same lines as in the past year, but more specialized advice will be required on some subjects.

As WHO-assisted projects become well established and more closely integrated into the regular health services, governments recognize more clearly the need for stronger health administrations, better co-ordination and careful planning. This has led to more requests for WHO public health advisers at the national level.

It is expected that the expansion of rural health services will be stimulated by the proposed evaluation of the rural health programme in the Philippines. The findings should be of interest to developing countries that desire to establish or strengthen their rural health services.

Malaria eradication will retain its importance and governments will be encouraged to assess their campaigns closely, to ensure that speedy action can be taken to meet unexpected difficulties. The eradication of yaws will remain a high priority.

The better control of tuberculosis and leprosy that follows the new methods of therapy will probably lead to more requests from governments for assistance in rehabilitation services, to help them to solve the social and economic problems presented by the increasing number of persons recovering from those diseases.
The increasing interest in the eradication of smallpox, both in countries where it is endemic and in smallpox-free countries, will, it is hoped, result in concerted action to organize national eradication campaigns. The Regional Committee emphasized the need for strict observance of quarantine regulations and reminded health administrations that serious outbreaks from an imported case can be avoided by suitable mass vaccination.

The project in Leyte has shown that control of bilharziasis is dependent upon the elimination of the snail vector, in which modern agricultural methods play a foremost part. Regional or national control operations therefore require for their success close working relationships with the ministries of agriculture and public works, so that disease control is directly related to economic development. The knowledge gained from the project is thus very important both in long-range agricultural and economic planning and in the control of the disease. A multi-agency programme is now being studied and a redesigned bilharziasis control programme will probably be launched some time in 1961.

Trachoma control in Taiwan will include well-controlled trials and scientific evaluation under the guidance of experts; and studies on the local epidemiology of the infection will be started.

In the early years of WHO's assistance to nursing, refresher courses and in-service training were given to supplement inadequate general nursing education and to prepare nurses for hospital service and for special fields such as maternal and child health. As the standards of general and basic nursing education improve, these courses are in some countries now chiefly given in such subjects as nursing service administration, clinical teaching and the broader ideas of public health service.

In nutrition there is still a great need for more precise knowledge of the nature and extent of the problems and of the possible resources for dealing with them, and for maternal and child health workers with better training in nutrition.

The co-ordination of preventive and curative health services for mothers and children has become more effective but will require further emphasis.

Governments will be encouraged to undertake projects of environmental sanitation designed to provide adequate and safe supplies of water for their communities, including small water supply projects for rural areas, and to organize continuing programmes for this purpose.

There is a keen interest on the part of health authorities in the health problems and work of other countries and territories and recognition of the common benefit that comes from exchange of knowledge, experience and views.

As the communicable diseases gradually come under control and as health facilities are strengthened and expanded, the interest of some governments moves towards industrial health, cardiac diseases, cancer and health insurance.

The closer relations with the South Pacific Commission will have a bearing on the future development of health programmes in this part of the Region.

Some Aspects of Work in the Region

A complete list of projects current during the year will be found in Part IV. The following have been selected for fuller description.

Environmental Sanitation, Taiwan

The Province of Taiwan consists of a number of islands, the chief of which, Taiwan proper, is a predominantly agricultural land in the sub-tropical belt. It has an area of 14 000 square miles and a population of over ten million living chiefly in rural towns and villages.

There was much destruction in Taiwan during the Second World War and there has been much restoration since. Vigorous efforts have been made to increase industrialization and to improve agricultural productivity.

Prominent among the causes of death in Taiwan are diseases attributable to faulty environment, such as gastro-enteritis, the helminthiases and typhoid and paratyphoid fevers.

The control of environmental factors was handicapped by lack of trained personnel and funds and by the overlapping of government agencies. The health administration, for example, had no professional staff in environmental sanitation and the sanitarians at health centres and health stations throughout the island were not adequately trained.

The provision of safe and adequate water supplies was given a high priority in the work of restoration but the improvement and expansion of waterworks systems did no more than keep pace with the growth of population and there was no programme for rural water supplies. Of about 100 000 wells in use, very few were sanitary installations; most of them were open dug wells or bamboo tube wells with suction hand pumps.
There were no waterborne sewerage systems on the island and the disposal of refuse in open dumps bred rodents, flies and other vermin. Of about 17,000 public schools in the island, only 19.5 per cent. were provided with water from public water systems.

The Government requested assistance from WHO in dealing with this situation and a short-term consultant was provided in 1954 to make studies and investigations, which led to specific recommendations for improving the central organization. From January 1956 until December 1958 a WHO sanitary engineer assisted in the formation and operation of the Taiwan Institute of Environmental Sanitation (IES); a second WHO sanitary engineer was assigned to this project (China 14) in March 1957 and is still on duty.

On 15 December 1955, the Taiwan Institute of Environmental Sanitation was officially constituted as the engineering arm of the Provincial Health Administration in all matters of environmental sanitation. Its initial staff numbered eighteen and by the end of 1958 there were forty-one permanent officers making, with temporary employees, a total of about sixty.

The Institute has been active in many branches of environmental sanitation, particularly in training sanitation personnel. Permanent buildings, including classrooms, laboratory, library, workshop and dormitory, have been constructed in Pingtung for a sanitary training centre. In 1957 and 1958 the Institute organized and operated nine nine-week classes in which it trained 174 sanitarians. There were also five two-week classes in which ninety-three well and latrine construction inspectors were trained.

The Institute has very good laboratory facilities for routine analyses, developmental and research work on water, sewage, industrial waste refuse and, to some extent, on air pollution. The four regional water analysis laboratories formerly used by the public works agency of the province are now under the IES which now checks water quality for all public water systems and wells in Taiwan. The IES has also helped to strengthen seven laboratories of health centres and waterworks plants, by training laboratory technicians.

The Institute has supervised and assisted technically an island-wide programme of well construction, financed by the Joint Commission for Rural Reconstruction, the provincial government and local governments, in which more than three thousand sanitary dug and tube wells have been installed.

The second WHO sanitary engineer was assigned to the newly-created Taipei Sewerage and Drainage Corps, which he is advising on the design of a waterborne sewerage system and a drainage system for the City of Taipei. This scheme for the estimated future population of 1,300,000 means an expenditure on construction of about fifty million US dollars.

In conjunction with this assistance, an inter-country programme was started for "on-the-job" training in investigations, studies and design for waterborne sewerage and drainage. Four qualified engineers from Member countries of the Region have received six months' training in the practical design of water-carriage sewerage and storm drainage. It is expected that engineers from other Member countries will be awarded fellowships for similar training, if funds become available.

The IES has also assisted the City of Keelung (population 180,000) in the planning and design of a waterborne sewerage system.

After the WHO seminar in Taipei in October 1956, on "The Collection, Disposal and Utilization of Organic Waste", the Institute took a leading role in a programme for the better collection and disposal of refuse. A series of investigations, surveys and studies, and conferences of health, agricultural and administrative officials, resulted in the construction of a pilot composting plant at Pingtung City. After a year's test of this plant, a full-scale plant was constructed and is working well and economically. This plant has aroused wide interest throughout the Region and has been visited by many persons from Taiwan and elsewhere.

The Institute has a primary interest in general problems of rural sanitation and has set up eight rural demonstration areas and, in co-operation with local authorities, has secured improvements in households, markets, water supplies and excreta disposal, for which part of the cost has been met by the local community.

A programme to improve school sanitation was undertaken in co-operation with the Department of Education and with funds provided by the Joint Commission for Rural Reconstruction and the provincial government. At the end of 1958, 116 water supply systems and 299 school latrines had been installed. Standard designs have been prepared and the Institute gives any necessary advice to school authorities.

For food sanitation, a survey of 600 abattoirs has been completed and the Institute has helped to plan proposed new abattoirs in the cities of Taipei and Kaohsiung. In the last two years more than 8000 foodhandlers have been given a two-day course of training in classes organized with the technical assistance of the Institute of Environmental Sanitation.

The Taiwan Institute of Environmental Sanitation is now firmly established and is an accepted centre.
The rapid composting plant established in recent years at Kobe, Japan, with WHO assistance is now in full operation. The pictures show refuse being (1) placed in the collection box, (2) collected, (3) received at the plant, (4) sorted, and (5) transferred, after grinding, to the composting vault, to be mixed with digested sewage sludge. Finally (6), the hygienically processed refuse is used by farmers as fertilizer.
Like many other Asian countries, Nepal is woefully short of health workers, and the problem is aggravated by the fact that its ten-million population is scattered over a practically roadless area of 54,000 square miles. WHO is helping to train nurses at the Bir Hospital in Kathmandu, and, to fill the gap while the long-term task of training fully qualified doctors goes on, keen young men are taking the two-year course at the WHO-assisted health assistants' school.

(1) A nurse instructor demonstrates baby care to a group of students at the Bir Hospital.

(2) A young girl suffering from osteomyelitis of the thigh takes her first walk after three months in the hospital.

(3) One of the diseases that health assistants learn to fight is cholera. The picture above shows one of the check points where all entering Kathmandu from the countryside are examined and, when necessary, vaccinated.

(4) A group of student health assistants in the library of the training school.

(5) Taking his final examination — in the open air — a second-year student is asked to decipher a prescription.
MENTAL HEALTH IN THE PHILIPPINES

WHO assistance to the National Mental Hospital at Manila continued throughout 1959.

(1) Gardening as a form of occupational therapy.

(2) Another form of therapy: a group of women patients playing sungka, a game popular in many parts of the Philippines.

(3) A fourteen-year old patient is given an intelligence test.
for co-ordinating environmental sanitation work throughout the islands. Requests for advice and technical assistance from local governments have steadily increased since the formation of the Institute. Although the effects of the Institute's many activities on the public health, and on economic and social structure, cannot be easily evaluated, there is no doubt that its steady growth and its continuing programme have well served the health and well-being of the people of Taiwan.

Dental Health Seminar

An interesting review of developments in dental health over the previous five years, and many practical recommendations for further progress, were made possible by the convening of an inter-regional dental health seminar—the second of its kind—in February 1959, at the University of Adelaide. Organized by WHO in co-operation with the Government of Australia, and the Australian Dental Federation, the seminar (WPRO 63) was attended by forty-four participants from Australia, Ceylon, China, the Federation of Malaya, Fiji, Hong Kong, India, Indonesia, Japan, Republic of Korea, Netherlands New Guinea, New Zealand, Pakistan, the Philippines, Sarawak, Singapore, Territory of Papua and New Guinea, Thailand, United States Trust Territory of the Pacific Islands, Viet Nam and Western Samoa.

The purpose of the first inter-regional dental health seminar, held in Wellington, New Zealand, was to exchange views on some of the important dental health problems, particularly those of the Western Pacific, South-East Asia and Eastern Mediterranean Regions, to assess the needs and discuss the methods by which dental health programmes could be made an effective part of public health services, and to discuss the selection and training of dental health personnel.

Reports presented at the seminar in Adelaide showed that definite improvements have been made in the organization of dental services in some of the less developed countries; in one or two countries health insurance with provision for dental services has been introduced; and in most of the countries epidemiological, clinical and laboratory studies have been started. In general, physical facilities have been expanded, the number of dental students has increased, standards of dental education have improved and more emphasis has been placed on preventive dentistry. In some of the countries facilities for dental treatment have been considerably improved. More attention has been given to dental health education, particularly for children, health workers, and school-teachers. Some countries have undertaken pilot projects in the fluoridation of communal water supplies, and in a limited number of areas fluoridation has been fully accepted.

Each country submitted a review of its dental health services, and papers were presented by a dentist in Sudan and consultants from Norway and the United States of America.

The discussions were based on ten working papers, grouped under the following four topics: current techniques for the prevention and control of dental diseases; the administration of dental health programmes and the utilization of personnel; methods of recording, surveying, evaluating and reporting dental conditions; and evaluation of the present services and plans for future dental health programmes. A number of recommendations were made on these or related matters, their substance being as follows: periodontal disease should be further studied and should be an important part of dental education and of dental practice; education in dental health should be encouraged; research on dental health in primitive communities might be instructive. More of the total expenditure on health and welfare should go to dental health services and more international aid to dental training; those in dental practice should be helped to keep up with advances; and public health dentistry should be taught in selected medical schools. Nomenclature and indices of dental conditions should be standardized and their use extended; and training should be given in dental epidemiology. Dental departments should have more administrative dental services and financial autonomy; legislation against unqualified dentistry should be enforced; and recruits for the dental profession should be encouraged by scholarships, fellowships and grants.

At special sessions films were shown and special topics discussed. Members of the seminar were granted honorary membership of the Fifteenth Australian Dental Congress and took part in the Congress deliberations.

There has been wide interest in the seminar and many requests have been received for copies of the report and working papers. The report has been reprinted in the International Dental Journal, which has ensured a wide distribution of the recommendations and conclusions, and of the substance of the working papers.

Nursing Education, Federation of Malaya

WHO gave assistance to nursing education in Malaya from June 1950 until December 1958. The objects of the project (Malaya 1) were: to improve the standard of basic and graduate nursing education and the quality of nursing services; to prepare
nurses for administrative and teaching posts; to adapt the nursing education programme to local resources and needs; and to develop a well-organized programme for midwives. The assistance given covered public health nursing, basic general and paediatric nursing, midwifery including domiciliary midwifery, and post-basic courses and in-service training in ward administration and clinical teaching. Malayan personnel are now continuing all parts of this programme.

The first schools of nursing were opened in Penang and Kuala Lumpur in 1947. Till then there had been no organized training programmes for nurses or hospital assistants. Female nurses who before that date had been trained on the apprenticeship system were registered as "existing nurses" when the Nurses Ordinance and Registration Regulations came into force in 1950. Between 1947 and 1954, almost all those who in 1950 were registered as "existing nurses" and a large number of hospital assistants received short refresher and supplementary training in the schools of nursing. Some of the more adequately trained who had completed secondary education had a longer period of training and were later sent abroad for courses in health visiting and teaching in midwifery and general nursing; others took the local four-month course in ward administration or the public health nursing course and are now ward sisters, in charge of the assistant nurse training programmes, or public health supervisors. Special courses in laboratory work and dispensing have been organized for the hospital assistants to fit them for work in the district hospitals and dispensaries.

From 1950 to 1954 a three-month course in public health nursing was introduced which concentrated on midwifery and maternal and child health. In 1954 this was replaced by a nine-month course in which the curriculum and methods of teaching were better adapted to local conditions. Fifteen to twenty nurses now graduate each year.

Assistance in midwifery training was given in Penang, Selangor and Perak; and midwifery education was completely reorganized. The new Midwives Ordinance of 1954 and the regulations of the Midwives Board prescribed a one-year course for graduate nurses (Division I), and a two-year course for women not trained as nurses (Division II). Three months' domiciliary and district training are required of Division I students and six months' training of Division II students. This training includes experience of prenatal and postnatal consultations, home visiting and clinic work, domiciliary deliveries and domiciliary after-care and infant welfare. Five Division I schools and some twenty Division II schools have been established which in due course should produce enough well-prepared midwives to meet the needs of the rapidly expanding health services. Some have been sent abroad for special training as tutorial staff and staff for senior administrative positions, but for such posts many more are needed.

A third school of nursing was opened in Johore Bahri in 1952, but shortage of teaching staff and inadequate clinical facilities and accommodation for students made it necessary later to close both it and the school at Kuala Lumpur. The school at Penang was developed into a central school of nursing for basic and post-basic training. Improved conditions enabled the school at Kuala Lumpur to reopen in 1958; that in Johore will reopen in 1960.

The programme of basic nursing education has been evaluated continuously and has been strengthened by revising the curriculum to meet local needs and improving teaching methods, including those for supervised clinical practice and clinical teaching. The social and public health aspects of nursing have been included in the theoretical teaching but lack of facilities and qualified personnel has prevented their adequate inclusion in the practical courses. A nursing procedure manual, first published in 1954, has since been revised, and is in use in all hospitals in the Federation.

Refresher courses, post-basic courses and a continuous in-service education programme for staff of the nursing service in Penang have improved the quality of nursing care and given the staff a better understanding of the educational needs of student nurses.

The educational requirements for admission to nursing have been raised to Senior Cambridge level and the procedure for selecting students has been improved. Recruits are coming in well and more nurses are graduating. Since 1950 male and female nurses have received the same training.

Three nursing seminars were organized in 1955 and 1956. The Malayan Trained Nurses Association now holds a seminar as a regular part of the programme of each annual meeting.

A nursing education committee appointed to study problems relating to basic nursing education has considered regulations governing nursing education, student evaluation and examinations.

Nursing education has made remarkable progress in the past ten years, but it will be many years before the supply meets the demands in all fields. The greatest needs are in posts of leadership and in special fields such as psychiatric nursing and mental health.
PART III

CO-OPERATION WITH OTHER ORGANIZATIONS
CHAPTER 19

CO-ORDINATION OF WORK WITH OTHER ORGANIZATIONS

The preceding chapters give many examples of co-operation with other international organizations and more are to be found in the list of projects in Part IV. Almost all are familiar; they continue from year to year, because the normal work of the organizations concerned has health aspects or deals with closely related problems. Such co-operation has grown at an increasing rate in recent years because of developments both in WHO and in the United Nations family as a whole.

As gains have been consolidated in health programmes which, like the control of communicable diseases, are mainly in the hands of the health authorities, WHO has been able to progress towards the solution of administratively more complex problems, such as community water supplies. The trend in health work towards integrating specialized services into the general public health programme has parallels in wider domains. There is a significant increase in the efforts to mobilize various technical services in a many-sided approach to such problems as rural backwardness, the rational use of water resources, the drift toward the cities.

Safe and adequate water supplies, which are essential to health, at once contribute to and depend on many other aspects of development. The new environmental sanitation programme adopted by the Twelfth World Health Assembly will make important contributions to the co-operative programme of water resources development and to the long-range programme for housing, building and planning, which was formulated in 1959 through the Administrative Committee on Co-ordination (ACC).

WHO was in close touch with the United Nations Water Resources Development Centre, which began work during the year and ensures exchange of information and joint planning by the organizations that participate in this programme. Permanent liaison was maintained, through the secretariat of the Economic Commission for Asia and the Far East, with the Committee on Co-ordination of Investigations of the Lower Mekong Basin.

A technical paper on surveys of water quality was contributed to a report to the Economic and Social Council and WHO collaborated with the Economic Commission for Europe and FAO in producing suggestions to governments on international river-basin organizations for the control of water pollution. The United Nations, the Special Fund, interested specialized agencies, and many other international bodies were informed of resolution WHA12.48 of the Twelfth World Health Assembly on community water supplies, with a view to obtaining as much co-operation as possible in the future.

In the long-range programme of housing, building and planning, the principal event of the year was the formulation of proposals for concerted action on low-cost housing and related community facilities. WHO took part in the work of ECE on studies of legislation and on preparations for the housing censuses of 1960-1961, and maintained liaison with the Housing Committee of ECE, the Working Party on Housing and Building Materials of ECAFE, and the regional housing centres of the United Nations.

Under this same broad heading of concerted action, health activities related to community development continued to occupy an important place in WHO's programme during the year. Within the framework of the United Nations programme, WHO took part in several inter-secretariat working groups, in the preparation of a technical paper on public administration aspects of community development, and in the seminars and study tours organized by the United Nations in the Americas, Europe and the Western Pacific. WHO assisted a United Nations mission on community development evaluation and co-operated with UNESCO in investigating methods of evaluating fundamental education programmes. Assistance was given, in co-operation with other United Nations organizations, to national community development projects in South-East Asia, Europe, the Eastern Mediterranean and the Western Pacific.

The Organization maintained its assistance to UNESCO's Fundamental Education Centres for the Arab States and Latin America and took part in consultations on the future of these centres.

Through ACC, plans were made during the year for preliminary surveys of urbanization problems with a view to determining whether concerted action on those problems is feasible. WHO took part in the first survey, participated in the planning of the succeeding ones, and contributed to the work of the
United Nations/UNESCO seminar on urbanization in Latin America. As the first stage of FAO's Mediterranean Development Project has now been completed, further co-operation in this work will depend on requests from governments.

At the request of the Economic and Social Council, ACC prepared a special report in 1959 on possibilities of concerted action in the fields mentioned above, in industrialization and productivity and in the peaceful uses of atomic energy. WHO has been associated with all phases of the consultations, and with the continuing work of ACC for the co-ordination of programmes and of administrative and budgetary matters.

At the request of the Economic and Social Council and with the approval of the Executive Board, a forecast of the scope, trend and cost of WHO's programme until 1964 was prepared during the year. The Organization took part in consultations on this subject with the Committee established by the Council and with the other United Nations organizations concerned.

The main fields of co-operation with the individual organizations of the United Nations system are reviewed below.

**United Nations**

The programmes of concerted action mentioned above have led to extensive co-operation with the United Nations, both at the headquarters level and with the regional economic commissions: studies of water pollution with ECE (and FAO), housing and community development projects with ECAFE, and seminars on community development and statistics with the newly-established Economic Commission for Africa. In addition to this, WHO's co-operation with the United Nations continued to cover the health aspects of a wide range of problems, including social conditions in Trust and non-self-governing territories, economic development, social welfare and human rights programmes, and the effects of atomic radiation.

Both the Trusteeship Council and the Committee on Information from Non-self-governing Territories expressed appreciation this year of WHO's analyses of health conditions and suggestions concerning them. In addition to this continuing work, WHO contributed to the ten-year report of progress in non-self-governing territories and took part in the General Assembly's debates on the subject.

Through the reports of its expert committee and through special studies, the Organization continued to provide technical advice to the United Nations organs for international narcotics control—in particular to the Commission on Narcotic Drugs. It co-operated with the United Nations in studies on drug addiction and plans were made with regional offices for work arising from the newly authorized United Nations programme of technical assistance for the control of narcotics.

Informal consultations between the United Nations Statistical Office and the specialized agencies, which were renewed this year, have proved valuable. Meetings under ACC auspices on statistics for social programmes outlined future studies and reports and began to work out a compendium which will enable certain types of surveys conducted by one agency to yield statistical information of interest to others. Consultations and co-operation in assistance to governments ensure that the resources of both agencies are used to the best advantage.

WHO continued to work with the United Nations in projects relating to child health (including day care of children in institutions, the use of health and welfare personnel, and national programmes for social welfare and related services), juvenile delinquency, psychiatric treatment of offenders, and rehabilitation of the physically handicapped. As in previous years, the Organization contributed to studies of world social conditions and of balanced economic and social development, and provided information and advice on the health aspects of human rights activities.

After consultations through ACC, arrangements were made for expanding the co-operation between the public information services of the United Nations and the specialized agencies, particularly on visual media. WHO has taken a lively interest in these arrangements, which will enable it to increase its contribution to the common effort.

The United Nations Scientific Committee on the Effects of Atomic Radiation has requested the co-operation of WHO in studies and seminars; work on some of them began during the year.

Since the establishment of the Economic Commission for Africa, which started its programme in 1959, WHO has taken part in regional seminars on community development and statistics in Africa and made plans for co-operating with ECA in technical assistance in these and other fields. Collaboration with ECAFE was extended to include problems of balanced economic and social development, which were considered by an ECAFE working group in September.

Consultations were undertaken with the United Nations Special Fund on arrangements by which WHO should give advice on the health aspects of projects assisted by the Fund, and provide technical assistance as required. WHO has also consulted
other specialized agencies concerned with such projects.

The Chief Medical Officer of UNRWA and two staff members are still seconded by WHO, and the Organization has assisted the United Nations High Commissioner for Refugees in problems relating to the mental health of refugees.

*United Nations Children's Fund*

The substantial assistance given by UNICEF to health programmes assisted by WHO is evident from the list of projects in Part IV. The fields in which this assistance is provided have not changed significantly during the year and the administrative arrangements are cordial and productive. In pursuance of the request by the Executive Board of UNICEF for evaluations of the health activities assisted by the Fund, WHO prepared evaluations of projects on environmental sanitation, maternal and child health and malaria.

*International Labour Organisation*

As in previous years, WHO and ILO worked in close association on a number of questions of social and occupational health, in particular the hygiene of seafarers, the health aspects of automation and the integration of indigenous peoples into the economic and social life of their countries, including assistance to the Andean Indian programme.

Regional work in social and occupational health is often jointly planned; ILO has taken an active part in WHO training courses and seminars, especially in Europe, and the agencies are co-operating in assistance to several governments. At the end of the year the two organizations were in consultation on the health protection of "white-collar" workers, a subject which will be considered by the International Labour Conference in 1960.

*Food and Agriculture Organization*

The joint FAO/WHO work on nutrition problems, of growing importance, was centred, as in the past, on protein malnutrition in children and nutrition education; it also included work on food additives and food technology. Both UNICEF and FAO were associated with the work of WHO's Protein Advisory Group (see page 28).

As regards communicable diseases, fruitful co-operation with FAO in bilharziasis control projects has been developed. Good progress was made in joint work on veterinary public health and the standardization of biological substances for veterinary use.

The Inter-agency Working Group on Milk and Milk Products continued to ensure joint or parallel action by UNICEF, FAO and WHO on standards of milk quality.

WHO is represented at meetings of the newly formed FAO/UNICEF Joint Policy Committee, and is co-operating in arrangements for the "Free the World from Hunger" campaign.

*United Nations Educational, Scientific and Cultural Organization*

In addition to their work on community development mentioned above, UNESCO and WHO convened in 1959 a joint expert committee on health training for teachers. The two organizations continue to co-operate in assistance to universities and schools of medicine.

WHO continued its support to the Council for International Organizations of Medical Sciences (CIOMS), which also received support from UNESCO, and maintained liaison with both organizations concerning activities in cell biology. It is associated with UNESCO's major project of arid zone research and with the work of its Advisory Committee for Humid Tropics Research. WHO contributed to studies of international relations and exchanges in the fields of education, science and culture and of trends of inquiry in the natural sciences which UNESCO is preparing for the Economic and Social Council and the United Nations General Assembly. In connexion with the work of the United Nations Scientific Committee on the Effects of Atomic Radiation and of the International Atomic Energy Agency, UNESCO, FAO and WHO are co-operating in studies of water pollution by radioactive substances.

*Co-operation with Other Specialized Agencies*

Following the establishment of the Intergovernmental Maritime Consultative Organization, which took over some of the work of the United Nations Transport and Communications Commission, informal arrangements were made to co-operate with the new organization in connexion with international quarantine, health and welfare of seafarers and the pollution of the sea by oil or by radioactive residues. Other co-operative activities included the work with the International Civil Aviation Organization on aviation medicine, hygiene and sanitation of airports and carriage of narcotics on aircraft, and on aspects of international quarantine; with the Universal Postal Union on the postal shipment of perishable biologicals; with the World Meteorological Organization on atmospheric pollution and, in connexion with the water resources programme, on groundwater surveys. WHO assisted the International
Bank for Reconstruction and Development in several of its survey missions to governments.

**International Atomic Energy Agency**

The Twelfth World Health Assembly approved the Agreement between IAEA and WHO, which had been approved at the end of 1958 by the General Conference of the Agency. Co-operation with IAEA, which did not wait on the formal conclusion of the Agreement, expanded in 1959, as the work of the Agency developed. WHO and IAEA have joined in the planning and organization of technical meetings—for example a seminar on medical radioisotope scanning and a study group on the use of radioisotope teletherapy units and supervoltage radiation in radiotherapy. WHO contributed to the IAEA/UNESCO seminar on educational problems connected with the peaceful uses of atomic energy and assisted the Agency in the preparation of the medical addendum to its handbook *Safe Handling of Radioisotopes*; the IAEA participated in the seminar organized by WHO on the public health aspects of radioactive-waste disposal. Each agency was represented at meetings organized by the other on matters of common interest, plans for future activities were prepared jointly, and working arrangements were made for the administration of fellowships in the use of radioisotopes in medicine and the health aspects of atomic energy (see also page 40).

**Other Intergovernmental Organizations**

As in the past, liaison and co-operation were maintained with a number of intergovernmental organizations, both regional and non-regional. Reference may be made to the International Committee of Military Medicine and Pharmacy, the International Union for the Protection of Industrial Property, and the Office international des Epizooties, as well as to the frequent contacts between the regional offices of the Organization and such regional organizations as the Council of Europe (fellowships, exchange of therapeutic substances, etc.), the European Productivity Agency of the Organization for European Economic Co-operation (OEEC) (social and occupational health), the European Coal and Steel Community (arrangements for exchange of information), the European Economic Community (water supplies), the European Nuclear Energy Agency (symposium on health physics), the Health Section of the League of Arab States, the Commission for Technical Co-operation in Africa South of the Sahara (training courses, and technical meetings relating to the control of communicable diseases, maternal and child health, nutrition, etc.), the South Pacific Commission and the Colombo Plan.

**Non-governmental Organizations**

In 1959, at the twenty-third session of the Executive Board, the following five non-governmental organizations were admitted into official relations with WHO, bringing the total number to fifty-one:

- International Air Transport Association
- International Union of Architects
- International League of Dermatological Societies
- World Federation of the Deaf
- World Federation of Occupational Therapists

A list of all the non-governmental organizations in official relationship with WHO is given in Annex 6. The examples given in other parts of this report of the co-operation between WHO and non-governmental organizations show the value of this relationship in many aspects of the work.

As in the past, nearly all the non-governmental organizations in official relationship with WHO have been represented at its principal meetings and have given assistance by making the Organization's activities more widely known, considering ways of helping it in its work and sending it specialized publications. To supplement the references to the non-governmental organizations that appear elsewhere in this report, a condensed list of particular activities carried on in collaboration with non-governmental organizations is given below.

**The Biometric Society**

Participation by WHO in an international biometric seminar;

Consultations on the preparation of a document on *Modern Statistical Techniques in Medical Research*.

**Central Council for Health Education**

Preparation by the Council of documentation for the technical discussions at the Twelfth World Health Assembly on health education of the public;

Co-operation in the preparation of a flannelgraph to be used in public health education on malaria in Africa.

**Council for International Organizations of Medical Sciences (CIOMS)**

Frequent consultations, contacts and reciprocal representation with regard to research, organization of symposia, amendment to the statutes of CIOMS, etc.;
CO-ORDINATION OF WORK WITH OTHER ORGANIZATIONS

Assistance by CIOMS in the preparation of the WHO contribution to the United Nations/UNESCO survey on the main trends of research in the natural sciences.

Inter-American Association of Sanitary Engineering
Encouragement of interest in WHO’s community water supply programme, particularly in Latin America;
Collaboration in the production of an English/Spanish Glossary of Sanitary Engineering Terms.

International Air Transport Association
Participation in the work of the Committee on International Quarantine;
Advice by the Association on international quarantine problems;
Consultation about a forthcoming expert committee on aircraft disinsectization.

International Association of Microbiological Societies
Consultations with the Association’s various technical committees, in particular with that on nomenclature.

International Association for Prevention of Blindness
Collaboration on studies of the eye lesions produced by *Onchocerca volvulus* and of the incidence of blindness caused by such lesions.

International Commission on Radiological Protection and International Commission on Radiological Units and Measurements
Statement on the main problems of radiation risks by the Chairman of the ICRP to the twenty-third session of the WHO Executive Board;
Participation by WHO in the Ninth International Congress of Radiology and in meetings held by ICRP and ICRU in conjunction with the Congress;
Participation in a joint ICRP/ICRU Study Group, set up in consequence of a decision by the United Nations Scientific Committee on the Effects of Atomic Radiation, concerning radiation doses received by patients.

International Committee of the Red Cross and League of Red Cross Societies
Co-operation by the Red Cross organizations in assistance to Moroccan victims of mineral oil poisoning;
Participation in the observance of the 1959 World Health Day;

Advice to WHO regarding the recruitment of experts for assistance in the organization of blood banks.

International Confederation of Midwives
Collection by the Federation and its member associations of information about midwifery training and functions in various countries.

International Conference of Social Work
Participation by WHO in the organization of and the preparation of material for the forthcoming Tenth International Conference of Social Work;
Participation by the International Conference of Social Work in the preparation of the technical discussions during the Twelfth World Health Assembly on health education of the public.

International Council of Nurses
Participation of the Council in the WHO Conference on Post-Basic Nursing Education Programmes for International Students.

International Dental Federation
Consultations on standardization of reporting of dental diseases and on methodological studies for developing systems of dental health statistics;
Co-operation in the preparation of the World Directory of Dental Schools;
Publication in the Federation’s Newsletter and in the *International Dental Journal* of information about WHO’s dental activities.

International Diabetes Federation
Exchange of views on possible future co-operation in various technical fields in which a programme of diabetes control might be encouraged.

International Hospital Federation
Participation by WHO in the Federation’s International Hospital Congress;
Exchange of views on possible developments of co-operation.

International Leprosy Association
Advice from the Association on the recruitment of WHO consultants;
Participation of the Association in the WHO/CCTA Conference on Leprosy in Africa.

International Organization against Trachoma
Provision by the Organization of information on eye lesions related to nutritional deficiencies.
International Paediatric Association

Participation by WHO in the Association's International Congress of Paediatrics and in a meeting organized in Europe by the Association.

International Pharmaceutical Federation

Participation by WHO in two meetings held by the Federation: the XIX International Congress of Pharmaceutical Sciences, where the Supplement to Volumes I and II of the first edition of the International Pharmacopoeia was presented, and a meeting of Directors of Drug Control Laboratories;

Consultations with subsidiary organs of the Federation, in particular with the Section of Industrial Pharmacists.

International Society for Blood Transfusion

Advice by the Society on the recruitment of advisers on the organization of blood banks;

Consultation about the preparation of a leaflet on the organization and functioning of blood transfusion services.

International Union of Architects

Discussion on possible future co-operation in town planning, housing, hospital construction and health aspects of school building;

Assistance in organizing the international competition for the plan of the new WHO headquarters building in Geneva.

International Union against Cancer

Consultation with the Union's special committee for liaison with WHO in matters of research;

Consultation with the Union's Committee on Nomenclature as to the study of histological definitions of cancer types;

Participation by WHO in a meeting of the Union's Sub-Committee on Geographical Pathology for Africa.

International Union for Child Welfare

Collaboration in observance of the 1959 World Children's Day;

Liaison in connexion with the Union's activities in Africa and on the improvement of institutional care for children and other methods of child care.

International Union for Health Education of the Public

Preparation by the Union of documentation for the technical discussions at the Twelfth World Health Assembly on health education of the public;

Participation by WHO in the Union's Fourth International Conference;

Provision by the Union of reference material for background documentation prepared for the Joint WHO/UNESCO Expert Committee on Teacher Preparation for Health Education.

International Union against Tuberculosis

Participation by WHO in the Union's International Tuberculosis Conference and in the discussions of the Union's Council, at which a paper on the tuberculosis programme of WHO was presented and considered.

International Union against the Venereal Diseases and the Treponematoses

Participation by WHO in technical discussions held during the General Assembly of the Union on treponematoses control and the emerging resistance of gonococci to antibiotics.

World Confederation for Physical Therapy

Consultations on the recruitment of experts.

World Federation of the Deaf

Participation by WHO in the discussions of the Medical Commission of the Federation's third World Congress.

World Federation for Mental Health

Co-operation in preparing a joint meeting on "Malnutrition and Food Habits" with the participation of FAO and UNICEF;

Contribution by the Federation to the observance of the World Health Day on the theme "Mental Sickness and Mental Health in the World of Today", and by WHO to the preparations for the observance of the World Mental Health Year in 1960.

World Federation of United Nations Associations (WFUNA)

Organization by the Federation (as at past Assemblies) of a ten-day study course during the Twelfth World Health Assembly, with the participation of WHO technical staff;

Co-operation by the Federation in the distribution of public information material on WHO.

World Medical Association

Collaboration in the preparation and running of the Second World Conference on Medical Education;

Contacts on possible co-operation on the best means of obtaining and distributing information on new pharmaceutical substances.
World Veterans Federation

Briefing by WHO of rehabilitation personnel employed by the Federation to work in rehabilitation field projects.

World Veterinary Association

Participation by WHO in the Association’s International Veterinary Congress which devoted an important part of its debates to the work of WHO in veterinary public health and on biological standardization.

Other Non-governmental Organizations

WHO also had fruitful working contacts with several non-governmental organizations which are not in official relationship, such as the International Association for Child Psychiatry, the International Committee on Laboratory Animals, the International Dairy Federation, the International Social Security Association, the International Organization for Standardization, the International Water Supply Association and the Union of International Associations.

1 Formerly the Permanent Committee for the International Veterinary Congresses
The year 1959 was the tenth anniversary of the adoption by the Economic and Social Council of resolution 222 (IX), which created the Expanded Programme. During those ten years the number of contributing governments has risen from fifty-four to eighty-six and assistance has been given to 140 countries and territories by some 8000 experts and by the award of about 14 000 fellowships.

There was a reduction, as compared with 1958, in the amount available for the 1959 field programme and in the estimates for planning the 1960 Programme. The Economic and Social Council (in resolution 734 (XXVIII), adopted in August 1959), stated its concern at this financial situation, particularly at a time when additional assistance was required for newly-independent countries, and expressed the hope that countries would increase their contributions so that the Programme might in its second decade resume a gradual growth.

The most important change in the legislation of the Expanded Programme since its inception was the introduction of country programming, which was decided upon in 1954. The Technical Assistance Committee has expressed satisfaction with country programming and desires no radical change, but it considers that the present programming procedures should be reviewed, in order to simplify them and make the operations of the approved Programme more flexible. Annual programming had given rise to certain difficulties, both for governments and for participating agencies. For instance, there was too little time, after the approval of the annual programme, to recruit the experts and obtain the equipment necessary for its execution. Further, if programme negotiations were undertaken once only in every two years it would save time both for governments and for the participating agencies. On the recommendation, therefore, of the Technical Assistance Board, the Technical Assistance Committee at its twenty-eighth session in June 1959 decided as an experiment to adopt two-year programming for the period 1961-1962. The Committee recognized at the same time that some countries might have constitutional difficulties in making pledges covering a period of two years, which would be necessary if the full advantages of two-year programming were to be secured. It has been assumed, in planning the biennial programme for 1961-1962, that contributions would continue at the same rate as pledged for 1960, plus a small increment. The Technical Assistance Committee will continue its review of programming procedures at its summer session in 1960.

In the resolution by which it adopted the two-year programming cycle, the Technical Assistance Committee decided that projects planned to last longer than the two-year period should be approved at the outset and for their full duration by the coordinating agency of the government concerned. The Committee took this decision after considering an analysis of continuing projects which, at its request, had been included for the second consecutive year in the Annual Report of the Technical Assistance Board. It included in its report on this subject the following passage, which is of special importance to WHO:

"The comprehensive analysis of continuing projects given for the second time in the annual report was welcomed by the Committee which once again felt generally reassured by the main conclusions that emerged out of this analysis. At the same time some members raised questions about the number of projects which were expected to continue beyond 1962, and whose completion dates were not yet known; and in their view there was, prima facie, a case for further examination of the projects falling in this category. Several members voiced their concern in this respect and stated that in their view such projects should be financed only exceptionally by the Expanded Programme. The Executive Chairman, while undertaking to give additional information on these projects in the next annual report, explained that certain projects must from their very nature continue for a period of as much as eight years. In malaria eradication programmes, for example, one year is required for pre-eradication surveys, three years for spraying operations, and four years for surveillance; and at least eight years..."

1 UN document E/3226, pp. 24-29
are needed to assist governments to build up medical training institutions and public health demonstration areas. The Committee welcomed the increasing use of plans of operation, which contributed to the improved regulation of long-term projects and to their gradual and orderly transfer to the Government. For, as stated in the report, a plan of operation ‘includes, as a matter of course, dates for commencement and completion of a project; it also spells out the obligations of each party for the entire period the project will be in operation’.”

In response to a request from the Economic and Social Council for the formal views of the governing organs of the participating organizations, the Twelfth World Health Assembly considered the question of the allocation of administrative and operational services costs between the regular and Expanded Programme budgets and adopted resolution WHA12.31, in which it expressed its willingness to consider any long-term proposal which the Economic and Social Council might make on this question. In July 1959 the Economic and Social Council decided gradually to decrease the lump sum payments for administrative and operational services costs for 1961 and 1962. The matter is to be considered further.

Similarly, no final decision on local costs arrangements was taken during the year by the Economic and Social Council although the procedures were simplified, and this subject also is to be considered again during the summer session in 1960.

Representatives from twenty-three countries attended a meeting of the European National Technical Assistance Committees, held in Geneva on 16 and 17 July 1959 under the auspices of the Executive Chairman of TAB, with representatives of the specialized agencies. It was the first such meeting since 1954. Several representatives suggested that the present salary levels were too low to attract highly qualified experts of their countries to field work in the Expanded Programme. The difficulties caused by the fact that funds available for an expert’s mission could not be carried forward from one year to the next were also stressed, although the two-year programming cycle should partially resolve that problem.

The 1959 Programme

The number of WHO staff—including consultants—serving in field projects under the Expanded Programme at 30 November was 334, as compared with 357 on 30 November 1958. Some 285 WHO fellowships were awarded in the Expanded Programme in the twelve months ending on 30 November 1959; in the previous twelve months 318 awards had been made.

Contingency allocations for WHO projects were authorized in 1959 for a team of consultants to advise on water supply and sewage disposal in Calcutta; assistance to Colombia in smallpox eradication; the services of a consultant for the National Institute of Hygiene in Venezuela. These projects, as well as other field activities financed under the Expanded Programme, are listed in Part IV.

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1 UN document E/3298, para. 22

PART IV

PROJECT LIST
This part of the Report contains a list of the projects—country, inter-country and inter-regional—which were in operation during the whole or part of the period from 1 December 1958 to 30 November 1959. Continuing projects for which the only assistance given during the year was technical advice from headquarters or regional offices are not shown.

In country projects the "Aim of the project" states the purpose for which it was undertaken by the government or governments concerned; it does not depend on the form or extent of WHO's assistance.

As in former Annual Reports, an attempt has been made to summarize the immediate results of projects for which WHO assistance terminated in the period under review and, where the nature of the work has permitted, to assess or evaluate how far the project succeeded in the purposes for which it was undertaken. It has not been possible to do this for all completed projects, particularly for those which ended late in the year.

The projects are grouped by region in the following order: Africa, the Americas, South-East Asia, Europe, Eastern Mediterranean and Western Pacific. In each region, projects that concern more than one country appear first, and are lettered "AFRO", "AMRO", "SEARO", "EURO", "EMRO" or "WPRO": projects in individual countries follow, in alphabetical order by countries. Inter-regional projects are given at the end of the list.

The heading "Fellowships" is used for fellowships that are considered as projects in themselves; other fellowships are shown under the title of the project of which they form part. The fellowships shown in the list are those awarded during the year.

In the first column (under "Project No., Source of Funds, Co-operating Agencies"), "R" means the regular budget, "MESA" means the Malaria Eradication Special Account, "TA" means Technical Assistance funds, and "UNICEF" the United Nations Children's Fund. Names of other co-operating agencies, whether or not they have contributed funds, are given in parenthesis.
AFRICA

Technical Meeting on Malaria Eradication, Brazzaville (3 - 6 Nov. 1959)

Aim of the project. To review the situation in each territory of the Region and to evolve a plan of concerted action for malaria eradication; to serve as a means of exchanging information between malarialogists in different parts of Africa.

Assistance provided by WHO. (a) Three short-term consultants from Belgium, France and the United Kingdom; (b) cost of attendance of thirty-six participants from Angola, the Belgian Congo, the Cameroons, the Central African Republic, the Republic of the Congo, the Republic of Dahomey, the Federation of Rhodesia and Nyasaland, the Gambia, Ghana, Kenya, Liberia, the Malagasy Republic, Mauritius, Mozambique, Nigeria, the Republic of Senegal, Sierra Leone, the Somaliland Protectorate, Tanganyika, Togo, the Union of South Africa and the Republic of the Upper Volta.

Work done. The progress in the various malaria projects in the Region was reviewed and the increasingly successful transition from malaria control to eradication was noted. The many difficulties encountered, particularly those arising out of shortage of trained national personnel necessary to ensure the degree of efficiency demanded by eradication, were discussed, and a general policy for the immediate future of work in the Region was recommended.

The topics discussed included survey processes, technical and operational aspects of spraying, the use of drugs (alone or as auxiliaries to residual spraying), entomological problems such as vector behaviour and susceptibility levels, and surveillance in the consolidation phase of operations. Ways of giving advanced training to national and international personnel through special centres and fellowships were considered. The importance of efficient administration in eradication programmes and the need for applied research were recognized. The future malaria eradication programme in Africa and WHO's work of co-ordination were also discussed.

Twelve WHO staff members took part in the discussions.

Bilharziasis (Identification of Snail Intermediate Hosts) (1950 - )

Aim of the project. To prepare identification keys illustrating the differential characteristics of the intermediate hosts of bilharziasis, so as to facilitate epidemiological studies for bilharziasis control.

Assistance provided by WHO during the year. (a) Collection and dispatch of snails to research centres; (b) grants to the research centres.

Work during the year. Great efforts have been made to stimulate the collection of snails for classification by the centres engaged on identification. Work continued on preparation of kits for use in collecting and preserving snails according to a standard method and on models illustrating anatomical characteristics.

Fellowships

The following fellowships were awarded for attendance at courses organized by the International Children's Centre, Paris:

Training Course on Social Paediatrics, Paris, 6 April - 4 July 1959
A twelve-week fellowship to a candidate from Portuguese Guinea.

Training Course on Social Paediatrics, Leopoldville, Belgian Congo, 15 July - 30 Aug. 1959
Five six-week fellowships to candidates from Angola, the Gabon Republic, the Malagasy Republic, Mozambique, and the Republic of Dahomey.

Training Course on Mother and Child Care, Paris, 26 Oct. - 20 Dec. 1959
Three two-month fellowships to candidates from the Malagasy Republic.

Training Course on Mother and Child Care, Dakar, Republic of Senegal, 19 May - 13 June 1959
Three one-month fellowships to candidates from Angola, the Belgian Congo and the Cape Verde Islands, and two five-week fellowships to candidates from the Malagasy Republic.

Conference on Leprosy in Africa, Brazzaville (14-21 April 1959)

Aim of the project. To enable scientific workers and persons responsible for directing national campaigns against leprosy to discuss and compare the different methods used and to integrate their work as necessary.
**AFRO 39**

**R**

**Project No.**

**Source of Funds**

**Co-operating Agencies**

**Description**

**Assistance provided by WHO.** (a) Three discussion leaders; (b) cost of attendance of twenty-one participants from the African Region (Angola, the Belgian Congo, the Federation of Rhodesia and Nyasaland, the French Community, the Gambia, Ghana, Liberia, Mozambique, Portuguese Guinea, Ruanda-Urundi, Sierra Leone, Spanish Guinea and Tanganyika) and of four from the Eastern Mediterranean Region (Ethiopia, Somalia and Sudan); (c) supplies and equipment.

**Work done.** See page 59.

**AFRO 42**

**R**

(FAO)

(CCTA)

**Seminar on Food and Nutrition Problems, Lwiro, Belgian Congo (18-29 May 1959)**

**Aim of the project.** To discuss food consumption levels and nutritional status, techniques of clinical surveys and surveys of food consumption.

**Assistance provided by WHO.** (a) Discussion leaders (jointly with FAO); (b) cost of attendance of twenty-seven participants from the Belgian Congo and Ruanda-Urundi, Cameroons, the Cape Verde Islands, the Central African Republic, the Federation of Rhodesia and Nyasaland, Guinea, Liberia, the Malagasy Republic, Morocco, Mozambique, the Republic of the Congo, the Republic of Senegal, Togo, Uganda, and the Union of South Africa. (Participants included some who had taken part in nutrition courses organized by FAO and WHO.)

**Work done.** After its discussions on nutritional status, the seminar recommended that a booklet, with photographs, should be prepared to help in the diagnosis of specific nutritional states, especially those which would indicate the general nutritional state of the population. It stressed that feeding surveys must be carried out according to sound techniques and that they required a complete understanding of the social life of the population, and recommended that an international centre should be set up in Africa to train supervisors for them.

Other matters considered were supplementary feeding and school feeding programmes, nutrition work in maternal and child health, organization of nutrition services, and co-ordination of the work of various departments and services to improve nutrition. The establishment of national nutrition boards or councils was advocated as the best means of achieving co-ordination, and, to ensure sound nutritional policy, it was recommended that technical nutrition units or institutes should be set up in connection with the boards or councils, or within a government department.

**AFRO 46**

**R**

**Leprosy: Short-Term Consultants (1957 - )**

**Aim of the project.** To advise on leprosy control; to gather information on the work done.

**Assistance provided by WHO during the year.** A consultant, for two periods of four weeks.

**Probable duration of assistance.** Indefinite.

**Work during the year.** The consultant acted as secretary to the Conference on Leprosy in Africa (see page 59) and then visited the Westfort Institute at Pretoria to investigate the possibility of arranging a joint programme of co-ordinated research on leprosy. In June, he surveyed the leprosy services in Northern Nigeria, where a campaign assisted by UNICEF is in progress, and later visited the principal centres for leprosy control in the Belgian Congo. Reports were made on both visits to the Governments concerned.

**AFRO 49**

**R**

**Bilharziasis Studies (March 1959 - )**

**Aim of the project.** To study (a) the public health importance of bilharziasis and the economic losses caused by it in Africa, and (b) the action of molluscicides on the intermediate hosts and the methods of application in use in some African territories.
**AFRO 50**

**Tuberculosis: Short-term Consultants (Oct. 1957 - )**

**Aim of the project.** To provide advisory services (short-term consultants) for tuberculosis projects in the Region.

**Assistance provided by WHO and work done during the year.** A consultant (medical officer) in October, to help governments of the Region with plans for tuberculosis control projects to be assisted by WHO.

**Probable duration of assistance.** Indefinite.

**AFRO 51**

**Treponematoses: Advisory Services (July 1959 - )**

**Aim of the project.** To co-ordinate the yaws control campaigns of the countries of the Region and to define certain useful common factors.

**Assistance provided by WHO during the year.** A short-term consultant.

**Probable duration of assistance.** Until 1961.

**Work during the year.** The short-term consultant visited Togo from 31 July to 6 October and reviewed the results of the government yaws mass campaign which has been operating with UNICEF assistance since 1956. He visited a number of institutions in various parts of the country, and assessed the methods of survey and treatment as well as laboratory facilities. Attention was also paid to the syphilis and leprosy problems. The consultant's report was submitted to the Government and included an analysis of the data available together with his recommendations for the continuance of the campaign.

**AFRO 54**

**Conference on Smallpox Eradication, Brazzaville (16-19 Nov. 1959)**

**Aim of the project.** To exchange views on the epidemiology of smallpox; to collate experience of practical problems of smallpox control, to compare results and study the lessons to be learnt from them; to determine the most effective methods of carrying out a smallpox eradication program.

**Assistance provided by WHO.** (a) Five discussion leaders, from the Belgian Congo, the Federation of Rhodesia and Nyasaland, France, Mozambique and Nigeria; (b) cost of attendance of seventeen participants from Angola, Cameroons, the Gambia, Guinea, Kenya, the Malagasy Republic, Nigeria, the Republic of the Ivory Coast, the Republic of Chad, Sierra Leone, Spanish Sahara, Tanganyika, Uganda, the Union of South Africa, and Zanzibar, and to a participant from Sudan (Eastern Mediterranean Region).

**Work done.** CCTA, the Institut Pasteur and the Institute of Higher Studies in Brazzaville were represented at the conference and three WHO staff members took part. The work of the conference was done in two discussion groups, whose conclusions were reviewed in plenary session. The chief questions discussed were: the organization of an antismallpox service and of eradication campaigns; the recruitment and training of staff; vaccines and vaccination techniques; social aspects and health education; legislation and international considerations. The final report summarized the conclusions and recommendations. The descriptions by representatives of work in their countries complemented the information already given by health administrations in response to a questionnaire; a good picture of the current situation in the Region was thus obtained.

**AFRO 55**

**Hospital Construction: Short-term Consultants (1959 - )**

**Aim of the project.** To provide advice on the planning, construction and operation of hospitals and on staffing matters.

**Assistance provided by WHO during the year.** A short-term consultant, specialized in the architecture and planning of hospitals.

**Probable duration of assistance.** Until mid-February 1960.

**Work during the year.** The consultant made two series of visits: to the Federation of Rhodesia and Nyasaland, Basutoland and Mozambique; and to Nigeria, the British Cameroons, Angola and again to Mozambique.
AFRO 62

**Description**

Training Course on Technology in Helminthology, Muguga, Kenya (27 July - 8 Aug. 1959)

**Aim of the project.** (a) To provide instruction in the techniques of helminth identification and in the pathological, haematological and immunological techniques which have proved useful in the study of helminthiasis; (b) to advise on a training course for local technical staff, so as to stimulate surveys and research in helminthiasis by uniform, comparable methods.

**Assistance provided by WHO and work done.** The training course was attended by thirty-six participants, from Angola, Basutoland, Bechuanaland, the Belgian Congo, Belgium, the Federation of Rhodesia and Nyasaland, France, Ghana, Kenya, Liberia, the Malagasy Republic, Mozambique, Nigeria, Portugal, the Republic of Chad, Tanganyika, Uganda, the Union of South Africa, and the United Kingdom, and by several observers, including observers from FAO and WHO. WHO provided a lecturer on the pathological anatomy of certain parasitic diseases of man, the treatment of parasitoses in man and the general structure of cestodes and trematodes.

Angola

See Portugal (African Provinces).

Basutoland 1

**Description**

Nutrition Survey and Control of Deficiency Diseases (Aug. 1956 - )

**Aim of the project.** To determine the incidence of deficiency diseases and to establish an accurate basis for their diagnosis, prevention and control.

**Assistance provided by WHO during the year.** (a) A medical nutritionist; (b) supplies.

**Probable duration of assistance.** Until the end of 1961.

**Work during the year.** The survey phase of the project was almost completed. Its findings indicate that malnutrition (protein malnutrition, vitamin and mineral deficiencies) is widespread in the country, and that endemic goitre and pellagra are important problems. Agricultural, social and economic factors all affect the nutritional status. Negotiations were begun with UNICEF and FAO on a programme, in which the WHO medical nutritionist would co-operate, to stimulate agricultural production, improve diets, provide training in nutrition and carry out health education.

Basutoland

**Participation in Inter-country Projects**

See AFRO 55; AFRO 62.

Bechuanaland 2

**Description**

Tsetse-Fly Control (June 1959 - )

**Aim of the project.** To control tsetse fly in Ngamiland.

**Assistance provided by WHO during the year.** A consultant for five weeks in June and July.

**Probable duration of assistance.** Until 1961 (further visits by short-term consultants).

**Work during the year.** The consultant visited all the tsetse-fly infested areas of Ngamiland and the Chobe districts to assess the effectiveness of the measures—game control and discriminative clearing—being taken for control. He has reported that tsetse-fly infestation has increased in all areas except Maun, where the situation is well in hand. The main centres of population and the stock grazing areas have been protected and the local people are co-operating readily. The report contains recommendations for further measures.

Bechuanaland

**Participation in Inter-country Projects**

See AFRO 62.

Belgian Territories 8

**Description**

Fellowships

- **Cancer therapy.** A three-week fellowship for study in Sweden.
- **Cardiology.** A nine-month fellowship for study in France.
- **Medical entomology and sanitation.** A four-month fellowship for study in the United States of America.
- **Mental health.** A twelve-month fellowship for study in the Netherlands.
### Project List: Africa

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<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Description</th>
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<tr>
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<td><strong>Paediatric and infant surgery.</strong> A nine-month fellowship for study in France.</td>
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<td><strong>Public health administration.</strong> A twelve-month fellowship to take an MPH course in the United States of America.</td>
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<td><strong>Radioisotopes.</strong> A six-month fellowship for study in France and Belgium.</td>
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<td></td>
<td><strong>Tuberculosis.</strong> A three-week fellowship to take a course on tuberculosis in Turkey.</td>
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### Belgian Territories
**Participation in Inter-country Projects**

See AFRO 12; AFRO 26; AFRO 32; AFRO 42; AFRO 46; AFRO 49; AFRO 54; AFRO 62; EURO 56; EURO 100.7; Inter-regional 52.

### British Cameroons 1
**Yaws Control (July 1955 - )**

- **TA**
- **UNICEF**

**Aim of the project.** To control yaws by mass treatment with procaine penicillin; to train personnel; to demonstrate the value of a sound public health service.

**Assistance provided by WHO during the year.** A medical officer; technical advice from the medical officer attached to project Nigeria 1, who is responsible for the supervision of the two projects.

**Probable duration of assistance.** Until the end of 1961 at least.

**Work during the year.** Case-finding followed by treatment was completed in the Mamfe division three months ahead of schedule. In the province of Bamenda surveys proceeded without difficulty. By the end of June 1959, nearly 500,000 had been examined, of whom over 270,000 were treated. Shortage and bad condition of vehicles gave the team some trouble.

As in former years, the work of the teams was not confined to examining for yaws: the opportunity was also taken to look for cases of sleeping sickness and leprosy and to vaccinate against smallpox. By the end of June twenty-six cases of sleeping sickness had been diagnosed; 224 cases of leprosy were found and 18,741 persons vaccinated against smallpox.

### British Cameroons
**Participation in Inter-country Projects**

See AFRO 55.

### Cameroons 2
**Malaria Eradication Pilot Project (1958 - )**

- **MESA**
- **UNICEF**

**Aim of the project.** To carry out (a) a pilot project in the vicinity of Yaoundé; (b) a mass campaign in the South Cameroons; (c) a mass campaign in the North Cameroons. (The township of Yaoundé is not included.)

**Assistance provided by WHO during the year.** (a) Two malariologists (one for the Yaoundé pilot zone, one for North Cameroons); (b) six fellowships—two of six weeks and three of one month for study in Mauritius, and one of one month for study in Venezuela.

**Work during the year.** Epidemiological studies in the Yaoundé pilot zone continued. Research was intensified, especially research on the entomological aspects of transmission in the two mass campaigns. Experiments with chemoprophylaxis were made in conjunction with residual spraying in North and South Cameroons. Residual spraying continued, with strict control to ensure immediate detection of resistance. Special staff were trained for an experiment in surveillance in the Yaoundé pilot zone. An improved plan for interrupting transmission was prepared. Progress during the year has been encouraging.

### Cameroons
**Fellowships**

- **R**
  - **Environmental sanitation.** A seven-month fellowship to attend a course for sanitary inspectors in France.
- **TA**
  - **Health education of the public.** A twelve-month fellowship for study in France.
- **TA**
  - **Tuberculosis.** A three-week fellowship for study in Turkey.
Cameroons

**Source of Funds**

Co-operating Agencies

**Description**

Participation in Inter-country Projects

*See AFRO 12; AFRO 42; AFRO 54.*

Cape Verde Islands

**Source of Funds**

Co-operating Agencies

**Description**

See Portugal (African Provinces).

East Africa 1

**Source of Funds**

Co-operating Agencies

**Description**

East Africa Institute of Malaria and Vector-borne Diseases, Amani, Tanganyika (Nov. 1954 - )

*Aim of the project.* To control hyperendemic malaria in the Paré district of Tanganyika and the Taveta sub-district of Kenya; to carry out laboratory and field studies on malaria transmission; to train national and international malaria personnel.

*Assistance provided by WHO during the year.* (a) A sanitary engineer; (b) a training consultant.

*Work during the year.* Two series of records covering the past five years were analysed: (a) observations on man of parasite indices, haemoglobin levels, spleen rates, and bio-assays of eradication by drugs; (b) entomological records, including the density and the resistance of vectors. Training of national and international staff continued.

East Africa 2

**Source of Funds**

Co-operating Agencies

**Description**

Tuberculosis Survey Team, East Africa (Nov. 1954 - )

*Aim of the project.* To determine the prevalence of tuberculosis.

*Assistance provided by WHO during the year.* A medical officer, a statistician, an x-ray technician, a laboratory technician, two public health nurses and a public health nurse trainee.

*Probable duration of assistance.* Until the end of 1961.

*Work during the year.* A year's survey of Kenya was completed in October 1959 and the team then moved to Zanzibar. The survey there is scheduled to last four months.

French Community 1

**Source of Funds**

Co-operating Agencies

**Description**

Fellowships

Malagasy Republic

*Virology.* A four-month fellowship for study in the Union of South Africa, Uganda and Nigeria.

French Community 2

**Source of Funds**

Co-operating Agencies

**Description**

Fellowships

Republic of the Ivory Coast

*Maternal and child health.* A three-month fellowship for study in the United States of America, and Canada.

*Rural health.* A fellowship of three and a half months for study in the Belgian Congo, the Malagasy Republic, Mauritius and Mozambique.

French Community

**Source of Funds**

Co-operating Agencies

**Description**

Republic of Dahomey 1

*Malaria Pre-eradication Operations (1958 - )*

*Aim of the project.* To achieve total interruption of malaria transmission.

*Assistance provided by WHO during the year.* (a) An entomologist; a locally-recruited laboratory technician; (b) a consultant malarialogist.

*Work during the year.* Spraying was continued in certain zones; and the mass chemoprophylaxis experiment was expanded. Epidemiological surveys were made, especially in the areas where chemoprophylaxis had been carried out.

Five years of spraying have not entirely interrupted transmission, but the results of chemoprophylaxis are encouraging.

French Community

**Source of Funds**

Co-operating Agencies

**Description**

Malagasy Republic 1

*Malaria Pre-eradication Survey (1959 - )*

*Aim of the project.* To make a survey and recommendations for surveillance on the central plateau. To conduct pilot projects in the north-east and south-west to determine the way to interrupt transmission.

*Assistance provided by WHO during the year.* A six-week fellowship to study entomology in Southern Rhodesia and the Republic of the Upper Volta.
**Malaria Pre-eradication Operations (1958 - )**

**Aim of the project.** To determine, by a series of chemoprophylaxis experiments, the drugs or association of drugs, dosage and administration schedule most suited to the specific conditions, and thus to interrupt transmission by a combination of DDT spraying and chemoprophylaxis.

**Assistance provided by WHO during the year.** (a) A fellowship of three and a half months to study entomology in Nigeria, Uganda, Tanganyika, Zanzibar and the Federation of Rhodesia and Nyasaland; (b) antimalarial drugs.

**Work during the year.** A series of chemoprophylaxis experiments was made under close supervision, in treated and untreated areas. Detailed epidemiological and entomological studies were carried out in the project and check areas.

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**Ghana Eradication Pilot Project (1957 - )**

**Aim of the project.** To carry out a pre-eradication survey and pilot trials of several insecticides and of chemotherapy, with a view to planning a suitable programme.

**Assistance provided by WHO during the year.** (a) A malariologist and a laboratory technician; (b) a two-month fellowship for study in Jamaica, Mexico and Venezuela.

**Work during the year.** Experimental spraying was carried out with DDT, dieldrin and BHC; anopheline species were identified and investigations were made of density and distribution; trap huts were constructed; sporozoite rates and gonotrophic cycles were determined; studies on sorption and haematological studies were made. Chemoprophylaxis experiments were carried out to discover whether it is possible by simple propaganda to induce the rural population to take drugs regularly.

Gross parasite rates have been found to range from 64 to 80 per cent. Eleven anopheline species have been found, of which four are proved malaria vectors.

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**Bilharziasis Control (Nov. - Dec. 1957; May 1959 - )**

**Aim of the project.** To establish and operate a bilharziasis control pilot project.

**Assistance provided by WHO during the year.** A parasitologist.

**Probable duration of assistance.** Until 1961 at least.

**Work during the year.** The parasitologist started an extensive survey of snail hosts in the northern, north-eastern and central districts of the country. A laboratory, established at Kintampo, was used for the identification of species and for observations on the egg capsules and oviposition of Bulinus snails.

The WHO Bilharziasis Advisory Team (see Inter-regional 52) arrived in Accra in September and the adviser accompanied the team to representative endemic areas of bilharziasis in south Ghana and later in the northern region.

Discussions were held with the Government to ensure the future of the work and particularly to reinforce the foundations of the next phase of the project—the pilot investigation and control scheme itself.

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**Fellowships**

**Nutrition.** A twelve-month fellowship for study in the United States of America.

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**Environmental Sanitation (Nov. 1958 - )**

**Aim of the project.** To survey general problems of environmental sanitation and to plan a comprehensive programme for gradual improvement.
**Ghana 13**

**Public Health Administration (April 1958 - )**

**Aim of the project.** To plan a long-term national health programme and to draft legislation; to train health personnel.

**Assistance provided by WHO during the year.** A public health administrator.

**Probable duration of assistance.** Until the end of 1961.

**Work during the year.** The consultant helped to complete draft health legislation and to draw up the health part of the first two phases of Ghana's development plan.

---

**Ghana 18**

**Medicated Salt Trial (June 1959 - )**

**Aim of the project.** To determine whether the administration of antimalarial drugs in dietary salt is practicable in local conditions, and whether this method alone can interrupt the transmission of malaria in highly endemic conditions.

**Assistance provided by WHO during the year.** A sanitarian.

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**Ghana Participation in Inter-country Projects**

*See AFRO 12; AFRO 32; AFRO 49; AFRO 62; Inter-regional 49; Inter-regional 52; Inter-regional 78.*

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**Kenya 4**

**Tuberculosis Control (Nov. 1957 - )**

**Aim of the project.** To assess the tuberculosis problem in an urban area and in the surrounding rural area by case-finding and tracing contacts; and then to carry out a control programme including chemotherapy, chemoprophylaxis and home visiting.

**Assistance provided by WHO during the year.** (a) Two medical officers, a statistician, a public health nurse and a laboratory technician; (b) some supplies and equipment.

**Probable duration of assistance.** Until the end of 1961 at least.

**Work during the year.** The reconnaissance survey begun in 1958 was completed and a detailed report was published in September 1959. It does not support the previous view that the incidence of open pulmonary tuberculosis in Nairobi was ten to twenty cases per thousand, and shows the need for a well-organized epidemiological investigation to determine the true incidence. Just under 10,000 persons were examined (about ten per cent. of the population) and an analysis of the results shows that the true incidence ranges from 0.6 to 2.2 per cent.

This fairly high incidence of open pulmonary tuberculosis and the pulmonary anomalies among children of school age suggest that periodical mass examinations of schoolchildren and teachers would help the control of tuberculosis in Nairobi.

In order to find the relation of tuberculosis incidence in adjacent areas to that in Nairobi proper, an investigation by the same methods was made on a one per cent. random sample of the population in the Kiambu area. It was found that the incidence there was distinctly higher than in Nairobi: there is therefore some risk of introducing new cases into the town from the surrounding country.

Towards the end of 1959 the WHO and government teams began to review and improve the system of tuberculosis control in Nairobi in the light of the results of the survey. The WHO team helped to train local staff.
Kenya 13

Project No.
Source of Funds
Co-operating Agencies
Kenya 13
R

Description
Poliomyelitis Control (April 1959 - )

Aim of the project. To carry out a poliomyelitis control programme.

Assistance provided by WHO during the year. (a) A fellowship of three and a half months for study in the United States of America; (b) vacutainers and punch-cards; (c) contribution to the cost of laboratory analysis of blood specimens sent to the South African Institute of Medical Research, Johannesburg.

Probable duration of assistance. Until the end of 1961.

Work during the year. The Government started sample serological surveys. The specimens collected are sent to Johannesburg for examination.

Kenya

Participation in Inter-country Projects

See AFRO 12; AFRO 49; AFRO 54; AFRO 62; Inter-regional 52.

Liberia 3

Project No.
Source of Funds
Co-operating Agencies
Liberia 3
TA
UNICEF

Description
Yaws Control (Aug. 1953 - )

Aim of the project. To carry out a yaws control programme and eventually to eradicate the disease; to train staff for centres which will be used for the final stages of the campaign and for a programme of rural health and environmental sanitation.

Assistance provided by WHO during the year. (a) A medical officer and a public health nurse; (b) two twelve-month fellowships to study rural health and health education in Ceylon and India.

Probable duration of assistance. Until the end of 1961.

Work during the year. The first resurvey, completed towards the end of 1958, revealed a great reduction in yaws prevalence. In 1959 frequent resurveys were made which indicated further important reductions, except in a few districts, mostly on the frontiers. Arrangements were made with neighbouring countries to ensure that surveys were made and treatment given at about the same time, and travelling teams were formed to carry out constant scouting in districts where incidence is higher and to deal with any area where the reappearance of yaws is reported.

In February all Liberian staff members attended refresher courses covering every aspect of yaws eradication campaigns.

Liberia 12

Project No.
Source of Funds
Co-operating Agencies
Liberia 12
R

Description
Fellowships


Undergraduate medical studies. A twelve-month fellowship for study in Switzerland.

Liberia 15

Project No.
Source of Funds
Co-operating Agencies
Liberia 15
R

Description
Fly Investigation and Control (July 1958 - )

Aim of the project. To investigate the increase in the number of houseflies observed after spraying with dieldrin for malaria control; to take measures for the permanent control of houseflies; to carry out a health education programme.

Assistance provided by WHO during the year. A scientist/entomologist specialized in vector control, and a public health inspector.

Probable duration of assistance. Until the end of 1961.

Work during the year. Preliminary laboratory research on the bionomics of the fly was completed; it showed that the Monrovia fly is highly resistant to dieldrin. The biotic potential (e.g. the number of eggs laid and the length of life) was also investigated in each strain tested for resistance. Preliminary results showed that, with the development of resistance to dieldrin, there is a significant increase in the average number of female fly-days and in the average number of eggs laid. The tests will be continued to determine for how many generations the increase continues.

House-to-house collection of garbage was introduced, in accordance with the recommendations of the WHO team; the service is to be extended to the whole city and a new disposal site is to be brought into use. A vigorous health education programme was pursued.
Liberia 16
MESA
UNICEF

Malaria Eradication Pilot Project (Jan. 1958 - )

Aim of the project. To determine by epidemiological and entomological surveys the most effective and economical methods of controlling malaria; to plan an expanding programme of control and then to put into operation a scheme aimed at interrupting transmission of malaria within the present project area.

Assistance provided by WHO during the year. (a) A malariologist, an entomologist, two sanitarians, a laboratory technician, an administrative officer and a technical assistant; (b) three consultants, two in entomology and one in health education.

Work during the year. Educational work was undertaken to increase the collaboration of the people. Spraying was continued; chemoprophylaxis trials were made with chloroquine and pyrimethamine, separately and in combined tablets; blood smears were taken monthly to check results. A malariometric survey was made in the check area in Guinea which presents the same characteristics of population, geography and mosquito ecology.

Nowhere in DDT-sprayed houses in an area of some 4000 square miles can adult vectors be found in habitations or biting outside. The check area in Guinea and two villages missed by the spraymen are producing the normal number of vectors. Anopheles funestus has probably been eliminated as a vector from sprayed areas. A. gambiae remains susceptible to DDT but is resistant to dieldrin.

Liberia

Participation in Inter-country Projects

See AFRO 12; AFRO 32; AFRO 42; AFRO 62.

Mauritius 2
TA

Tuberculosis Control (June 1956 - )

Aim of the project. To make a survey of tuberculosis; to build up a comprehensive control service and to train local professional staff in all types of tuberculosis work, including domiciliary visits.

Assistance provided by WHO during the year. (a) Two medical officers, a statistician, a laboratory technician, an x-ray technician, and two public health nurses; (b) a fellowship for study in Turkey; (c) supplies and equipment.

Probable duration of assistance. Provisionally to the end of 1959.

Work during the year. A report was published in August 1959 on the work done between October 1957 and July 1958 to estimate the incidence of tuberculosis and the cases of infectious pulmonary tuberculosis in Mauritius. Groups selected by random sampling were examined by tuberculin test, x-ray and sputum test; the incidence, estimated from sputum tests was between 0.06 and 0.17 per cent. It was higher in the capital, Port Louis, than in the villages and in the other towns.

The work of setting up a suitable tuberculosis control system continued and a "longitudinal" study of the overall prevalence of tuberculosis in Mauritius was started, with re-examination of the groups examined in the initial survey. Certain special groups, such as foodhandlers and schoolmasters were systematically examined. Weekly x-rays of contacts were made in some well-defined sectors. Domiciliary visits for case-finding and examination of patients and contacts, and in some cases for ambulatory treatment, were intensified. An x-ray apparatus, provided by WHO, was installed in Curepipe.

Mauritius 4
TA

Nutrition Survey and Control of Deficiency Diseases (Oct. 1955 - )

Aim of the project. To study the nutritional status of the people and to take measures against malnutrition.

Assistance provided by WHO during the year. A medical nutritionist and an assistant nutritionist.

Probable duration of assistance. Until the end of 1959.

Work during the year. Work continued along the same lines as in 1958. Anaemia was found to be of the iron-deficiency type which in most cases can be satisfactorily treated by oral administration of iron. Hookworm and roundworm infestation was found to be widespread and is thought to be a main cause of anaemia. Investigations of the feeding of infants and pre-school children were continued; they showed that infants are frequently weaned to a diet relatively high in carbohydrate and low in protein. The nutritional state of pre-school children appeared to be unsatisfactory.

The Government has investigated the possibility of introducing iron-enriched foodstuffs, particularly rice, wheat-flour, dried skim milk and salt, but has not yet reached a decision. Also considered was the extension, to children of pre-school age and pregnant and nursing mothers, of the free skim milk...
Mauritius

Nursing Education (Jan. 1957 - )

Aim of the project. To increase the number of trained nurses on the island.

Assistance provided by WHO during the year. A senior nurse educator, a public health nurse tutor and a midwifery tutor.

Probable duration of assistance. Until the end of 1961.

Work during the year. In February the tutor appointed by the Government was placed in charge of the Central School of Nursing. The WHO senior nurse educator instituted a programme of in-service training for ward sisters and senior nurses. The public health nurse tutor continued in-service training (conferences and workshops) in public health and health education for all types of health workers, and the midwifery tutor took over the hospital training of nurse midwives and pupil midwives.

Nigeria 1

Yaws Control (July 1954 - )

Aim of the project. To control yaws by mass treatment with procaine penicillin; to train personnel; to demonstrate the value of a sound public health service.

Assistance provided by WHO during the year. Two medical officers.

Probable duration of assistance. Until the end of 1961 at least.

Work during the year. The campaign continued and was extended to cover an area of 240,000 square miles. Forty-five teams, under eight mobile medical units, were at work (sixteen on initial treatment surveys, twenty-three on resurveys, and six on consolidation).

Returns show that the campaign is achieving its objects; there is already an area with a population of about seven million where yaws has disappeared or is extremely rare. In the initial treatment surveys and resurveys over fifteen million persons had been seen by the end of June 1959; nearly six million of them were treated.

The consolidation stage presents an opportunity for improving the rural health services. In Northern Nigeria, for example, in an area where yaws was widespread, a project has been planned under which rural health centres serving some 750,000 people will be set up, and health education and environmental sanitation work, including the supply of drinking-water, will be carried out.

Advantage has been taken of the yaws examinations to search for other diseases, particularly leprosy and sleeping sickness, and to vaccinate against smallpox. More than 6000 cases of leprosy have been discovered and placed under treatment, 500 new cases of sleeping sickness have been found and 250,000 vaccinations effected. Children have had spleen examinations, bilharziasis has been carefully looked for and treated as necessary—and many other kinds of treatment have been given.

In Western Nigeria a team began a serological study to evaluate the importance of the problems due to yaws.

Nigeria 2

Malaria Eradication Pilot Project (April 1954 - )

Aim of the project. To provide the necessary data for an expanding mass campaign.

Assistance provided by WHO during the year. (a) Two entomologists, two sanitarians, a biologist and a chemist; (b) a six-week fellowship for study in Jamaica, Mexico and Venezuela.

Work during the year. The area of operations, which in 1954 covered a population of 125,000, reached 4000 square miles with a total population of 500,000 people. The whole project area was sprayed with DDT. (Dieldrin, BHC and DDT were used in different areas at the beginning. In late 1955, however, Anopheles gambiae was found to be resistant to dieldrin and cross-resistant to BHC. From then on, therefore, DDT was used throughout the area.)
A population of slightly over 2000 was directly protected by chemoprophylaxis with chloroquine and pyrimethamine. It was demonstrated that *A. gambiae* and *A. funestus* are the only local vectors and that they are both predominantly endophilic.

Although transmission has not been interrupted so far the results of the project are excellent. It is felt that success during the last eighteen months is sufficient to justify further expansion.

**Nigeria 3**

**UNICEF**

Leprosy Control (Jan. 1954 - )

See AFRO 46.

**Nigeria 9**

TA

UNICEF

Assistance to Schools of Hygiene (Jan. 1956 - )

*Aim of the project.* To review and improve the training of auxiliary health personnel at the Ibadan Training School.

*Assistance provided by WHO during the year.* A medical officer until March, and again from November.

*Probable duration of assistance.* Until 1962.

*Work during the year.* WHO assistance to the project was very limited, owing to the departure of the medical officer in March. The work was, however, continued by the Nigerian counterpart along the lines decided upon.

**Nigeria 10**

TA

UNICEF

Rural Health Services, Eastern Region (Nov. 1957 - )

*Aim of the project.* To improve rural health services—particularly maternal and child health services—in the Eastern Region.

*Assistance provided by WHO during the year.* (a) A specialist in maternal and child health, a public health administrator and a health inspector tutor; (b) supplies.

*Probable duration of assistance.* Until 1962.

*Work during the year.* See page 61.

**Nigeria 14**

R

UNICEF

Tuberculosis Control and Chemotherapy, Ibadan, Western Nigeria (Sept. 1957 - )

*Aim of the project.* To make a tuberculosis survey; later to carry out a control programme which will include chemotherapy.

*Assistance provided by WHO during the year.* A six-week fellowship for study in Kenya, Tunisia and Sudan.

**Nigeria 18**

R

Fellowships

*Nursing.* A three-week fellowship for study in Finland, Sweden and the Netherlands.

**Nigeria**

Participation in Inter-country Projects

See AFRO 12; AFRO 46; AFRO 54; AFRO 55; AFRO 62; Inter-regional 82.

**Portugal**

African Provinces (Port. Terr. 17)

R

Fellowships

*Nutrition.* A nine-month fellowship for study in the United Kingdom.

*Virology.* A six-month fellowship for study in France and Sweden.

**ANGOLA**

*Public health administration.* A three-month fellowship for study in France.

*Venereal diseases and treponematoses.* A four-month fellowship for study in the Republic of the Upper Volta and Nigeria.
### MOZAMBIQUE

**Anaesthesiology.** A nine-month fellowship for study in the United States of America.

**Eye surgery.** A six-month fellowship for study in the United States of America, Spain, the Federal Republic of Germany, and Italy.

**Maternal and child health.** A six-month fellowship for study in Switzerland and France.

**Public health administration.** Two twelve-month fellowships to take a DPH course in Brazil.

**Radiation protection.** A two-month fellowship for study in the United Kingdom.

**Thoracic surgery.** A six-month fellowship for study in the United Kingdom.

**Trypanosomiasis.** A three-month fellowship for study in Tanganyika, the Malagasy Republic, Kenya, Uganda, the Belgian Congo, Nigeria, Ghana, the Republic of the Upper Volta and the Republic of Senegal.

### Portugal

#### African Provinces

**Participation in Inter-country Projects**

See AFRO 12; AFRO 26; AFRO 32; AFRO 42; AFRO 49; AFRO 54; AFRO 55; AFRO 62; EURO 52.

#### Portuguese Guinea

See Portugal (African Provinces).

### Rhodesia and Nyasaland

#### 3

**Bilharziasis Control and Nutrition Survey, Northern Rhodesia (June 1957 - Dec. 1958)**

**Aim of the project.** To investigate the health problems of the area and to devise measures for solving them, particularly as regards nutrition and control of endemic diseases such as bilharziasis.

**Assistance provided by WHO.** A medical nutritionist and a parasitologist.

**Work done.** The team, throughout the project, concentrated on improving the general standards of living in three localities in the Fort Rosebery District. The work has been carried out in two main stages. First, investigation surveys yielded many valuable data (particularly parasitological and clinical) on the current health and nutritional status of the people; those findings were correlated with the results of parallel agricultural and dietary surveys. The second stage dealt with the nutritional and medical aspects; a start was made with suppressing the principal endemic diseases, treating others and raising generally the standards of public health by introducing better crops, livestock and cooking methods. Parasitological investigations were made simultaneously, chiefly among schoolchildren in and around Fort Rosebery and the Bangweulu Swamp area.

The WHO advisers have made their report to the Government.

**Evaluation.** The scheme at this stage was essentially a pilot project with restricted objectives and scope, but in a very short time the team managed to define most of the urgent health problems of the area. By restricting its work to small localities the team obtained quick results and findings which can be now applied to conditions further afield. The project has laid a firm basis for important future work—particularly in relation to ascariasis, bilharziasis, malaria and hookworm.

#### 7

**Fellowships**

**Dental health administration.** A two-month fellowship for study in the United Kingdom, Finland and Sweden.

#### 8

**Malaria Eradication (Sept. 1957 - )**

**Aim of the project.** To assess the results of the malaria control programme and to plan future policy.

**Assistance provided by WHO during the year.** A malariologist, an entomologist and a laboratory technician.

**Probable duration of assistance.** Until 1962 at least.

**Work during the year.** Entomological investigations, random blood sampling to cover approximately 10 per cent. of the population, and spleen surveys were continued. Results suggest that transmission has been interrupted in the western section of the eradication zone. The parasite reservoir in this area is only 0.18 per cent. Transmission still continues in the northern part of the territory, with varying but high incidence.
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See AFRO 12; AFRO 32; AFRO 42; AFRO 49; AFRO 54; AFRO 55; AFRO 62; EURO 52; Inter-regional 52.

Seychelles

**Public Health and Environmental Sanitation** (Aug. 1953 - )

_Aim of the project._ To improve environmental sanitation and health education of the public, and methods for the control of prevalent intestinal diseases; to train auxiliary personnel; to prepare public health legislation.

Since the beginning of 1959 WHO assistance has been limited to the environmental sanitation aspects of this project.

_Assistance provided by WHO during the year._ A sanitary engineer.

_Probable duration of assistance._ Until December 1960.

_Work during the year._ The sanitary engineer advised on the improvement of water supplies. Arrangements were made to plan a water supply for Mahé, and swamp drainage in Mahé, Praslin and La Digue. Health education work continued; lectures and demonstrations were given to sanitation personnel, and composting for the final disposal of refuse was introduced.

Sierra Leone

**Yaws Control** (Jan. 1956 - )

_Aim of the project._ To carry out a yaws campaign; to train auxiliary personnel for the campaign and, later, for centres which will undertake the final eradication of the disease and provide a comprehensive rural health service.

_Assistance provided by WHO during the year._ A medical officer and a public health nurse.

_Probable duration of assistance._ Until the end of 1962.

_Work during the year._ The first resurvey in the Northern Province was completed; it showed that the prevalence of yaws had been appreciably reduced. The campaign there then entered the consolidation phase: staff are posted to rural health centres as soon as they can be replaced in the field by newly trained personnel. Initial treatment surveys and serological surveys were continued in the South-Eastern Province and begun in the South-Western Province.

The work is now supported by a new laboratory which was opened in February at Bo. In May a refresher course was held for dispensers in rural clinics and dispensaries. All staff engaged in the yaws campaign assist in leprosy case-finding.

Sierra Leone

**Fellowships**

_Dentistry._ A twelve-month fellowship for study in Canada and the United States of America.

Sierra Leone

**Participation in Inter-country Projects**

See AFRO 12; AFRO 32; AFRO 54.

Somaliland Protectorate

**Malaria Pre-eradication Operations** (Oct. 1957 - )

_Aim of the project._ To determine how the transmission of malaria may be interrupted and then to plan, in co-ordination with the surrounding countries and territories, an inter-country programme of malaria eradication.

_Assistance provided by WHO during the year._ A malariologist and a laboratory technician.

_Work during the year._ The following investigations were made: malaria distribution and endemicity by spleen and parasite surveys; sources of _Anopheles gambiae_, which appears in the Hanel area at the beginning of the rains; the relative importance of _A. gambiae_ and other vectors; the susceptibility of vectors to the dieldrin/BHC and DDT groups. Studies were made of the efficacy of spraying in temporary huts.

The Somaliland Protectorate appears to be a hypoendemic area in which epidemic acerbations occur in cycles. _A. gambiae_ seems to be the only vector. It appears that the eradication of malaria is technically feasible.
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<td><strong>Spanish Territories</strong></td>
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<td></td>
<td>See AFRO 32; AFRO 54.</td>
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<td><strong>St Helena</strong> 3</td>
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<td>R</td>
<td>Aim of the project. To establish general hospital and public health laboratory services and to train staff for them.</td>
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<td>Assistance provided by WHO during the year. A laboratory technician.</td>
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<td>Probable duration of assistance. Until the end of 1959.</td>
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<td></td>
<td>Work done. See page 61.</td>
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<td><strong>Tanganyika</strong> 11</td>
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<td>R</td>
<td>Environmental sanitation. A ten-month fellowship to take a course in public health engineering in the United Kingdom.</td>
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<td><strong>Tanganyika</strong></td>
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<td></td>
<td>See AFRO 12; AFRO 32; AFRO 49; AFRO 54; AFRO 62.</td>
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<td><strong>Togo</strong> 3</td>
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<td>TA UNICEF</td>
<td>Aim of the project. To interrupt malaria transmission.</td>
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<td>Assistance provided by WHO during the year. (a) A malariologist; (b) two two-month fellowships—one for study in Senegal and the Cameroons, the other for study in the Republic of the Upper Volta and the Cameroons.</td>
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<td>Work during the year. Spraying was renewed in certain areas that were abandoned in 1958 and was extended to another area where there is much movement of the population. In this last area an epidemiological survey was completed. Chemoprophylaxis trials were undertaken. There has been a reduction in spleen and parasite rates after the first administration of drugs, but the intensity of transmission is still relatively high. There is an urgent need for intensified entomological research.</td>
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<td><strong>Togo</strong></td>
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<td></td>
<td>See AFRO 12; AFRO 42; AFRO 51; Inter-regional 52.</td>
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<td><strong>Uganda</strong> 12</td>
</tr>
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<td></td>
<td>R</td>
<td>Aim of the project. To make recommendations on malaria control in the Kigezi District; to carry out a survey and plan an eradication programme.</td>
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<td>Assistance provided by WHO during the year. A malariologist, a sanitarian and an entomologist.</td>
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<td></td>
<td>Work during the year. Field work, mostly entomological, was intensified so as to gather as much information as possible before spraying began in May. A malarriometric survey was made in northern Kigezi. In the mountainous Kigezi District, malaria is found on the slopes of the northern mountains between Lake Edward (3000 feet) and about the 4500 feet contour. Along this level the distribution is limited to certain valleys and to the shores of lakes in southern Kigezi. Good spray coverage has been obtained and the inhabitants have been very co-operative.</td>
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<td><strong>Uganda</strong></td>
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<td></td>
<td></td>
<td>See AFRO 42; AFRO 49; AFRO 54; AFRO 62.</td>
</tr>
</tbody>
</table>
Atomic hygiene. A four-month fellowship for study in France, the Federal Republic of Germany, Sweden and the United Kingdom.

Malaria control. Two fellowships of three and a half months for study in Greece, Nigeria, the Federation of Rhodesia and Nyasaland, Switzerland, Tanganyika, the United Kingdom, Venezuela and Zanzibar.

Union of South Africa

Participation in Inter-country Projects

See AFRO 12; AFRO 42; AFRO 46; AFRO 49; AFRO 54; AFRO 62; Inter-regional 49; Inter-regional 62.

West Africa 1

Tuberculosis Survey Team (Dec. 1955 - )

Aim of the project. To survey the prevalence of tuberculosis.

Assistance provided by WHO during the year. A medical officer, a statistician, an x-ray technician, a laboratory technician, two public health nurses and a public health nurse trainee.

Probable duration of assistance. At least until the end of 1961.

Work during the year. After completing its survey work in Sierra Leone, the team operated in the Gambia between mid-December 1958 and the end of March 1959. Out of an estimated population of 250,000 for the whole country, 1,769 persons, divided into four groups of a little over 400 each, selected at random over the territory, were included in the survey. Out of 1,644 persons tuberculin tested, 1,068 reacted with 9 mm or less induration and 576 with 10 mm or more; in 1,150 specimens of sputum examined, acid-fast bacilli were found in only one; relevant shadows were found in 62 cases out of 865 persons submitted to x-ray examination. The survey team moved to Liberia in May and is expected to remain in that country until the end of January 1960.

West Africa 2

Malaria: Strengthening of Entomological Research, Republic of Dahomey, and Togo (1958 - )

Aim of the project. To make detailed entomological studies in an area bordering the two countries, in order to obtain information for future planning.

Assistance provided by WHO during the year. (a) An entomologist and a locally-recruited laboratory technician; (b) two fellowships—one for study in Liberia, Malagasy Republic, Nigeria and Tanganyika, the other for study in Nigeria, Tanganyika, Uganda and Zanzibar.

Work during the year. The following work was begun: studies of malaria vector species and densities, sporozoite rates, gonotrophic cycles and susceptibility; localization of transmission foci, studies of vector behaviour in relation to sprayed dwellings, of residual effects (by bio-assays) and of nature and importance of outdoor resting places of vectors; determination of anthropophilic indices. Epidemiological surveys were made by the WHO malariologist stationed in Lomé (Togo).

Zanzibar 3

Training of Auxiliary Personnel (June 1957 - )

Aim of the project. To train rural health workers and health inspectors.

Assistance provided by WHO during the year. A public health inspector tutor.

Probable duration of assistance. Until the end of June 1961.

Work during the year. The second course for rural health workers began in March and lasted until the end of the year; there were fourteen students, all of whom had completed secondary education. The sixteen students of the first course were assigned to the rural health dispensaries, where in addition to their curative work they are making a survey of sanitary conditions, particularly as regards water supply and excreta disposal. The public health inspector tutor periodically supervises the environmental sanitation work.

Zanzibar 4

Malaria Eradication Pilot Project (Jan. 1957 - )

Aim of the project. To carry out a malaria survey, followed by an eradication campaign.

This project is the extension of the malaria control project started (under the same project number) in 1957.
<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cooperating Agencies</td>
<td>Assistance provided by WHO during the year. A malarialogist, an entomologist, a sanitarian, and a laboratory technician; two laboratory technicians for survey work in Pemba.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Work during the year. The second spraying cycle began in February but in spite of vigorous government propaganda, a number of houses were found locked. Malariorientic and entomological investigations were continued in Zanzibar and Pemba to complete the initial data required for an evaluation of results. In Pemba drugs were administered and immigrant workers were treated immediately on arrival, and monthly during their stay on the island. The results of the first spraying cycles in Zanzibar and Pemba are very encouraging, but public cooperation in Zanzibar leaves something to be desired. Anopheles gambiae and A. funestus adults were reduced to minimum densities after the first spraying. The effects of chemoprophylaxis cannot yet be assessed.</td>
</tr>
</tbody>
</table>

Zanzibar

Participation in Inter-country Projects

See AFRO 54.
THE AMERICAS

THE WORK OF WHO, 1959

Environmental Sanitation Training (Dec. 1952 - )

Aim of the project. To train sanitary engineers and auxiliary personnel for staffing national and local health departments; to strengthen courses and to expand facilities in Latin America for training environmental sanitation personnel from all countries of the Americas.

Assistance provided by WHO during the year. (a) A sanitary engineer; (b) contractual services; (c) supplies and equipment; (d) forty-three fellowships:

1. to study at the School of Public Health, São Paulo, Brazil—ten eleven-month fellowships in sanitary inspection, to candidates from Argentina, Brazil, Colombia (two), Dominican Republic, El Salvador (two), Honduras, Peru, and Venezuela; and twelve eleven-month fellowships in sanitary engineering to candidates from Argentina, Colombia (two), Dominican Republic (two), El Salvador (two), Honduras, Peru (two), Paraguay and Venezuela;
2. to attend the Workshop for Training of Auxiliary Personnel in Sanitation, Costa Rica—thirteen fellowships to candidates from Argentina, Bolivia, Chile, Colombia (two), Ecuador, Paraguay (two), Peru, Trinidad, Uruguay and Venezuela (two);
3. to attend the Groundwater Development Course, Minnesota, United States of America—six fellowships to candidates from Brazil, Honduras, Peru, Uruguay and Venezuela (two);
4. to attend the Course on Disposal of Waste in the Marine Environment, United States of America—two fellowships to candidates from Panama and Peru.

Probable duration of assistance. Until the end of 1960, after which the project will be replaced by separate projects for each of the six zones of the Region.

Work during the year. The sanitary engineer helped with the practical training programme of the School of Public Health, São Paulo.

Aëdes aegypti Eradication, Central America and Panama (Oct. 1952 - )

Aim of the project. To eradicate A. aegypti, the vector of urban yellow fever, from Central America and Panama.

Assistance provided by WHO during the year. (a) A medical officer and two sanitarians; (b) supplies and equipment.

Probable duration of assistance. Until the end of 1959.

Work during the year. Eradication was completed in the Canal Zone, Guatemala and Honduras. A final check was made in El Salvador.

Aëdes aegypti Eradication, Caribbean Area (Oct. 1952 - )

Aim of the project. To eradicate A. aegypti, the vector of urban yellow fever, from Venezuela and the British, French and Netherlands areas in the Caribbean.

Assistance provided by WHO and work done during the year. A medical officer, who gave advice on the country programmes in the area concerned (see British Guiana and West Indies 1, French Antilles and Guiana 2, and Surinam and Netherlands Antilles 1).

Probable duration of assistance. Until 1962.

Inter-American Programme for Education in Biostatistics (Oct. 1952 - )

Aim of the project. To improve vital and health statistics of Latin American countries by training their technical personnel; to provide training in vital and health statistics at the School of Public Health of the University of Chile; to develop the Chilean services responsible for vital and health statistics, which give practical training, and to organize model local offices of civil registration and vital and health statistics for demonstration purposes.
Assistance provided by WHO during the year.  
(a) Thirteen nine-month fellowships to candidates from Argentina (six), Colombia, Honduras, Peru (three) and Uruguay (two);  
(b) a grant;  
(c) supplies and equipment.

Probable duration of assistance.  Indefinite.

Work during the year.  A nine-month course on vital and health statistics was given for the seventh consecutive year at the School of Public Health, University of Chile.  It is divided into two parts: elementary, lasting sixteen weeks and ending in July, and advanced, lasting twenty-three weeks and ending in December.

**AMRO 16**  
**R**  
**Assistance to Schools of Public Health** (March 1958 - )  

**Aim of the project.**  To strengthen the teaching in schools of public health in the Region.

**Assistance provided by WHO during the year.**  
(a) Two short-term consultants (professors of statistics and of public health administration);  
(b) a three-week fellowship to the Director of the School of Public Health in Buenos Aires to observe the programme of the school of Public Health, Puerto Rico.

**Probable duration of assistance.**  Until 1967.

**Work during the year.**  The professor of statistics visited the schools of public health in São Paulo, Brazil, and in Santiago, Chile, to lecture and to advise on teaching programmes.  He also visited medical schools and public health training programmes in Argentina.

The professor of public health administration visited schools of public health in Rio de Janeiro, Belo Horizonte, São Paulo, Buenos Aires, Santiago and Mexico City to analyse teaching programmes, advise on necessary modifications, make recommendations on help by the Organization, and discuss the schools' participation in the Seminar on Schools of Public Health (see AMRO 152).

**AMRO 17.5**  
**R**  
**Waterworks Training Course, Montevideo** (16 Oct. - 21 Nov. 1959)

**Aim of the project.**  To train waterworks operators in methods of operating water plant, improving water quality, and maintaining equipment.

**Assistance provided by WHO.**  
(a) A short-term consultant;  
(b) nineteen five-week fellowships to trainees from Argentina, Chile, Paraguay and Uruguay;  
(c) supplies.

**AMRO 18**  
**R**  
**Medical Education** (March 1953 - )

**Aim of the project.**  To improve standards of medical education.

**Assistance provided by WHO during the year.**  
(a) Three short-term consultants;  
(b) a six-month fellowship to a faculty member at the Medical School, Jamaica, to study organization of medical education in the United States of America;  
(c) some supplies and equipment.

**Probable duration of assistance.**  Indefinite.

**Work during the year.**  One consultant reviewed teaching programmes and gave lectures on medical statistics in schools of medicine in Mexico, Peru, Guatemala, Costa Rica, El Salvador and Venezuela; the second advised the Medical School of Honduras on the reorganization of the Department of Physiology; and the third advised on reorganization of the library of the Medical School in Panama.

**AMRO 23.5**  
**R**  
**Fifth Regional Congress on Nursing, Buenos Aires** (25-31 Oct. 1959)

**Aim of the project.**  To enable nursing leaders of the Region to discuss professional problems and their solution.

**Assistance provided by WHO.**  Supplies and equipment.

**Work done.**  Six hundred and seventy nurses, 344 of whom were from countries other than Argentina, attended the Congress.  Twenty-one countries, including Trinidad and Puerto Rico, were represented by fifty-six official delegates.  The general theme for discussion was "Legislation for Improved Nursing Services".  Eighteen groups of fifteen to twenty persons each were formed; they met twice daily after the first day to discuss various phases of the central topic.  Recommendations were made for improving nursing education and practice in the Latin American countries.  (See also page 23.)
<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Co-operating Agencies</th>
<th>Description</th>
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<tbody>
<tr>
<td>AMRO 28</td>
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<td>R</td>
<td>Advanced Nursing Education (Jan. 1955 - )</td>
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<td><strong>Aim of the project.</strong> To prepare graduate nurses for supervisory, teaching, and administrative positions in schools of nursing, hospitals and public health services.</td>
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<td><strong>Assistance provided by WHO during the year.</strong> Three twelve-month fellowships to nurses from Colombia, Ecuador and Peru for attendance at a course in Chile. (See also page 69.)</td>
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<tr>
<td>AMRO 45</td>
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<td>R</td>
<td>Laboratory Services (Feb. 1955 - )</td>
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<td><strong>Aim of the project.</strong> To improve or reorganize public health laboratory services, particularly the departments responsible for virology, laboratory animal colonies, and testing of biologicals.</td>
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<td><strong>Assistance provided by WHO during the year.</strong> (a) A public health laboratory adviser; (b) supplies and equipment.</td>
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<td><strong>Probable duration of assistance.</strong> Indefinite.</td>
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<td><strong>Work during the year.</strong> Cultures, strains, standards, etc., were supplied to many laboratories. The laboratory adviser produced an outline and manual for a technicians' training course.</td>
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<tr>
<td>AMRO 47</td>
<td>TA PAHO UNICEF</td>
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<td>Yaws Eradication and Public Health Laboratory Services, Caribbean Area (Nov. 1954 - )</td>
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<td><strong>Aim of the project.</strong> (a) To conduct surveys in areas where yaws is known to be present and to decide what should be done to eradicate it from the Caribbean area; (b) to strengthen laboratory services for public health work in general.</td>
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<td><strong>Assistance provided by WHO during the year.</strong> A laboratory adviser.</td>
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<td>A medical officer was provided from PAHO funds.</td>
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<td><strong>Probable duration of assistance.</strong> Until 1961.</td>
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<td><strong>Work during the year.</strong> Yaws infection has been eliminated in Barbados and Curaçao. In Trinidad, the eradication programme approached its final stage. In the Windward Islands, the work continued, but in Jamaica the programme was temporarily in abeyance.</td>
</tr>
<tr>
<td>AMRO 48</td>
<td></td>
<td>R</td>
<td>Seminar on Teaching of Public Health in Schools of Veterinary Medicine, Kansas City, Missouri (16-22 Aug. 1959)</td>
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<tr>
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<td><strong>Aim of the project.</strong> To bring together deans and professors of schools of veterinary medicine throughout the Americas to discuss suitable ways of incorporating modern teaching of preventive medicine and hygiene into the curricula.</td>
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<td><strong>Assistance provided by WHO.</strong> (a) Two short-term consultants; (b) cost of attendance of twenty-three participants from Argentina, Brazil, Chile, Colombia, Cuba, Ecuador, Guatemala, Mexico, Paraguay, Peru, Uruguay and Venezuela; (c) supplies and equipment.</td>
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<td><strong>Work done.</strong> The seminar was attended by deans and professors from all veterinary medical schools in the Americas. The report, prepared in English and Spanish, dealt with basic principles of veterinary education under the heads: teaching objectives; curriculum; teaching staff and facilities; teaching methods and aids; research and community. It emphasized the veterinarian's part in the public health programme of his country and community.</td>
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<tr>
<td>AMRO 61</td>
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<td>R</td>
<td>Rabies Control (Jan. 1954 - )</td>
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<td><strong>Aim of the project.</strong> To advise on the planning of animal rabies control programmes; and on the manufacture and testing of vaccines for use in animals, and of hyperimmune serum and vaccine for use in man.</td>
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<td><strong>Assistance provided by WHO during the year.</strong> (a) A rabies adviser; (b) a short-term consultant; (c) supplies and equipment.</td>
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<td><strong>Probable duration of assistance.</strong> Until 1961.</td>
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<td><strong>Work during the year.</strong> The adviser assisted in co-ordinating and improving local programmes along the 2000-mile Mexico/United States border. The short-term consultant worked in Brazil, Argentina, Chile, Peru and Panama.</td>
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<tr>
<td>Project No.</td>
<td>Description</td>
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</tbody>
</table>
| AMRO 63    | **Assistance to Schools of Nursing** (Sept. 1958 - )  
- **Aim of the project.** To provide assistance in improving nursing education to countries without individual nursing projects.  
- **Assistance provided by WHO and work done during the year.** Copies of a text on the basic sciences, in Spanish translation, were distributed to over eighty schools of nursing in eighteen countries.  
- **Probable duration of assistance.** Until 1965. |
| AMRO 67    | **Teaching of Public Health in Schools of Veterinary Medicine** (July 1955 - )  
- **Aim of the project.** To strengthen, in schools of veterinary medicine, teaching relevant to public health and preventive medicine.  
- **Assistance provided by WHO during the year.** Two short-term consultants.  
- **Probable duration of assistance.** Until 1964.  
- **Work during the year.** One consultant visited schools in Mexico, Peru, Chile and Argentina to review curricula and advise on changes; the other visited schools in Brazil for the same purpose. |
| AMRO 76    | **Vaccine Testing** (July 1954 - )  
- **Aim of the project.** To help laboratories engaged on the production of vaccines in the Americas to maintain high standards of potency and safety.  
- **Assistance provided by WHO during the year.** A grant towards the cost of confirmatory testing of vaccines, antigens and antisera for the national ministries of health.  
- **Probable duration of assistance.** Indefinite. |
| AMRO 81    | **Pan American Zoonoses Center, Azul, Argentina** (Dec. 1956 - )  
- **Aim of the project.** To promote and strengthen antizoonoses work in the Americas.  
- **Assistance provided by WHO during the year.** A chief of laboratory services, a zoonoses specialist and an administrative officer.  
  - A scientific director was provided from PAHO funds. Services and para-professional staff are provided from a special fund contributed by the Government of Argentina.  
- **Probable duration of assistance.** Indefinite.  
- **Work during the year.** Education, service, and research work was further developed. A general course on zoonoses control for post-graduate students was held from 22 June to 10 July. The library and information service were extended and reprints were catalogued and classified. The library now has a collection of 338 journals and 531 books.  
  - Production of antigen for the *Brucella abortus* ring test was started on a scale sufficient for distribution to American countries. A study of legislation on brucellosis in the American countries was begun. Work was started on a bibliography of animal and human anthrax in the Americas.  
  - Work was continued on the field evaluation of bacterin for bovine lepto-spirosis control, and on a study on lep-tospirosis in wild life.  
  - The study on the possibility of passive immunity in vampire bats through feeding on immune cattle was almost completed. Preparations were made for the field evaluation of a vaccine against hydatidosis in sheep and for the investigation of salmonellae as etiological agents in infant diarrhoea. Preparations were made for a seminar to be held early in 1960 on animal tuberculosis and its relation to tuberculosis in man. |
| AMRO 85    | **Latin American Center for Classification of Diseases, Caracas, Venezuela** (April 1955 - )  
- **Aim of the project.** To promote completeness, accuracy and comparability of mortality statistics in Latin America, by a training centre and clearing-house for problems arising in the use of the *Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death*, and by training to improve medical certification.  
- **Assistance provided by WHO during the year.** (a) Nine two-week fellowships, to trainees from Colombia (four), Costa Rica, Guatemala, Honduras and Mexico (two); (b) a grant.  
- **Probable duration of assistance.** Indefinite. |
Work during the year. A two-week course on classification problems was given to ten trainees from five countries. A member of the staff gave courses in Argentina, Panama, Paraguay and Peru to 116 students. A working group on teaching of medical certification, lasting five days, was held in the Center in May.

Health Statistics (Jan. 1955 -)

Aim of the project. (a) To improve vital and health statistics by assistance with courses, seminars and workshops and with the selection and follow-up of fellowship students; (b) to advise on the statistical aspects of projects and assist in the compilation of data for programme planning.

Assistance provided by WHO during the year. A health statistician.

Probable duration of assistance. Indefinite.

Work during the year. Advice was given to the national health services of Panama, Costa Rica, Guatemala, Honduras and Nicaragua on their statistical services. Instruction in statistics was given at the Malaria Eradication Training Centre and at the School of Medicine in Panama.

Health Education (Oct. 1955 -)

Aim of the project. To provide advice on health education to Cuba, the Dominican Republic, Haiti and Mexico.

Assistance provided by WHO during the year. (a) A health educator; (b) supplies and equipment.

Probable duration of assistance. Indefinite.

Work during the year. The health educator advised the four countries covered by the project. In Mexico he also assisted the School of Public Health, and helped with the health education aspects of the malaria eradication programme.

Environmental Sanitation, Caribbean Area (May 1956 -)

Aim of the project. To improve environmental sanitation in the Caribbean area.

Assistance provided by WHO during the year. A sanitary engineer and a sanitarian. A second sanitarian was provided from PAHO funds.

Probable duration of assistance. Until the end of 1961.

Work during the year. The sanitary engineer assisted with water supply, sewage disposal and rural sanitation work in the islands served by the project. The WHO sanitarian was engaged mainly on sanitation projects assisted by UNICEF.

Antigua. A survey was completed.

Barbados. The latrine programme started in April. A special drilling rig had to be provided to drill the pits for the latrines through coral rock. Work proceeded steadily, but slowly, and more drilling units are required if a satisfactory rate of progress is to be achieved.

British Guiana. A survey was completed and a request was made to UNICEF for assistance. A committee was formed to plan the water programme. Changes were made in the school sanitation programme. A health educator was engaged, and the appointment of a sanitary engineer was approved. Two public health inspectors were trained in Puerto Rico and two sent for training in the United States of America.

British Virgin Islands. A survey was carried out, and arrangements were made to pay routine visits to the islands to advise the Government on its water and other environmental sanitation problems.

Montserrat. A survey was made. The Government has requested assistance from UNICEF, and advice from WHO, on a sewage system for Plymouth, the capital.

St Kitts. The rural latrine programme continued; after some delay the installation of latrine units progressed fairly rapidly. The sanitary engineer attached to this programme and the water development programme, who had been awarded a WHO fellowship to take a MPH degree in sanitary engineering in the United States of America, continued his studies.

St Lucia. The pit latrine programme started in April. Good progress was made, and it is planned that the other islands should use this programme as a guide. The “shallow dug well” programme was begun. The “deep well” programme was retarded by difficulties with the drilling rig.
St Vincent. The pit latrine programme, which started in April, made rapid progress. The Government is trying out a fibre-glass water storage tank for the water supply programme in the Grenadine islands.

Trinidad. UNICEF supplies for the rural pit latrine programme arrived in April. The output was ninety units cast per day.

**AMRO 144**

**Health Statistics (Jan. 1958 - )**

*Aim of the project.* (a) To improve vital and health statistics by assistance with courses, seminars and workshops and with the selection and follow-up of fellowship students; (b) to advise on the statistical aspects of projects and assist in the compilation of data for programme planning.

*Assistance provided by WHO during the year.* A health statistician.

*Probable duration of assistance.* Indefinite.

*Work during the year.* The health statistician advised on national health statistics in Mexico, Cuba, Haiti and the Dominican Republic. He helped to teach medical statistics in the School of Medicine, Puerto Rico, collaborated in the statistical programme of the School of Public Health, Mexico, and participated in a working group on training in medical certification, held in Caracas.

**AMRO 149**

**Leprosy Control (Feb. 1958 - )**

*Aim of the project.* To determine the nature and extend of the leprosy problem in the Americas and to survey facilities for leprosy control in order to permit the sound planning of national projects.

*Assistance provided by WHO during the year.* (a) A leprologist; (b) supplies and equipment.

*Probable duration of assistance.* Until 1962.

*Work during the year.* Surveys were completed in Panama, Costa Rica, Nicaragua, Honduras, El Salvador, Mexico and Ecuador. The leprologist assisted the Government of Mexico to prepare a programme for the control of leprosy throughout the country.

**AMRO 152**

**Seminar on Schools of Public Health, San Miguel Regla, Hidalgo, Mexico (2-7 Nov. 1959)**

*Aim of the project.* To enable directors of schools of public health to exchange ideas and experience about training and programmes in the schools of public health in Latin America.

*Assistance provided by WHO.* (a) Consultant services; (b) cost of attendance of twenty-two participants from Argentina, Brazil, Chile, Mexico, Peru, Puerto Rico, and Venezuela; (c) supplies and equipment.

*Work done.* The seminar discussed the objectives of schools of public health; the scope, content and methods of teaching; and administrative standards and community service. The report will be used as a guide by the seven schools which participated. It was recommended that regular meetings of the group be held at intervals of about two years.

**AMRO 188**

**Veterinary Public Health, Zone III (Jan. 1959 - )**

*Aim of the project.* To advise on food hygiene, and prevention and control of zoonoses, and on the planning, implementation and evaluation of veterinary public health work; to assist in selecting and training public health veterinarians.

*Assistance provided by WHO during the year.* A veterinary public health adviser.

*Probable duration of assistance.* Indefinite.

**AMRO 189**

**Veterinary Public Health, Zone V (Jan. 1959 - )**

*Aim of the project.* To advise on food hygiene, and prevention and control of zoonoses, and on the planning, implementation and evaluation of veterinary public health work; to assist in selecting and training public health veterinarians.

*Assistance provided by WHO during the year.* A veterinary public health adviser.

*Probable duration of assistance.* Indefinite.
Nursing Education, Córdoba and El Chaco (Jan. 1957 -  )

Aim of the project. To strengthen schools of nursing.

Assistance provided by WHO during the year. (a) Four nurse educators; (b) supplies.

Probable duration of assistance. Until 1962.

Work during the year. Advice was given to two schools of nursing, one in Córdoba and the other in El Chaco.

In Córdoba a budget for the school was obtained; full-time posts for the nurse director and for several instructors were created; a building on the campus of the University City was given to the school; it provides classrooms, a laboratory, a library, offices and residence for forty students. Two instructors returned from fellowships abroad. The number of students reached twenty-four and a campaign was begun in order to attract a large entry for 1960.

The School of Nursing in Resistencia (El Chaco), which was set up in 1958 by the provincial government with the help of the Organization, had only two students during the year. The school has had many problems, the chief of which is the difficulty of obtaining nurse instructors; the field practice areas are very poor and it has not yet been possible to make any improvements. There still are no laboratories for teaching the basic sciences. The turnover of instructors has been rapid and the two WHO nurse educators have been obliged to do much of the teaching and supervision.

National Institute of Microbiology (May 1959 -  )

Aim of the project. To improve the standard of the National Institute of Microbiology, which produces biological and chemical products used in the diagnosis and treatment of disease and serves as a centre for medical and epidemiological research.

Assistance provided by WHO during the year. Two twelve-month fellowships—one in virology and one in microbiology—for study in the United States of America.

Probable duration of assistance. Until 1964.

Fellowships

Health education. Three fellowships—two of twelve months for study in Puerto Rico and Chile respectively, and one of ten months for study in Chile.

Hospital administration. Two fellowships—one of ten months and one of fifteen months—for study in Chile.

Maternal and child health. A ten-month fellowship for study in Chile.

Public health administration. Four fellowships—three of ten months for study in Chile and one of eleven months for study in Brazil.

Public Health Services, El Chaco (May 1957 -  )

Aim of the project. To set up for demonstration purposes an integrated health service in the Province of El Chaco.

Assistance provided by WHO during the year. (a) A medical officer, a sanitary engineer and a public health nurse; (b) two short-term consultants; (c) three ten-month fellowships; (d) supplies and equipment.

Probable duration of assistance. Until 1963.

Work during the year. The organization of the provincial health service continued. The sanitary code for the province was completed, with the assistance of one of the consultants provided by the Organization. A new scale of posts and salaries was drawn up for the technical personnel of the province. Progress was made in organizing the Department of Environmental Sanitation, in extending the provision of water supplies, and in preparing a second course for sanitary inspectors.

Medical Education (1958 -  )

Aim of the project. To strengthen medical education.

Assistance provided by WHO during the year. (a) A short-term consultant; (b) five fellowships—one of six weeks to study the organization of medical education, with emphasis on medico-social work,
<table>
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<tr>
<th>Project No.</th>
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</table>
| Argentina 26 | R (Elizabeth Kenny Foundation) | National Institute of Rehabilitation (Sept. 1958 - )

**Aim of the project.** To assist the National Institute of Rehabilitation in the physical, emotional, and socio-economic rehabilitation of persons whose capacity for work has been impaired by congenital or acquired defects.

**Assistance provided by WHO during the year.** (a) Two consultants on occupational therapy and physical therapy; (b) teaching material.

**Probable duration of assistance.** Indefinite.

**Work during the year.** The Department of Occupational Therapy and Physical Therapy of the National Institute of Rehabilitation in Buenos Aires was reorganized, and training was given to professional and technical personnel specialized in rehabilitation. A treatment unit was set up at the Instituto Marcelo J. Fitte and plans were made for a school of occupational therapy in Buenos Aires. Sixteen rehabilitation units, in the provinces of Córdoba, Santiago del Estero, Tucumán, Salta, Mendoza, San Juan, Santa Fe, El Chaco and Misiones, were surveyed in order to assess the rehabilitation facilities of the interior of the country and the need for a long-range, comprehensive programme in rehabilitation.

Argentina | Participation in Inter-country Projects
See AMRO 1; AMRO 10; AMRO 16; AMRO 17.5; AMRO 23.5; AMRO 48; AMRO 61; AMRO 67; AMRO 81; AMRO 85; AMRO 152.

Barbados | See West Indies Federation.

Bolivia 4 | Malaria Eradication (1956 - )

**Assistance provided by WHO during the year.** A sanitarian, a medical officer, and a sanitary engineer.

Four sanitarians were provided from the PAHO Special Malaria Fund.

**Probable duration of assistance.** Until 1962.

**Work during the year.** Spraying was in full operation. Satisfactory progress was made with the network of notification posts.

Bolivia 5 | Nursing Education (Aug. 1953 - )

**Aim of the project.** To strengthen the National School of Nursing, especially by the inclusion of public health nursing, and to improve supervision and teaching.

**Assistance provided by WHO during the year.** (a) A nurse educator; (b) supplies.

**Probable duration of assistance.** Until 1963.

**Work during the year.** All the national agencies that require nurses co-ordinated their efforts to improve the School of Nursing, and a governing board composed of representatives of five national agencies was set up. A nurse instructor returned from study in Guatemala. The physical facilities for the clinical training of student nurses were improved. Transport between the residence and various hospitals was provided for the student nurses. There were sixty-two students, including twenty-eight in their first year.

Bolivia 11 | Joint Field Mission on Indigenous Populations, Andean Highlands (Jan. 1957 - )

**Aim of the project.** To promote the economic and social development of indigenous populations of the Andean highlands, so as to facilitate their integration into their national communities.

**Assistance provided by WHO during the year.** A medical officer.

**Probable duration of assistance.** Until 1962.

**Work during the year.** The medical officer assisted the programme in the Cotoca and Pillapi areas.
Bolivia

Participation in Inter-country Projects

See AMRO 1.

Brazil 8

National Virus Laboratory Services (April 1959 - )

Aim of the project. To assist the Instituto Oswaldo Cruz (one of the national public health laboratories) to expand and improve its virus laboratory work.

Assistance provided by WHO during the year. (a) A short-term consultant; (b) a three-month fellowship.

Probable duration of assistance. Until 1960.

Work during the year. The short-term consultant visited the Institute to prepare plans for a new laboratory and its equipment.

Brazil 16

Fellowships

Tuberculosis. Two fellowships—one of four and a half months for study in the United States of America, Canada, Mexico and Japan; the other of four months for study in the United States of America, Canada and Japan.

Brazil 18

National Food and Drug Service (April 1955 - )

Aim of the project. To develop a federal food and drug control service for the entire country; to expand the drug control laboratory and adapt it so that it can deal with food control as well as drug control.

Assistance provided by WHO during the year. A six-month fellowship.

Probable duration of assistance. Until the end of 1960.

Work during the year. Work continued on revision of legislation and on setting up laboratories for control of drugs and biologicals.

Brazil 19

School of Public Health, Rio de Janeiro (Jan. 1957 - )

Aim of the project. To build up a national school of public health.

Assistance provided by WHO during the year. A visiting professor.

Probable duration of assistance. Until 1962.

Work during the year. The visiting professor finished his two-year assignment during 1959. The establishment of the School has been authorized by decree.

Brazil 31

Rehabilitation Training Centre, São Paulo (July 1958 - )

Aim of the project. To set up a rehabilitation training centre in the clinical hospital of the University of São Paulo, for training Brazilian personnel and to serve as an international training centre for other Latin American countries.

Assistance provided by WHO during the year. A medical officer.

Probable duration of assistance. Until 1961.

Work during the year. The medical officer continued to assist the centre in the organization of its medical work.

Brazil 35

School of Public Health, São Paulo (July 1958 - )

Aim of the project. To strengthen the School of Public Health, São Paulo, so that it may be used also as an international training centre.

Assistance provided by WHO during the year. (a) Two fellowships in public health teaching for faculty members—one of three months to study in Paraguay, Chile, Peru, Colombia, Panama, Guatemala, Mexico and Puerto Rico; the other of four months to study in Italy, Czechoslovakia, France, Denmark, Norway, the United Kingdom, the United States of America, and Canada; (b) supplies and equipment.

Probable duration of assistance. Until 1965.
**PROJECT LIST: THE AMERICAS**

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<th>Co-operating Agencies</th>
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</thead>
<tbody>
<tr>
<td>Brazil 42</td>
<td>R</td>
<td></td>
<td>Rabies Control (April 1959 - )</td>
</tr>
</tbody>
</table>

*Aim of the project.* To develop centrally co-ordinated rabies control programmes throughout the country; to make available adequate supplies of properly tested vaccine and serum; and to improve training facilities for medical and veterinary personnel.

*Assistance provided by WHO during the year.* (a) A three-month fellowship; (b) supplies and equipment.

*Probable duration of assistance.* Until 1962.

*Work during the year.* A bi-ministerial co-ordinating committee for the rabies control programmes was set up. Educational material was prepared. The campaign was begun in some areas and production of vaccine was started.

| British Guiana and West Indies 1 | TA | Aedes aegypti Eradication (1952-1957 under AMRO 8; Jan. 1958 - ) |

*Aim of the project.* To eradicate A. aegypti, the vector of urban yellow fever, from the British areas of the Caribbean (except British Honduras).

*Assistance provided by WHO during the year.* (a) Five sanitarians; (b) supplies and equipment; (c) advice from the medical officer attached to AMRO 8.

*Probable duration of assistance.* Until 1962.

*Work during the year.* Eradication has been achieved in British Guiana and Bermuda. Negative results have been obtained from Antigua, Barbuda, Grenada, Montserrat, Nevis, St Kitts, St Lucia, St Vincent, Trinidad and Tobago and it should be possible to declare these islands free from A. aegypti in the near future. The eradication campaign continued in Anguilla, Barbados, the British Virgin Islands, Carriacou, the Grenadines and Jamaica.

| British Guiana and West Indies 3 | TA | Public Health Nursing (Aug. 1959 - ) |

*Aim of the project.* To develop the public health nursing services in British Guiana, and territories of the West Indies Federation.

*Assistance provided by WHO during the year.* (a) A public health nurse (from late September); (b) two fellowships—one of three months and one of six months.

*Probable duration of assistance.* Until 1962.

*Work during the year.* The public health nurse, accompanied by the zone nurse, visited Barbados, Trinidad and British Guiana.

| British Guiana and West Indies 5 | R | Fellowships |

*Aedes aegypti.* A twenty-six day fellowship for study in St Kitts, Anguilla, Barbados and Jamaica.

*Cytology.* A six-month fellowship for study in the United States of America, and Jamaica.

*Environmental sanitation.* Three fellowships—one of seven months for study in the United States of America, and two of six weeks for study respectively in Puerto Rico and in Puerto Rico and St Lucia.

*Leprosy.* A nine-week fellowship for study in Venezuela, Brazil and Surinam.

*Nutrition.* Two three-month fellowships for study in Guatemala.

*Poliomyelitis.* An eleven-month fellowship for study in the United States of America.

*Public health administration.* A twelve-month fellowship for study in the United States of America.

*Public health nursing.* A three-month fellowship for study in Canada and the United States of America.

*Rehabilitation.* An eleven-month fellowship for study in the United States of America.

*Tuberculosis.* A two-month fellowship for study in England.

| British Guiana | Participation in Inter-country Projects |

*See AMRO 95.*
## THE WORK OF WHO, 1959

<table>
<thead>
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<th>Project No.</th>
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</table>
| *British Honduras* 5 | R | UNICEF | **Public Health Services** (June 1957 - )  
*Aim of the project.* To strengthen and extend the public health services.  
*Assistance provided by WHO during the year.* A twelve-month fellowship to a public health administrator for study in Puerto Rico.  
*Probable duration of assistance.* Until 1963. |
| *Canada* 1 | R | | **Fellowships**  
*Public health teaching.* A three-and-a-half month fellowship for study in the United Kingdom, Sweden, India, Hong Kong and Japan.  
*Health education.* A three-month fellowship for study in the United States of America, Mexico, Guatemala and Peru. |
| *Chile* 18 | TA | | **Fellowships**  
*Geriatrics.* A six-month fellowship for study in the United States of America and in Europe.  
*Laboratory services.* A three-month fellowship for study in the United States of America and in Brazil.  
*Nursing education.* A twelve-month fellowship for study in the United States of America, Costa Rica and Peru. |
| *Chile* 19 | TA | | **Food and Drug Control** (1958 - )  
*Aim of the project.* To improve the standard of the country’s food and drug control services.  
*Assistance provided by WHO during the year.* A short-term consultant.  
*Probable duration of assistance.* Until 1960.  
*Work during the year.* The consultant prepared a report on the present status of laboratories and services and made recommendations for combining scattered responsibilities, improving laboratories, and obtaining basic equipment. |
| *Chile* 20 | R | | **Midwifery Education** (Sept. 1956 - )  
*Aim of the project.* To prepare a teaching programme for graduate midwives suited to the present needs in maternal and child health services; and to strengthen the teaching of obstetrical personnel at all levels.  
*Assistance provided by WHO during the year.* (a) A nurse midwife educator; (b) supplies.  
*Probable duration of assistance.* Until 1962.  
*Work during the year.* Data on the present functions of the midwives have been collected from maternal and child health services in rural and urban sections of the country and are being studied. In the School of Midwifery in Santiago, the physical facilities for practical teaching have been improved, and the curriculum has been strengthened by the inclusion of more nursing. |
| *Chile* 25 | R | | **Fellowships**  
*Occupational health.* A twelve-month fellowship for study in the United States of America. |
| *Chile* 29 | R | | **Advanced Nursing Education** (Jan. 1955 - Dec. 1957 as part of AMRO 28; Jan. 1958 - )  
*Aim of the project.* To train Chilean nurses and nurses from other Latin American countries as instructors for schools of nursing and for auxiliary nurse training programmes, and as instructors for hospitals and public health agencies.  
*Assistance provided by WHO during the year.* (a) A nurse educator; (b) a twelve-month fellowship; (c) supplies.  
*Probable duration of assistance.* Until 1961.  
*Work during the year.* See page 69. |
<table>
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<tr>
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</table>
| Chile 31    | R               | **School of Public Health (1958 - )**  
*Aim of the project.* To strengthen the teaching in the School of Public Health of the University of Chile, and to expand the facilities for training students from other countries of the Americas.  
*Assistance provided by WHO during the year.* (a) A three-month fellowship to a faculty member to study public health teaching (particularly health statistics) in the United States of America; (b) supplies and equipment.  
*Probable duration of assistance.* Until 1963. |
| Chile 33    | R               | **Environmental Sanitation Training (Aug. 1959 - )**  
*Aim of the project.* To strengthen the course for sanitary engineers and sanitarians at the School of Public Health and to expand facilities for training environmental sanitation personnel from all countries of the Americas.  
*Assistance provided by WHO during the year.* A consultant for six weeks.  
*Probable duration of assistance.* Until 1965.  
*Work during the year.* The consultant reviewed the training programme, advised on needed changes and made recommendations on how the School might be further assisted. |
| Chile       |                 | **Participation in Inter-country Projects**  
*See AMRO 1; AMRO 10; AMRO 16 AMRO 17.5; AMRO 48; AMRO 61; AMRO 67; AMRO 152.* |
| Colombia 4  | TA UNICEF (ICA) | **Public Health Services (Sept. 1951 - )**  
*Aim of the project.* To reorganize the Ministry of Public Health, centrally and in the municipalities; to prepare a national health plan, to train personnel and to organize a local demonstration programme.  
*Assistance provided by WHO during the year.* (a) Two medical officers, a sanitary engineer, and three public health nurses; (b) three fellowships—two of ten months and one of ten and a half months; (c) supplies and equipment.  
*Probable duration of assistance.* Until 1963.  
*Work during the year.* See page 67. |
| Colombia 17 | TA PAHO UNICEF  | **Smallpox Eradication (1955 - )**  
*Assistance provided by WHO during the year.* Equipment (vehicles).  
A medical officer and supplies were provided from PAHO funds. |
| Colombia 18 | R               | **Fellowships**  
*Leprosy.* A two-month fellowship for study in Brazil.  
*Public health administration.* Two fellowships—one of eleven months for study in Brazil, and one of ten months for study in Chile.  
*Veterinary medicine.* An eleven-month fellowship for study in Brazil. |
| Colombia 19 | TA              | **Leprosy Control (Feb. 1958 - )**  
*Aim of the project.* To plan a leprosy control programme based on modern techniques and procedures.  
*Assistance provided by WHO during the year.* A medical officer until July.  
*Probable duration of assistance.* Until 1961.  
*Work during the year.* The Government is reorganizing the leprosy services on the plan presented by the medical officer at the beginning of 1959. |
Aedes aegypti Eradication (Jan. 1951 - )

Aim of the project. To eradicate A. aegypti, the vector of urban yellow fever.

Assistance provided by WHO during the year. A medical officer.

Probable duration of assistance. Until the end of 1959.

Work during the year. The checks necessary to verify eradication throughout the country were made.

School of Public Health (May 1959 - )

Aim of the project. To reorganize and improve the standards of the School of Public Health, and to provide a nucleus of full-time faculty members.

Assistance provided by WHO during the year. A visiting professor of microbiology.

Probable duration of assistance. Until 1962.

Work during the year. The visiting professor helped to reorganize the teaching programme, began to train a national counterpart, and participated in teaching microbiology to medical students.

Participation in Inter-country Projects

See AMRO 1; AMRO 10; AMRO 28; AMRO 48; AMRO 85.

Waterworks Training Course (18 May - 17 June 1959)

Aim of the project. To train waterworks operators to obtain better results from the existing installations, and to improve maintenance and the quality of the water.

This was the first course in a programme that will be continued by the Government without further assistance from the Organization.

Assistance provided by WHO. (a) Two consultants (from Mexico and Uruguay); (b) supplies and equipment.

Participation in Inter-country Projects

See AMRO 48; AMRO 93; AMRO 144.

Nursing Education (Aug. 1958 - )

Aim of the project. To establish a modern school of nursing which will prepare graduate nurses for administrative, supervisory and teaching posts in schools and health services.

Assistance provided by WHO during the year. (a) A nurse educator; (b) a three-month fellowship.

Probable duration of assistance. Until the end of 1963.

Work during the year. The first class of fifteen students admitted in October 1958 has followed the provisional programme set up for a three-year basic course in nursing. Fellowships and in-service education are helping to improve the administration of the school and the preparation of the faculty.

No new class was admitted to the school in 1959.

Aedes aegypti Eradication (1958 - )

Aim of the project. To eradicate A. aegypti, the vector of urban yellow fever.

Assistance provided by WHO during the year. A medical officer and a sanitarian.

Some supplies and equipment were provided from PAHO funds.

Probable duration of assistance. Until 1962.
### Project List: The Americas

#### Work during the year.

Because of shortage of staff, work was limited to certain towns in the interior. All the rural areas have been sprayed with dieldrin in the course of the malaria campaign, and it is hoped that this has eliminated *A. aegypti* also. Work in the capital has been suspended since resistance to DDT was reported.

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</table>

### Dominican Republic

**Participation in Inter-country Projects**

*See AMRO 1; AMRO 93; AMRO 144.*

### Ecuador 4

**Public Health Services (Nov. 1953 - )**

*Aim of the project.* To decentralize the national health services administratively, to strengthen the central services, and to expand and improve the local health services; to organize a programme of training and set up a school of nursing.

*Assistance provided by WHO during the year.* (a) A medical officer and a public health nurse; (b) eight fellowships as follows:

- **Bubonic plague.** An eleven-month fellowship for study in Brazil.
- **Maternal and child health.** A ten-month fellowship for study in Chile.
- **Nutrition.** Two three-month fellowships for study in Chile.
- **Public health administration.** Two twelve-month fellowships for study in Puerto Rico.
- **Public health nursing.** A twelve-month fellowship for study in Puerto Rico and Costa Rica.
- **Zoonoses.** A twelve-month fellowship for study in Argentina.

*Probable duration of assistance.* Until 1966.

### Ecuador 14

**Malaria Eradication (Nov. 1956 - )**

*Assistance provided by WHO during the year.* A chief country malaria adviser, a sanitary engineer and four sanitarians.

Supplies and equipment were provided from the PAHO Special Malaria Fund.

*Probable duration of assistance.* Until 1961.

*Work during the year.* The field operations were carried on as planned. In some areas where dieldrin was being sprayed, the vector, *Anopheles albimanus*, was found to be resistant. Spraying was continued with DDT, to which the vector was found to be still susceptible.

### Ecuador 16

**Nursing Education (May 1957 - )**

*Aim of the project.* To strengthen the teaching programme of the School of Nursing in the University of Guayaquil so that graduate nurses may be prepared for posts in the public health services and hospitals of the country.

*Assistance provided by WHO during the year.* (a) Two nurse educators; (b) supplies.

*Probable duration of assistance.* Until 1963.

*Work during the year.* The school had fifteen first-year, six second-year and ten third-year students. Completion of secondary school education was made compulsory for entrance. For the first time the third-year class was given theoretical and practical training in administration and teaching. A period of advanced practical work in the specialty of each student's choice was planned. One of the nurse educators gave a short vacation course in teaching to a group of instructors who had not had special preparation for their posts. A residence was provided for twelve students from outside the city.

### Ecuador 53

**National Institute of Nutrition (Sept. 1956 - )**

*Aim of the project.* To extend practical studies on nutrition at the National Institute of Nutrition, using available data on basic food analysis and biochemical and clinical investigation; to give further training to its staff and develop its organization and operation; to co-ordinate its work with public health programmes so as to improve the nutrition of the population.

*Assistance provided by WHO during the year* (a) A medical nutritionist; (b) supplies and equipment.

*Probable duration of assistance.* Until 1961.

*Work during the year.* The consultant continued to assist in the extension of the nutrition education programme and worked on the general programme of the Institute and the training of its staff.
Ecuador

Participation in Inter-country Projects

See AMRO 1; AMRO 28; AMRO 48; AMRO 149.

El Salvador 2

Malaria Eradication (1957 - )

Assistance provided by WHO during the year. (a) A sanitary engineer, a medical officer and two sanitarians; (b) a short-term consultant.

Supplies and equipment were provided from the PAHO Special Malaria Fund.

Probable duration of assistance. Until 1965.

Work during the year. The third year of coverage, which began in August 1958, continued. The main vector, Anopheles albimanus, had been found resistant to dieldrin earlier in 1958, and the programme was then reorganized to provide for spraying of the whole malarious area twice a year with DDT. Satisfactory progress was made in organizing evaluation work.

Field testing of new insecticides of the organo-phosphorus group and epidemiological studies on which to base investigation of the reasons for persistence of transmission were carried out with assistance from PAHO.

El Salvador 5

Health Demonstration Area (May 1951 - )

Aim of the project. To demonstrate local health services which will be duplicated in other rural areas; to co-ordinate health and medical services with education work in a demonstration area, and to train personnel for health services.

Assistance provided by WHO during the year. A sanitary engineer and a public health nurse.

Probable duration of assistance. Until the end of 1960.

Work during the year. During the year the area was officially made a training area for health personnel of all types, professional and auxiliary.

El Salvador

Participation in Inter-country Projects

See AMRO 1; AMRO 7; AMRO 18; AMRO 149.

French Antilles and Guiana 1

Fellowships

Rehabilitation. A three-month fellowship for study in the United States of America.

French Antilles and Guiana 2

Aedes aegypti Eradication (1952-1957 under AMRO 8; 1958 - )

Aim of the project. To eradicate A. aegypti, the vector of urban yellow fever.

Assistance provided by WHO during the year. (a) A sanitation; (b) supplies and equipment; (c) advice from the medical officer attached to AMRO 8.

Probable duration of assistance. Until 1962.

Work during the year. Steps were taken to eliminate A. aegypti from two localities in French Guiana which had become reinfested. Only slow progress was made in Guadeloupe and Martinique. St Martin was reported negative.

Guatemala 1

Malaria Eradication (1956 - )

Assistance provided by WHO during the year. (a) A sanitary engineer; (b) supplies.

A medical officer, two sanitarians and supplies were provided from the PAHO Special Malaria Fund.

Probable duration of assistance. Until 1965.

Work during the year. The third year of spraying, begun in October 1958, was continued. The main vector, Anopheles albimanus, had been found highly resistant to dieldrin, and the programme was therefore reorganized to provide for spraying twice yearly with DDT. Evaluation operations were carried out.
Guatemala 6

R

Training of Nursing Auxiliaries (April 1955 - )

Aim of the project. To prepare graduate nurses as instructors of auxiliary nursing personnel and to train nursing auxiliaries for hospital services by a central training programme in Guatemala City and extension training programmes in the provinces.

Assistance provided by WHO during the year. (a) Two nurse educators; (b) a twelve-month fellowship for study in the United States of America; (c) supplies.

Probable duration of assistance. Until 1961.

Work during the year. Twelve nurse instructors, of whom seven were from countries other than Guatemala, and eighty-seven nursing auxiliaries, were trained.

The project was broadened to include consultant services to the national school of nursing, and from 1 June one of the nurse educators was entirely engaged on that work. The other continued to help with the training of auxiliaries and gave special attention to the improvement of field practice areas by an in-service programme for head nurses in the general hospital, and to the extension courses in the provinces.

Guatemala 8

R

UNICEF

Public Health Services (Aug. 1954 - )

Aim of the project. To reorganize the health services; to set up a model rural health centre; and to train personnel.

Assistance provided by WHO during the year. (a) A medical officer, a public health nurse and a sanitary engineer; (b) three twelve-month fellowships—one to study nutrition in the United States of America; one to study zoonoses in Argentina; and the third to study nursing education in Chile; (c) supplies and equipment.

Probable duration of assistance. Until 1963.

Work during the year. Training of physicians, public health nurses, sanitarians and nursing auxiliaries continued. Advice was given on the reorganization of the national health administration and on the extension of local health services to other areas.

Guatemala 11

TA

UNICEF

Tuberculosis Control (June 1956 - )

Aim of the project. To consolidate the tuberculosis control programme.

Assistance provided by WHO during the year. A medical officer.

Probable duration of assistance. Until the end of 1963.

Work during the year. A pilot programme was begun to test in one area the efficacy of isoniazid for domiciliary and ambulatory treatment of tuberculosis patients and for prevention of the disease among contacts.

Guatemala

Participation in Inter-country Projects

See AMRO 7; AMRO 18; AMRO 48; AMRO 85; AMRO 86.

Haiti 1

R

PAHO

UNICEF

Yaws Eradication (July 1950 - )

Aim of the project. To carry out (a) surveys to confirm that yaws has been eradicated; (b) surveillance to protect the eradication areas and to discover any new cases; and (c) vaccination against smallpox.

Assistance provided by WHO during the year. (a) A medical officer and two sanitarians; (b) supplies and equipment.

A medical officer was provided from PAHO funds.

Probable duration of assistance. Until 1960.

Work during the year. The number of patients with infectious yaws has been reduced to zero in four of the five departments. Work progressed in the fifth department, which it is hoped to clear of infectious cases during the first week of 1960. Many reports of cases were received, and are to be investigated.
### Project No. 16

#### Description

**Public Health Services** (Oct. 1959 - )

**Aim of the project.** To expand the basic organization of national, provincial and local health services.

**Assistance provided by WHO during the year.** A medical officer.

**Probable duration of assistance.** Until 1962.

**Work during the year.** The medical officer advised the health authorities on various public health matters, especially the development of the rural health services and the setting up of a model unit, and on medical and nursing education.

### Haiti

#### Participation in Inter-country Projects

See AMRO 93; AMRO 144.

### Project No. 1

#### Description

**Malaria Eradication** (1956 - )

**Aim of the project.** To eradicate malaria.

**Assistance provided by WHO during the year.** A medical officer and a sanitarian.

A sanitary engineer, a sanitarian and supplies and equipment were provided from the PAHO Special Malaria Fund.

**Probable duration of assistance.** Until 1965.

**Work during the year.** Administrative difficulties and the appearance of resistance to dieldrin in the main vector, *Anopheles albimanus*, made it necessary to suspend operations and rebuild the entire programme. The new operations started in July.

### Project No. 4

#### Description

**Public Health Services** (Aug. 1955 - )

**Aim of the project.** To reorganize the health services and to extend health work in rural areas; to set up a demonstration and training project in a rural area; and to prepare a national health plan.

**Assistance provided by WHO during the year.** (a) A medical officer, a sanitary engineer, a health educator, a public health nurse and a sanitarian; (b) supplies and equipment.

A sanitarian was provided from PAHO funds.

**Probable duration of assistance.** Until 1962.

**Work during the year.** A programme has been drawn up for progressive changes in the national health structure, beginning in 1959 and continuing until the end of 1963. It provides for the establishment of four regions, and the regionalization of local health services in seven districts. The demonstration area, which forms part of the first “health district” to be set up, was further developed, and training of nursing personnel and sanitary inspectors continued.

### Honduras

#### Participation in Inter-country Projects

See AMRO 1; AMRO 7; AMRO 10; AMRO 18; AMRO 85; AMRO 86; AMRO 149.

### Project No. 22

#### Description

**Public Health Services, Guanajuato** (Aug. 1955 - )

**Aim of the project.** To organize comprehensive local health services in one large district of Guanajuato and extend them gradually to the whole state; later, to reorganize the state health administration and extend integrated health services, with particular attention to training auxiliary personnel.

**Assistance provided by WHO during the year.** (a) A medical officer, a sanitary engineer, a health educator, a public health nurse and a sanitarian; (b) supplies and equipment.

**Probable duration of assistance.** Until 1963.

**Work during the year.** The health services were further extended, particular attention being given to environmental sanitation. After the arrival of the health educator, courses were organized on health education methods for nursing and sanitation personnel.

### Project No. 30

#### Description

**School of Public Health** (July 1958 - )

**Aim of the project.** To strengthen teaching in the School of Public Health of the University of Mexico.

**Assistance provided by WHO during the year.** (a) A nurse educator; (b) supplies and equipment.
### Project List: The Americas

<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Co-operating Agencies</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Probable duration of assistance.</strong> Until 1965. <strong>Work during the year.</strong> The nurse educator worked with regular faculty members to improve the teaching of public health nurses and other health workers.</td>
</tr>
</tbody>
</table>

**Mexico 32**

<table>
<thead>
<tr>
<th>R</th>
<th>Medical Education (June 1958 - )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Aim of the project.</strong> To improve medical education by providing visiting professors and consultants, and fellowships for teaching staff. <strong>Assistance provided by WHO during the year.</strong> (a) A short-term consultant; (b) advice by regular staff members stationed in Mexico. <strong>Probable duration of assistance.</strong> Until 1965. <strong>Work during the year.</strong> A national seminar was held in Veracruz, on the teaching of environmental sanitation in schools of medicine.</td>
</tr>
</tbody>
</table>

**Mexico 34**

<table>
<thead>
<tr>
<th>R</th>
<th>Teaching of Public Health in Schools of Veterinary Medicine (1959 - )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Aim of the project.</strong> To improve the teaching in the School of Veterinary Medicine, particularly as regards public health and preventive medicine. <strong>Assistance provided by WHO during the year.</strong> Visiting lecturers. <strong>Probable duration of assistance.</strong> Until 1963. <strong>Work during the year.</strong> Arrangements were made for three professors, who were travelling through Mexico, to give lectures at the National School of Veterinary Medicine and to discuss curriculum content with faculty members.</td>
</tr>
</tbody>
</table>

**Mexico 35**

<table>
<thead>
<tr>
<th>R</th>
<th>Environmental Sanitation Training (1955 - )</th>
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</thead>
<tbody>
<tr>
<td></td>
<td><strong>Aim of the project.</strong> To strengthen the course for sanitary engineers and sanitarians and to expand facilities for the training of environmental sanitation personnel from all countries of the Americas. <strong>Assistance provided by WHO during the year.</strong> (a) A short-term consultant; (b) supplies and equipment. <strong>Probable duration of assistance.</strong> Until 1965. <strong>Work during the year.</strong> The consultant made a survey of the training given in the schools of public health and sanitary engineering. This will be used in connexion with possible future assistance to the schools and the placement of fellows.</td>
</tr>
</tbody>
</table>

**Mexico 53**

<table>
<thead>
<tr>
<th>TA PAHO (Special Malaria Fund) UNICEF</th>
<th>Malaria Eradication (1956 - )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Assistance provided by WHO during the year.</strong> Two medical officers, a sanitary engineer and a sanitarian. A sanitarian, a one-week fellowship for study in El Salvador, and supplies and equipment, were provided from the PAHO Special Malaria Fund. <strong>Probable duration of assistance.</strong> Until 1965. <strong>Work during the year.</strong> See page 68.</td>
</tr>
</tbody>
</table>

**Mexico**

<table>
<thead>
<tr>
<th>Participation in Inter-country Projects</th>
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<tbody>
<tr>
<td><em>See AMRO 16; AMRO 18; AMRO 48; AMRO 61; AMRO 67; AMRO 85; AMRO 93; AMRO 144; AMRO 149; AMRO 152.</em></td>
</tr>
</tbody>
</table>

**Netherlands Antilles**

| See Surinam and Netherlands Antilles. |

**Nicaragua 5**

<table>
<thead>
<tr>
<th>R</th>
<th>Nursing Education (March 1955 - )</th>
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<tbody>
<tr>
<td></td>
<td><strong>Aim of the project.</strong> To strengthen the National School of Nursing by assisting the Faculty, improving physical facilities and areas for field practice and expanding the curriculum to include the teaching of public health nursing and courses in teaching and supervision.</td>
</tr>
</tbody>
</table>
### Assistance provided by WHO during the year.
(a) Two nurse educators; (b) three twelve-month fellowships; (c) supplies.

### Probable duration of assistance.
Until 1961.

### Work during the year.
The school made steady progress under national direction. There were twenty first-year students, nine second-year and fifteen third-year. The chief advances during 1959 include:
- setting up a new practice area for public health nursing;
- continued in-service education of the Faculty;
- and an experiment in international collaboration for theoretical and practical training in psychiatric nursing. Under this experiment a nine-week course was provided in Costa Rica for fifteen third-year students from Nicaragua. Until psychiatric nursing can be developed in Nicaragua, it is expected to continue this affiliation in Costa Rica.

### Nicaragua

**Participation in Inter-country Projects**

See AMRO 86; AMRO 149.

### Panama 1

**Public Health Services (Aug. 1952 - )**

**Aim of the project.** To strengthen rural public health services; to develop effective methods of public health administration suited to the social, economic and cultural needs of the population; to provide facilities for training auxiliary and professional public health personnel; to organize and develop the central laboratory in Panama City and rural laboratories.

**Assistance provided by WHO during the year.**
(a) Two medical officers, a sanitary engineer and two public health nurses; (b) an eleven-month fellowship; (c) supplies and equipment.

**Probable duration of assistance.** Until 1962.

**Work during the year.** The national health organization was further revised. Courses and in-service training were given for auxiliary nursing personnel, sanitary inspectors, and other professional and auxiliary health workers.

### Panama 2

**Malaria Eradication (1956 - )**

**Assistance provided by WHO during the year.**
(a) A sanitarian; (b) supplies and equipment.

A medical officer and a sanitarian were provided from the PAHO Special Malaria Fund.

**Probable duration of assistance.** Until the end of 1965.

**Work during the year.** The second year of spraying continued but some unexpected difficulties were encountered. The main vector, *Anopheles albimanus*, remained susceptible to dieldrin, the insecticide used in the programme.

### Panama

**Participation in Inter-country Projects**

See AMRO 1; AMRO 18; AMRO 61; AMRO 85; AMRO 86; AMRO 149.

### Paraguay 1

**Malaria Eradication (Oct. 1955 - )**

**Assistance provided by WHO during the year.**
(a) A sanitary engineer and a sanitarian; (b) a fellowship of two and a half months for study in Mexico.

A malariologist and supplies and equipment were provided from the PAHO Special Malaria Fund.

**Probable duration of assistance.** Until 1962.

**Work during the year.** Both spraying and evaluation progressed very satisfactorily. Tests showed that *Anopheles darlingi* is susceptible to dieldrin—the only insecticide used—which is sprayed yearly.

### Paraguay 9

**Leprosy Control (Sept. 1956 - )**

**Aim of the project.** To reduce the incidence of leprosy by ambulatory treatment with diamino diphenyl sulfone (DDS) and a programme of case-finding by means of systematic examination of contacts and selected groups of population.

**Assistance provided by WHO during the year.** A leprologist, from October.

**Probable duration of assistance.** Until 1961.

**Work during the year.** Case-finding and ambulatory treatment progressed satisfactorily.
PROJECT LIST: THE AMERICAS

<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Description</th>
</tr>
</thead>
</table>
| Paraguay 10 | TA UNICEF        | Public Health Services (Jan. 1955 - )  
  **Aim of the project.** To organize and expand comprehensive central and local public health services, with programmes for maternal and child health, control of communicable diseases, environmental sanitation; to establish adequate public health laboratory services and training of professional, technical and auxiliary personnel.  
  **Assistance provided during the year.** A chief country adviser, a sanitary engineer, a bacteriologist, an epidemiologist and a public health nurse.  
  **Probable duration of assistance.** Until 1963.  
  **Work during the year.** See page 69. |

**Paraguay Participation in Inter-country Projects**

See AMRO 1; AMRO 17.5; AMRO 48; AMRO 85.

**Peru 5**

<table>
<thead>
<tr>
<th>Source of Funds</th>
<th>Description</th>
</tr>
</thead>
</table>
| TA UNICEF       | Malaria Eradication (June 1957 - )  
  **Assistance provided by WHO during the year.** A chief country adviser and a sanitarian.  
  A sanitary engineer and five sanitarians were provided from the PAHO Special Malaria Fund.  
  **Probable duration of assistance.** Until 1963.  
  **Work during the year.** The operations developed as planned in the coastal area. Financial difficulties have hindered the programme in the eastern area, but it is expected that by 1960 the country-wide programme will be in full operation and well supported financially. |

**Peru 15**

<table>
<thead>
<tr>
<th>Source of Funds</th>
<th>Description</th>
</tr>
</thead>
</table>
| R               | Nursing Education (April 1959 - )  
  **Aim of the project.** To organize advanced courses for the training of nurse instructors and supervisors for schools, hospitals, and public health services; and to establish new schools of nursing in the interior of the country.  
  **Assistance provided by WHO during the year.** (a) A nurse educator; (b) a twelve-month fellowship; (c) supplies.  
  **Probable duration of assistance.** Until 1961.  
  **Work during the year.** A suitable building was rented to serve as headquarters for the Institute of Post-graduate Studies in Nursing; the Institute is directed by a Peruvian nurse with two nursing instructors full-time and other faculty members part-time.  
  A twelve-month course for nurse instructors and supervisors was begun on 22 June with thirty-six graduate nurses. The nurses cannot afford to stop working during their training, and the course, which was originally planned for six months, has been extended to allow the students to attend half time and to continue working. |

**Peru 21**

<table>
<thead>
<tr>
<th>Source of Funds</th>
<th>Description</th>
</tr>
</thead>
</table>
| R               | Fellowships  
  **Maternal and child health.** A fellowship of ten and a half months for study in Mexico.  
  **Public health administration.** Seven fellowships—two of ten months for study in Chile, one of ten and a half months for study in Mexico, and four of eleven months for study in Brazil.  
  **Radioisotopes.** A three-month fellowship for study in Puerto Rico.  
  **Sanitary engineering.** A twelve-month fellowship for study in the United States of America.  
  **Tuberculosis.** A three-month fellowship for study in Libya, Tunisia, Italy and France.  
  **Veterinary public health.** An eleven-month fellowship for study in Brazil. |

**Peru 22**

<table>
<thead>
<tr>
<th>Source of Funds</th>
<th>Description</th>
</tr>
</thead>
</table>
| TA              | Public Health Services (Jan. 1956 - )  
  **Aim of the project.** To evaluate and co-ordinate central and local public health work.  
  **Assistance provided by WHO during the year.** (a) A sanitary engineer and a public health nurse; (b) supplies. |
<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>Peru</td>
<td>Joint Field Mission on Indigenous Populations, Andean Highlands (Jan. 1957 - )</td>
</tr>
<tr>
<td>TA</td>
<td>(UN)</td>
<td>Aims of the project: To promote the economic and social development of indigenous populations of the Andean highlands, so as to facilitate their integration into their national communities.</td>
</tr>
<tr>
<td></td>
<td>(ILO)</td>
<td>Assistance provided by WHO during the year: Supervision by the medical officer assigned to project Bolivia 11.</td>
</tr>
<tr>
<td></td>
<td>(UNESCO)</td>
<td>Work during the year: The Nursing Department of the Ministry of Health has been strengthened and supervision is better. In two of the most important cities there is now great interest in an urban water-supply programme.</td>
</tr>
</tbody>
</table>

Peru Participation in Inter-country Projects

See AMRO 1; AMRO 10; AMRO 18; AMRO 28; AMRO 48; AMRO 61; AMRO 67; AMRO 85; AMRO 152; EURO 52.

Puerto Rico Participation in Inter-country Projects

See AMRO 144; AMRO 152.

Surinam and Netherlands Antilles Aedes aegypti Eradication (1952-1957 under AMRO 8; 1958 - )

TA

Aims of the project: To eradicate A. aegypti, the vector of urban yellow fever, from Surinam and the six islands of the Netherlands Antilles.

Assistance provided by WHO during the year: (a) Two sanitarians; (b) advice from the medical officer attached to AMRO 8.

Probable duration of assistance: Until 1962.

Work during the year: Aruba, Bonaire, St Eustatius, St Maarten and Saba were reported negative. Residual infestation persisted in Curaçao and it will be necessary to assign a sanitarian to the island. Surinam is still infested and A. aegypti there appears to be resistant to DDT.

Surinam and Netherlands Antilles Fellowships

Antilles 4

R

Bacteriology: A three-month fellowship for study in the United States of America.

Surinam and Netherlands Antilles Participation in Inter-country Projects

See AMRO 47.

Trinidad

See West Indies Federation.

United States 7 R

Public health administration: A nine and a half week fellowship for the study of public health teaching in Turkey, Israel, Ethiopia and Liberia, and a nine-week fellowship to study the organization of public health teaching, particularly in relation to occupational health, in Brazil, Chile, Peru and Colombia.

United States 10 R

Consultants in Specialized Fields of Public Health (March 1958 - )

Aim of the project: To provide advice on public health specialties.

Assistance provided during the year: A consultant for three months.

Probable duration of assistance: Indefinite.

Work during the year: A public health nurse consultant from Denmark visited the United States to discuss programmes of home care.
<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Description</th>
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<tbody>
<tr>
<td>United States</td>
<td></td>
<td>Participation in Inter-country Projects</td>
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<tr>
<td></td>
<td></td>
<td>See AMRO 1; AMRO 48; AMRO 61; EURO 13.2.</td>
</tr>
<tr>
<td>Uruguay 5</td>
<td>TA UNICEF</td>
<td>Public Health Services (Aug. 1955 - )</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Aim of the project.</em> To reorganize and improve basic rural health services by: combining all public health institutions under the direction of the Ministry of Health; creating integrated services based on health centres, improving those centres, establishing new ones in remote communities, and increasing the number of subcentres; organizing community participation; training all categories of local public health personnel; supporting the work by a health education programme.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Assistance provided by WHO during the year.</em> A medical officer, a sanitary engineer and a public health nurse.</td>
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<td></td>
<td><em>Probable duration of assistance.</em> Until 1962.</td>
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<td></td>
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<td><em>Work during the year.</em> The demonstration programme continued according to plan. The second course for health visitors ended in May; thirty students received certificates. Nineteen students completed the course for officials of sanitation and began work in the health centres.</td>
</tr>
<tr>
<td>Uruguay</td>
<td></td>
<td>Participation in Inter-country Projects</td>
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<tr>
<td></td>
<td></td>
<td>See AMRO 1; AMRO 10; AMRO 17.5; AMRO 48.</td>
</tr>
<tr>
<td>Venezuela 2</td>
<td>R</td>
<td>Mental Health (June 1959 - )</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Aim of the project.</em> To evaluate the mental health programme.</td>
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<td><em>Assistance provided by WHO and work done during the year.</em> A short-term consultant, who made a survey of the existing conditions and discussed with the Government a plan for the expansion of its mental health programme.</td>
</tr>
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<td></td>
<td></td>
<td><em>Probable duration of assistance.</em> Until the end of 1959.</td>
</tr>
<tr>
<td>Venezuela 5</td>
<td>R</td>
<td>Onchocerciasis Investigation (Sept. - Nov. 1959)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Aim of the project.</em> To determine the extent of onchocerciasis in Venezuela and to identify the vectors.</td>
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<td></td>
<td></td>
<td><em>Assistance provided by WHO and work done.</em> (a) A short-term consultant, who made a survey and submitted a report; (b) supplies and equipment.</td>
</tr>
<tr>
<td>Venezuela 10</td>
<td>R</td>
<td>Fellowships</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nursing education. A twelve-month fellowship for study in the United States of America.</td>
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<tr>
<td></td>
<td></td>
<td>Virology. A six-month fellowship for study in the United States of America and in Trinidad.</td>
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<tr>
<td>Venezuela 14</td>
<td>TA</td>
<td>Nursing Education (April 1959 - )</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Aim of the project.</em> To strengthen the curriculum of the National School of Nursing.</td>
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<td><em>Assistance provided by WHO during the year.</em> A nurse educator.</td>
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<td></td>
<td><em>Probable duration of assistance.</em> Until 1963.</td>
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<td><em>Work during the year.</em> The present nursing curriculum and the general education system of the country were studied with a view to incorporating into the curriculum as much general education as possible in order to give the graduate nurse a broader background. The requirements for entrance into the School of Nursing were raised from six to nine years of general schooling.</td>
</tr>
<tr>
<td>Venezuela 18</td>
<td>TA</td>
<td>National Institute of Hygiene (July 1959 - )</td>
</tr>
<tr>
<td></td>
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<td><em>Aim of the project.</em> To study problems of modern public health laboratory work due to the variety of animals needed for diagnostic services and for the production of biologicals.</td>
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<td><em>Assistance provided by WHO during the year.</em> Two short-term consultants (virologist and laboratory animal care specialist).</td>
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<td></td>
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<td><em>Probable duration of assistance.</em> Until the end of 1959.</td>
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<tr>
<td>Project No.</td>
<td>Source of Funds</td>
<td>Co-operating Agencies</td>
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<tr>
<td><strong>Venezuela 19</strong></td>
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<td><strong>Venezuela</strong></td>
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<tr>
<td><strong>West Indies Federation</strong></td>
<td><strong>Jamaica 11</strong></td>
<td>R</td>
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<td><strong>West Indies Federation</strong></td>
<td><strong>Trinidad 6</strong></td>
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<td><strong>West Indies Federation</strong></td>
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</table>
### SOUTH-EAST ASIA

#### SEARO 2
**Project No.:** TA
**Source of Funds:** SEARO 2
**Co-operating Agencies:** TA

**Description:** Assistance to Tuberculosis Laboratories (Aug. 1955 - Dec. 1958)

**Aim of the project.** To assist countries of the Region in developing laboratory work in connexion with the expansion of their tuberculosis services.

**Assistance provided by WHO.** A bacteriologist. He completed his assignment at the end of 1958. WHO assistance is continuing, but in future will be provided as part of the tuberculosis control projects of each country rather than as a separate inter-country programme.

**Evaluation.** The bacteriologist analysed the various factors which were responsible for a lack of development in many of the laboratories, among them delays in equipment repair and replacement, shortages of glassware and chemicals, differences in salary scales, and the difficulty of attracting trained staff. Remedies were suggested for these problems and the adviser's efforts contributed to raising the standard of performance in both specialist and public health laboratories.

#### SEARO 3
**Project No.:** R
**Source of Funds:** SEARO 3
**Co-operating Agencies:** R

**Description:** BCG Assessment Team (Nov. 1958 - )

**Aim of the project.** (a) To review the further progress of the BCG mass campaigns in Burma, Ceylon, Thailand and Indonesia, particularly as regards their consolidation; to check technical procedures, and to train national assessment teams; (b) to examine the techniques of tuberculin testing and vaccination in India and, if necessary, to make suggestions for improvement.

**Assistance provided by WHO during the year.** (a) A BCG assessment team, of a medical officer, a statistician and a nurse, for Ceylon and other countries; (b) a short-term BCG nurse consultant for India; (c) supplies and equipment.

**Probable duration of assistance.** Until mid-1961.

**Work during the year.** The nurse consultant assigned to India (November 1958 to May 1959) reviewed the tuberculin testing and BCG vaccination techniques and the work of the national BCG teams in various states. In the course of her assignment she visited the states of West Bengal, Madhya Pradesh, Andhra Pradesh, Bombay, Rajasthan, Punjab, Uttar Pradesh and Bihar, and she observed the work of 106 teams out of a total of 118. Her report has been submitted to the Government of India.

The WHO assessment team worked in Ceylon from January to October 1959. While doing the assessment work it made comparative tests of tuberculin dilutions prepared by the Statens Seruminstitut, Copenhagen, and the King Institute of Preventive Medicine, Guindy (Madras), and of the potency of vaccine despatched to Ceylon from Madras.

Assistance was given in preparing a three-year plan for the tuberculin testing and BCG vaccination of all the schoolchildren in the island, improving the handling and storage of BCG vaccine, and in field techniques and procedures. A document was prepared on the importance of assessing a running BCG vaccination programme, the methods to be used and the place of a permanent BCG assessment team, with detailed instructions on how to carry out valid assessment.

A permanent national BCG assessment team was trained, and numerous lectures on tuberculin testing and BCG vaccination were given to tuberculosis medical officers in Ceylon.

#### SEARO 6
**Project No.:** TA
**Source of Funds:** SEARO 6
**Co-operating Agencies:** TA (ILO)

**Description:** Conference on Industrial and Occupational Health, Calcutta (24 Nov. - 5 Dec. 1958)

**Aim of the project.** To bring together for discussion persons associated with occupational and industrial health, in order to assist countries in the Region to plan industrial and occupational health services.

**Assistance provided by WHO.** (a) A consultant for three months; (b) stipends for twenty-eight participants from Afghanistan, Burma, Ceylon, India, Indonesia and Thailand.

**Work done.** The All-India Institute of Hygiene and Public Health, Calcutta, was host to the Conference, which was sponsored by WHO and ILO. There were twenty-eight participants from six countries, and six observers. The participants came from health and labour departments and from organizations of employers and employees, and included industrial medical officers and safety engineers. The pro-
gramme covered three main aspects: (1) organization of occupational health services; (2) collaboration and co-ordination in occupational health; (3) training and education. After the discussions, general principles were drawn up for the promotion of adequate and co-ordinated industrial health services at an early stage in industrial development.

**SEARO 7 R**

**Advisory Team on Malaria Eradication (May 1959 - )**

*Aim of the project.* To make an independent appraisal of the status of malaria eradication, or of any special aspect of it, in countries of the Region as required.

*Assistance provided by WHO during the year.* (a) A team consisting of a malariologist, an entomologist and two technicians; (b) supplies and equipment.

*Probable duration of assistance.* Until the end of 1962.

*Work during the year.* The team worked in Thailand, where the eradication programme is so advanced that in some areas eradication may have been achieved. It appraised the degree of interruption of malaria transmission in Chiangmai province; the data collected in the Sarapee and Hangdong districts will be reviewed by a committee of government, ICA and WHO malariologists, who will make recommendations for the country programme.

**SEARO 18 R**


*Aim of the project.* To assist the health departments of certain countries in the Region in preparing their annual public health reports.

*Assistance provided by WHO during the year.* (a) To Afghanistan: a medical consultant for four months and a statistical assistant and a typist for three months; (b) supplies.

*Probable duration of assistance.* Four months.

*Work during the year.* Information for an annual health report was collected and correlated. Progress was made with checking the data and preparing the report.

**SEARO 22 R**

**Training Course for Health Physicists, Bombay (17 Nov. - 19 Dec. 1958)**

*Aim of the project.* To provide training in the health aspects of the various uses of nuclear science.

*Assistance provided by WHO.* (a) A director of the course and three lecturers; (b) stipends for nineteen participants from the South-East Asia Region (sixteen of them from India, including fourteen from the Department of Atomic Energy, one from Indonesia and two from Thailand) and for four from the Western Pacific Region (Australia, China (Taiwan), Japan and Philippines).

*Work done.* The course, organized with the co-operation of the Indian Department of Atomic Energy and the Atomic Energy Commission of the United States of America, was held in the Department of Atomic Energy, Bombay. In addition to the official participants, several members of the junior staff of the Department of Atomic Energy attended part of the course informally. The course director and two lecturers came from the Atomic Energy Commission of the United States of America. The third lecturer, from the Atomic Energy Authority of the United Kingdom, assisted during the last week of the course. Staff of the Indian Department of Atomic Energy took part in the teaching.

**SEARO 40 MESA**

**Malaria Eradication (Experimental Study on Surveillance), Ceylon and India (April 1959 - )**

*Aim of the project.* To study the most practicable and efficient methods and procedures for surveillance in malaria eradication.

*Assistance provided by WHO during the year.* Ceylon. (a) A malariologist, two assistant malariologists, six laboratory technicians and twelve auxiliary personnel; (b) supplies, equipment and transport; (c) reimbursement of the Government for salaries and allowances and travel and *per diem* costs of national personnel. *India.* (a) A malariologist, two assistant malariologists and six laboratory technicians; (b) supplies, equipment and transport; (c) reimbursement of the Government for salaries and allowances and travel and *per diem* costs of national personnel.

*Probable duration of assistance.* Until April 1961.

*Work during the year.* The programme in Ceylon was delayed for the completion of some preliminaries, such as recruitment and training of international and national personnel, shipment of supplies and transport, and preparation of a detailed plan of action, and it did not start until 1 July 1959. In this programme the efficacy of passive surveillance procedures will be determined and methods explored of removing any deficiencies. The programme in India (Mysore State) began work on 1 April 1959. The two programmes fill a vital need for research on surveillance and the epidemiology of disappearing and reappearing malaria. It has already been found that in Ceylon the case that starts a focus of transmission is often at the stage of a primary attack, but in Mysore such a case is a feeble gametocyte carrier, presumably because of infection acquired some years earlier. The resultant infections in susceptible individuals in these two areas are being studied.
PROJECT LIST: SOUTH-EAST ASIA

<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Description</th>
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<tbody>
<tr>
<td>SEARO 41</td>
<td>TA</td>
<td>Training of X-ray Technicians (Feb. 1959 - )</td>
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</tbody>
</table>

**Aim of the project.** To train x-ray technicians in radiographic techniques and in the maintenance of x-ray equipment.

**Assistance provided by WHO during the year.** (a) An x-ray engineer; (b) supplies and equipment.

**Probable duration of assistance.** Until the end of 1960.

**Work during the year.** The School of Radiography at the General Hospital, Colombo, was selected as a regional centre for training radiographers. The x-ray engineer joined the project in February 1959, and submitted plans for improving the dark-room of the hospital and made recommendations for better protection in the school. Governments in the Region have been invited to nominate candidates for WHO fellowships for the two-year course at this school.

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<tr>
<th>Region</th>
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<tr>
<td>Afghanistan</td>
<td>Public Health Administration</td>
<td>(Nov. 1951 - )</td>
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</table>

**Aim of the project.** To improve public health administration and services; to train medical and paramedical personnel; to co-ordinate national and internationally-assisted health programmes.

**Assistance provided by WHO during the year.** (a) A public health officer and an administrative assistant; (b) supplies and equipment.

**Probable duration of assistance.** Indefinite.

**Work during the year.** A general review of all WHO-assisted projects was made, and discussions were held with the national health authorities on future WHO assistance. Shortage of trained personnel in all fields continues to be the major obstacle to improvements in the technical services of the country. The public health adviser discussed with the Chairman of the Rural Development Commission and other officials future plans of the Commission. He visited Kandahar and the Helmand Valley area to study the health conditions. Careful planning will be necessary to supply essential health facilities for the increasing population in the Helmand Valley.

A meeting with the Ministry of Public Health and the Ministry of Education was held in Kabul in October to discuss the status of the nursing services and ways in which they could be improved.

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<th>Region</th>
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<tr>
<td>Afghanistan</td>
<td>Malaria Eradication</td>
<td>(Aug. 1956 - )</td>
</tr>
</tbody>
</table>

**Aim of the project.** To eradicate malaria from the entire country.

**Assistance provided by WHO during the year.** (a) Three malariologists, an entomologist, a sanitarian, two technicians and three secretary-stenographers; (b) four regional fellowships (one four-month and three two-month) and two three-month international fellowships; (c) transport, supplies and equipment.

**Probable duration of assistance.** Until 1965.

**Work during the year.** The findings of the WHO Advisory Team assigned to Afghanistan in 1958 showed that the earlier promise of complete interruption of transmission in certain parts of the country had not been fulfilled. The Government therefore augmented the staff at all levels to secure more effective supervision and total coverage of all malarious areas. WHO assisted by providing technical advisory staff both at the centre and in the provinces with transport and supplies. The provision by UNICEF of insecticides, transport, sprayers, drugs, etc., for the continuation of the programme in 1960 was approved by the UNICEF Executive Board in March.

Surveillance was intensified in Ningrahar and Kataghan provinces. Between the conclusion of spraying in July 1958 and its renewal in May 1959, about 5465 fever cases were detected in Kataghan province out of an average of about 200 000 contacted every month for surveillance. Of these, 797 showed malaria parasites, giving a parasite prevalence of 4.0 per 1000. Figures for Ningrahar were: population under surveillance 190 000; number of fever cases 5848; number positive for malaria parasites 426; and parasite prevalence per 1000 population 2.3. Conditions are better in Ningrahar, but there is still active transmission in both provinces.

The Government has assigned five malariologists who will, with the WHO malariologists, delimit the total malarious area. Four Afghan doctors finished their special training in the Malaria Institute, Delhi, and subsequent field training in Mysore and Baroda, and have returned to Afghanistan.

The total population protected is about 2 700 000, i.e., 2 200 000 by residual insecticides and 435 000 by antilarval methods.

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<tr>
<td>Afghanistan</td>
<td>Assistance to Faculty of Medicine, University of Kabul</td>
<td>(Jan. - Aug. 1952; Sept. 1953 - )</td>
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</table>

**Aim of the project.** To develop on sound lines the Departments of Anatomy, Physiology, Preventive Medicine, Internal Medicine and Paediatrics at the Faculty of Medicine and to train national counterparts of the visiting professors.
Assistance provided by WHO during the year. (a) A professor of paediatrics, a professor of preventive and social medicine and a professor of internal medicine; (b) supplies and equipment.

Probable duration of assistance. Indefinite.

Work during the year. The visiting professor of paediatrics completed his assignment at the end of 1958. The Paediatrics Department is now headed by national professors, for the first time in the history of Afghanistan. New case-history charts and laboratory forms were introduced; the number of doctors and nurses was increased; the training of medical students in paediatrics now includes about 140 lectures during the fourth and fifth years. Major difficulties are the lack of textbooks and the need of beds and equipment for the paediatric out-patient clinic.

The visiting professor of preventive and social medicine continued his courses as part of the curriculum of the third, fourth and fifth years. Examination results have been very satisfactory. New buildings which will provide adequate accommodation are nearing completion. The counterpart took up a two-year fellowship in October 1959; a second assistant has been appointed.

The visiting professor of internal medicine took up his duties in September 1959.

Vaccine Production, Kabul (Jan. 1955 - )

Aim of the project. To reorganize, expand and improve facilities for vaccine production in order to provide adequate supplies of vaccine for the national health programmes; to train local personnel in the production of biological substances; to organize a suitable system for the distribution and use of vaccines.

Assistance provided by WHO during the year. (a) A bacteriologist; (b) a twelve-month international fellowship; (c) supplies.

Probable duration of assistance. Until the end of 1963.

Work during the year. The laboratories in the Vaccine Institute are producing smallpox, cholera, TAB and rabies vaccines. The work has continued to be satisfactory. The bacteriologists made recommendations for improving and maintaining the standards of procedure for vaccine production, and these have been adopted.

Legislation for compulsory vaccination against smallpox was introduced during the year. Steps were taken to increase the production of smallpox vaccine to meet the increased requirements.

Health Education Adviser (Oct. 1958 - )

Aim of the project. To organize health education in the area of the rural community development project; to collaborate with the Ministry of Education in promoting health education in teacher-training institutes and other educational institutions; to assist public health and education authorities with short courses in health education; to build up a national system of health education, using the personnel of various agencies.

Assistance provided by WHO during the year. (a) A health educator; (b) supplies and equipment.

Probable duration of assistance. Until the end of 1961.

Work during the year. Plans and materials were prepared for health education in schools, various training courses and specialized campaigns. A two-day health education conference was held of seventy persons, in which ministers, senior civil servants and religious and community leaders participated. Routine courses for health personnel continued throughout the year.

The health educator left the project in September 1959, and is being replaced.

Assistance to Public Health Laboratory, Kabul (May 1956 - )

Aim of the project. To consolidate the work of the public health laboratory at Kabul; to give further training to laboratory technicians.

Assistance provided by WHO during the year. A laboratory technician.

Probable duration of assistance. Until the end of 1960.

Work during the year. The laboratory technician gave assistance mainly in the training programmes for laboratory technicians and laboratory assistants. The total number of students in the first and second year courses was fifty-three. Fourteen technicians passed their final examinations and were given three months' intensive practical training, and then posted to other laboratories.
Afghanistan 26

**Description**

Rural Health and Training Unit, Gulzar (April 1956 - )

**Aim of the project.** To establish a rural health training unit; to develop the environmental sanitation programme; to promote health education work.

This rural health programme is associated with the development scheme for Afghanistan and covers the Gulzar, Shewaki and Chaurassia areas; the health centre is in Gulzar.

**Assistance provided by WHO during the year.** (a) A public health officer, a public health nurse, a sanitary engineer and a sanitarian; (b) supplies and equipment.

**Probable duration of assistance.** Indefinite.

**Work during the year.** See page 73.

Afghanistan 28

School for Sanitarians, Kabul (July 1955 - )

**Aim of the project.** To train sanitarians for community health services.

**Assistance provided by WHO during the year.** (a) Two sanitarians; (b) supplies and equipment.

**Probable duration of assistance.** Until the end of 1961.

**Work during the year.** Training has continued satisfactorily. Students of the second course completed their field training and were posted in various parts of the country. The students of the third course who were successful in the examination held in December 1958 were posted for field training, and attended further lectures at the school. The fourth training course started in January 1959 with twenty-one students, who were given a progress examination in August.

Afghanistan 30

Assistance to X-ray Department, Faculty of Medicine, Kabul (Nov. 1956 - )

**Aim of the project.** To upgrade facilities and to improve the standard of teaching in the X-ray Department of the Faculty of Medicine; to train x-ray technicians in the operation and maintenance of equipment; to improve diagnostic facilities at the Ali-Abad Hospital, and to give training to doctors.

**Assistance provided by WHO during the year.** A short-term consultant (x-ray engineer).

**Probable duration of assistance.** Until the end of 1961.

**Work during the year.** The x-ray engineer completed the installation of the x-ray unit already supplied by WHO and helped to train national staff in its operation and maintenance.

Afghanistan 35

Nursing Education (June 1957 - )

**Aim of the project.** To develop the training of male and female nurses and of midwives; to establish a training programme for auxiliary nurse-midwives; to plan for meeting the country's needs in nursing services.

**Assistance provided by WHO during the year.** (a) A senior nurse, a public health nurse and three nurse tutors; (b) a twelve-month international fellowship; (c) supplies and equipment.

**Probable duration of assistance.** Until the end of 1963.

**Work during the year.** The Children's Ward of the Ali-Abad Hospital became a teaching ward. A new class of eleven students was enrolled at the School for Female Nurses of the Mastroorat Hospital; the sanitary facilities and water supply in the hospital were surveyed and a proposal for the nursing administration in the hospital was submitted to the Government. A refresher course was given for the head nurses and diploma nurses. In January a new class of fifteen students was admitted to the Shararah Hospital School of Midwifery. Training of auxiliary nurse-midwives was started with a class of seven students; this was the first time in Afghanistan that women students had been permitted to live in a hostel. Proposals for modifying the curriculum and administration of the School of Midwifery were submitted to the Government.

Afghanistan 36

**Fellowships**

**Epidemiology.** A twelve-month fellowship for study in the United States of America.

**Health statistics.** A three-month fellowship for study in India.

**Laboratory techniques.** A six-month fellowship for study in India.

**Nursing.** A twelve-month fellowship for study in Switzerland.

**Sanitation.** Two twelve-month fellowships for study in Lebanon.
Aim of the project. To discuss plans for smallpox eradication. The seminar was held in place of an orientation course in public health for medical officers which has been postponed to 1960 at the Government's request.

Assistance provided by WHO. Half the travel costs and stipends for fourteen participants from outside Kabul.

Work done. The seminar was attended by more than thirty medical officers, including the chief medical officers of all the provinces. The Government's tentative plan for smallpox eradication was discussed in detail, special attention being paid to the difficulties it was expected to encounter.

Aim of the project. To appraise the work of the venereal disease control programme since the end of 1954 (when WHO staff was withdrawn) and to determine how venereal disease control can best be integrated into the public health services.

Assistance provided by WHO during the year. A short-term consultant.

Work done. The venereal disease control project in Burma, now carried on by Burmese personnel, was started in 1950, with the assistance of UNICEF and WHO, as part of the joint maternal and child health/venereal disease control programme. A consultant was assigned by WHO for three months in 1958 to assess the national control programme. His report has been submitted to the Government.

Aim of the project. To organize and expand the national tuberculosis service; to give lectures on tuberculosis to undergraduates and graduates at the Rangoon Medical College; to train counterparts to carry out both of those functions.

Assistance provided by WHO during the year. Three regional fellowships (one for a month, one for two and one for three months), and one international fellowship (for a year).

Probable duration of assistance. Until the end of 1962.

Work during the year. The regional adviser on tuberculosis visited Burma early in 1959, reviewed progress in the consolidation of BCG vaccination and made general observations on tuberculosis control. His recommendations have been submitted to the Government. The recruitment of a tuberculosis country adviser has been postponed until 1961.

Aim of the project. To improve the training of paramedical personnel at the School for Health Assistants, Rangoon; to improve the use and supervision of health assistants.

Assistance provided by WHO during the year. Four three-month regional fellowships.

Probable duration of assistance. Until the end of 1961.

Aim of the project. To strengthen the Health Education Bureau, Rangoon; to assist with developing a health education programme in the Teachers' Training Institute and to train all categories of health personnel in health education; to improve health education throughout the country.

Assistance provided by WHO during the year. (a) A health educator; (b) supplies and equipment.

Probable duration of assistance. Until mid-1960.

Work during the year. The Health Education Bureau has been permanently installed in the Directorate of Health Services. Health education courses were arranged for health department personnel, for mass educationists, school-teachers and student priests. A considerable amount of field work was done in the provinces.
Burma 22
R

**Vital and Health Statistics, Rangoon (Dec. 1955 - )**

**Aim of the project.** To establish machinery for prompt notification of accurate statistical data; to improve processing of the information and to train staff in statistical methods.

**Assistance provided by WHO during the year.** (a) A specialist in vital statistics; (b) a twelve-month international fellowship; (c) supplies and equipment.

**Probable duration of assistance.** Until the end of 1960.

**Work during the year.** Recommendations for a new vital registration service for Burma were approved by the Government. Preparations were made to introduce the new system in Rangoon city. The project staff prepared a statistical appendix for the 1957 Annual Health Report for Burma and revised and supplemented those for the two previous years. Medical certificates of cause of death from Rangoon city hospitals for 1956 were coded and tabulated; work was started on those for the 1957 deaths. *Ad hoc* reports on the incidence of several diseases were prepared for the use of the Health Directorate.

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Burma 25
TA

**Post-graduate School of Nursing, Rangoon (Jan.-Nov. 1955; Aug. 1956 - )**

**Aim of the project.** To give post-graduate training to nursing tutors, public health nurses and midwife tutors, to meet the requirements of the integrated health services.

**Assistance provided by WHO during the year.** (a) A nurse educator and a midwife tutor; (b) a twelve-month international fellowship.

**Probable duration of assistance.** Until the end of 1961.

**Work during the year.** See page 74.

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Burma 28
TA

**Assistance to Medical College, Rangoon (Feb. 1955 - )**

**Aim of the project.** To upgrade the departments of pharmacology, physiology and preventive medicine in the Medical College of Rangoon University, as part of a long-term programme for upgrading the medical faculty as a whole.

**Assistance provided by WHO during the year.** (a) A professor of radiology for three months; (b) a twelve-month international fellowship to a member of the Anatomy Department for study in India.

**Probable duration of assistance.** Indefinite.

**Work during the year.** The visiting professor of radiology surveyed the radiological equipment at Rangoon General Hospital and advised on its maintenance. He helped to reorganize the X-ray Department, paying special attention to the problems of radiation hazards. He gave courses for students in the College and also short courses in radiology at the Mandalay Medical College.

A member of the pathology teaching staff obtained her M.D. degree after two years' study in India on a WHO fellowship and returned to her post.

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Burma 30
TA

**Development of Environmental Sanitation Division, Ministry of Health (March 1956 - Sept. 1959)**

**Aim of the project.** To develop and strengthen the Division of Environmental Sanitation in the Ministry of Health; to plan a country-wide programme in environmental sanitation; to develop a demonstration and training centre in the Aung San Myo area.

**Assistance provided by WHO during the year.** A sanitary engineer.

**Work done.** Continued efforts have been made to strengthen the Environmental Sanitation Division in the Ministry of Health, but progress has been slow. The Government has decided to appoint permanent personnel for the Division and is considering a proposal for setting up at ministerial level a Central Sanitation Board to co-ordinate the sanitation work of different governmental agencies.

**Evaluation.** Although it has taken rather a long time to bring the staff of the Environmental Sanitation Division up to full strength, the project has succeeded in promoting the concept of a centrally organized machinery linking all sanitation work in Burma. This may solve budgetary problems and in turn overcome recruitment difficulties. The project has thus gone a long way towards achieving its two main objectives. Field work in the Aung San Myo area (see also Burma 34) has proved the effectiveness of the material tested and the reception given to the programme has been encouraging.
Malaria Eradication (Feb. 1957 - )

Aim of the project. To eradicate malaria throughout the country in progressive stages.

Assistance provided by WHO during the year. (a) A malariologist, an entomologist and two sanitarians; (b) a grant to meet part of the government expenditure on national staff.

Probable duration of assistance. Until 1967.

Work done. In this programme, 8 800 000 people were protected in 1957, 9 520 000 in 1958 and 10 130 000 in 1959. A maximum of a million and a half more out of the total population of about 20 000 000 may require protection. A review of the data collected during 1958 showed that there is low malaria transmission in the country as a whole. In regions where spraying has been in progress for five years or more, transmission appears to be almost completely interrupted. Surveillance, covering a population of 2 500 000 in two regions, was started in September 1959. Steps have been taken to train personnel to carry out surveillance among the remaining 7 600 000 people protected by spraying with DDT in 1957. Dieldrin was used on the Arakan coast for the second year, and there has been no reported case of poisoning, and no complaints of mortality among chickens and domestic pets.

This programme was critically reviewed by the Government in July and August 1959, and a revised programme was drawn up in consultation with UNICEF and WHO, retaining the present technical structure but adding some new features, such as the official participation of the public and the use of general public health staff in surveillance.

Strengthening of Environmental Sanitation (March 1956 - )

Aim of the project. To establish in the Aung San Myo area a pilot demonstration area where rural water supplies and excreta disposal will be improved; to devise simple, practical and cheap schemes for rural water supply and latrine construction; to provide services and facilities for extending sanitation to all rural areas; to train sanitation personnel.

Assistance provided by WHO during the year. (a) Assistance from the sanitary engineer attached to Burma 30; (b) pumping equipment.

Probable duration of assistance. Until the end of 1961.

Work during the year. Progress has been maintained in the construction of latrines and rural water supplies and in training auxiliary sanitation workers. Until September the project was under the supervision of the WHO sanitary engineer assigned to the related project, Burma 30. Action has been taken to recruit a sanitarian.

Public Health Administration, Rangoon (March - Oct. 1955; April - Nov. 1956; Nov. 1958 - )

Aim of the project. To strengthen the administration of the Directorate of Health Services; to assess health problems; and to co-ordinate the planning of health services.

Assistance provided by WHO during the year. A public health adviser.

Probable duration of assistance. Until the end of 1961.

Work during the year. The public health adviser completed a first examination of the organization and administration of the health services and of the international assistance available. He studied questions of the organization of health services, particularly in rural areas, and made recommendations to the Government. Since August he has also acted as WHO area representative in Burma.

National Training Courses in Health Education (First course: 1 Dec. 1958 - 3 Jan. 1959; second course: 2 - 27 Nov. 1959)

Aim of the project. To provide further orientation in health education to selected health workers and to persons responsible for teaching health education in different districts.

Assistance provided by WHO during the year. Half the cost of board, lodging and travel of sixteen students from outside Rangoon.

Probable duration of assistance. To be repeated in 1960.

Work done. First course: A four-and-a-half week national training course in health education for sixteen students. It was given in Rangoon in co-operation with the Post-graduate School of Nursing, the Environmental Sanitation Division, the School Health Education Council, the Mass Education
### Burma 54

**R**

**Fellowships**
- **Anatomy.** A two-year fellowship for study in India.
- **Leprosy control.** A twelve-month fellowship for study in India.
- **Nursing.** Two twelve-month fellowships for study in New Zealand.
- **Port health and quarantine.** A fellowship of four and a half months for study in Singapore and Hong Kong.
- **Public health.** A ten-month fellowship for study in India.
- **Rural health.** Three four-month fellowships for study in India.
- **Tuberculosis.** Three three-month fellowships for study in India.

### Burma 55

**TA**

**Fellowships**
- **Mental health.** Three fellowships—two of twelve months and one of two years—for study in India.

### Burma 56

**TA**

**Nursing Advisory Services (March 1959 - )**

**Aim of the project.** To assist the Division of Nursing of the Health Directorate in upgrading nursing and midwifery training schools, particularly the schools in district hospitals.

**Assistance provided by WHO during the year.** A senior nurse educator.

**Probable duration of assistance.** Until the end of 1962.

**Work during the year.** The nurse educator made a study of the nursing situation in Burma and visited training institutions in Rangoon and the provinces, assisting in the selection of students for nursing and midwifery schools. She helped the senior sister tutors of Rangoon General Hospital to draw up a studyday system of training, to be introduced gradually into the hospital.

### Burma 59

**R**

**Assistance to Medical College, Mandalay (Nov. 1959 - )**

**Aim of the project.** To upgrade certain departments of the Medical College, Mandalay.

**Assistance provided by WHO during the year.** A visiting professor of anatomy.

**Probable duration of assistance.** Two years, in the first instance.

### Ceylon 4

**Ceylon 4**

**Rural Health Development, Kalutara (Sept. 1955 - )**

**Aim of the project.** To upgrade the Children's Department of the Kalutara Health Unit Hospital; to integrate the preventive and curative aspects of child care, at the hospital and in the field; to improve public health nursing in the Health Unit and train various categories of health personnel.

**Assistance provided by WHO during the year.** A paediatrician.

**Probable duration of assistance.** Until the end of 1963.

**Work during the year.** The paediatrician was replaced in March 1959; the post of public health nurse has been vacant since September 1958.

Co-ordinated hospital and field services of a number of provincial hospitals outside Kalutara were strengthened. Mothers in hospital and in clinics were given comprehensive advice in the care of their children, and action was taken to improve field training programmes for health personnel. A new system was introduced whereby the follow-up of children discharged from Kalutara Hospital is undertaken by the local medical officers instead of at the hospital.

### Ceylon 5

**R**


**Aim of the project.** (a) To assess the work of the national venereal disease control programme since the end of 1953 (when WHO staff was withdrawn); (b) to consider why the prevalence of yaws has fallen and to plan an eradication programme.
Assistance provided by WHO during the year. Two short-term consultants.


Work during the year. WHO provided a consultant to assess the venereal disease control programme which has been carried on by national staff since the WHO staff was withdrawn at the end of 1953. His report has been submitted to the Government. Another consultant went to Ceylon in October to assist with the yaws investigation and the planning of an eradication programme.

Ceylon 23

Medical Stores Management (Nov. 1952 - Sept. 1954; Oct. - Dec. 1958)

Aim of the project. To develop the organization and administration of medical stores.

Assistance provided by WHO and work done during the year. A second visit by the consultant who had previously assisted the Government in improving its organization and administration of medical stores. He found that considerable progress had been made, and suggested some further improvements.

Ceylon 25

Tuberculosis Control and Training Centre, Colombo (Walisara) (May 1953 - Aug. 1957; Nov. 1957 - Jan. 1958; April 1959 - )

Aim of the project. (a) To survey the extent of the tuberculosis problem; to set up a model tuberculosis service; to train medical and paramedical personnel in diagnosis and prevention; (b) to revise the system of records and reports in chest clinics and other institutions dealing with tuberculosis and to organize a central tuberculosis records office.

Assistance provided by WHO during the year. (a) A statistician from November; (b) two one-month regional fellowships.

Probable duration of assistance. Until the end of 1961.

Ceylon 35

Environmental Sanitation, Kurunegala (March 1955 - )

Aim of the project. To set up two pilot projects in rural areas to improve water supplies and excreta disposal and to train personnel in environmental sanitation; to build up a health education programme that will secure the co-operation of the people and prepare the community for the sanitation programme; to apply in the national programme the experience so gained.

Assistance provided by WHO during the year. A sanitary engineer and a sanitarian.


Work during the year. The sanitarian organized many forms of training. Regular and refresher courses for public health inspectors were continued, and a short course for food handlers was undertaken. Field work was reorganized and extended to areas outside the pilot project. The staff of the project has been reinforced by another national sanitary engineer.

The WHO sanitary engineer left in April 1959. The project is to be assessed shortly to determine whether further WHO help is desirable.

Ceylon 38

Assistance in Epidemiology to Health Directorate (Feb. 1956 - )

Aim of the project. To establish an epidemiological unit in the Directorate of Health Services, Colombo; to make epidemiological surveys of the distribution of disease in Ceylon; to train undergraduate and post-graduate students and a counterpart.

Assistance provided by WHO during the year. An epidemiologist and a specialist in infectious diseases.

Probable duration of assistance. Until the end of 1961.

Work during the year. See page 74.

Ceylon 39

Assistance to Health Directorate (Nursing Adviser) (July 1957 - )

Aim of the project. To advise the Directorate of Health Services on nursing organization, education, administration and legislation, and on the development of co-ordinated supervisory services, to ensure uniformly high nursing standards within the national health programme.
Ceylon 45

Health Statistics (April 1957 - )

Aim of the project. To revise the system of records and reports in the health services; to train personnel in the design of documents, the conduct of surveys and other statistical techniques; to set up a permanent statistical service in the Ministry of Health.

Assistance provided by WHO during the year. (a) A health statistician; (b) supplies and equipment.

Probable duration of assistance. Until 1962.

Work during the year. A new record system was designed for the filariasis campaign and was approved by the Health Department. Assistance to the dental survey continued. The pre-operational survey for the environmental sanitation project at Kurunegala was completed and the data were analysed by the project staff. A census was taken of all medical institutions in the island to assess the personnel employed by each and the beds available. Work continued on rural health service and maternity records. The WHO epidemiologist (see Ceylon 38) collaborated in this project.

Ceylon 47

Medical Education (June 1959 - )

Aim of the project. To teach and demonstrate recent advances in clinical post-graduate subjects.

Assistance provided by WHO during the year. A professor of obstetrics and gynaecology for three months.

Probable duration of assistance. Until 1961.

Work during the year. The visiting professor assisted with the teaching of obstetrics and the organization of the obstetric unit, and gave a bi-weekly course of post-graduate lectures in obstetrics and gynaecology, particularly on the prevention of maternal and perinatal mortality, advances in the management of pregnancy and childbirth and on recent research. He also took part in weekly conferences of the Curriculum Committee appointed by the Medical Faculty. His report has been presented to the Government.

Ceylon 48

Medical Care (Thoracic Surgery) (Dec. 1958)

Aim of the project. To improve the organization and plan the development of thoracic surgery.

Assistance provided by WHO. A consultant for one month.

Work done. The consultant studied the organization of thoracic surgery units in Colombo and advised on future developments. He also advised on the possibilities of providing thoracic surgery units at Jaffna, Ratnapura and Kandy.

Ceylon 50

Fellowships

Leprosy. A three-month fellowship for study in India.

Malaria. Two six-week fellowships for study in India.

Public health. A ten-month fellowship for study in the United Kingdom.

Ceylon 54

Training of Laboratory Technicians (April 1959 - )

Aim of the project. To organize a programme for training laboratory technicians required for the laboratories in Ceylon.
<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>R</td>
<td></td>
<td>Assistance provided by WHO during the year. A laboratory technician.</td>
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<td>Probable duration of assistance. Until April 1961.</td>
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<td>Work during the year. A School of Medical Laboratory Technology has been set up with adequate accommodation for theoretical and practical teaching and four full-time tutors and counterparts to the WHO technician. The first course was started at the beginning of October 1959, with twenty-five students. Advice was given on various haematological procedures in the laboratories of the General Hospital, Children's Hospital and the Department of Medicine at the University.</td>
</tr>
</tbody>
</table>

Ceylon 55

School of Physiotherapy, Colombo (Oct. 1958 - )

Aim of the project. To develop physical medicine and rehabilitation services by training physiotherapists.

Assistance provided by WHO during the year. (a) Two physiotherapy tutors; (b) one twelve-month fellowship.


Work during the year. A two-year curriculum of training for qualification and a modified training programme to upgrade assistant physiotherapists already in service were initiated. A code of regulations was prepared, defining the conditions of entry to the school and its management. Plans were made for a permanent training school. Advice was given on the provision of physical medicine units in provincial hospitals.

Ceylon

Participation in Inter-country Projects

See SEARO 3; SEARO 6; SEARO 40; SEARO 41; WPRO 63; Inter-regional 23.

India 42

Tuberculosis Control and Training Centre, Nagpur (Nov. 1955 - )

Aim of the project. To establish a model tuberculosis service, particularly to do preventive work; to train personnel in modern methods of diagnosis and control, including domiciliary therapy; to carry out epidemiological surveys.

Assistance provided by WHO during the year. (a) A medical officer, a laboratory technician, an x-ray technician and a public health nurse; (b) supplies and equipment.

Probable duration of assistance. Until the end of 1959.

Work during the year. This project, which had started slowly owing to delays in appointing some counterpart personnel and the lack of enough trainees, has made good progress since the middle of 1959, and all branches of the work have been expanded. Home visits were maintained at a satisfactory level, and the number of patients under the INH domiciliary chemotherapy treatment scheme rose to eighty-three. A second training course for fifteen home visitors was started in August, and other training was continued. The x-ray staff of the Tuberculosis Centre was given thorough training in the maintenance, care and repair of equipment.

India 43

Tuberculosis Control and Training Centre, Hyderabad (Dec. 1956 - )

Aim of the project. (a) To train, for the district centres in the state, doctors, home visitors and technicians in the diagnosis of tuberculosis and in methods of control based on domiciliary chemotherapy and home hygiene; (b) to help personnel to adapt those methods to the conditions in the project area or, if necessary, to evolve new ones.

Assistance provided by WHO during the year. (a) A medical officer, a laboratory technician, an x-ray technician and a public health nurse; (b) supplies and equipment.

Probable duration of assistance. Until the end of March 1960.

Work during the year. Good progress was made in the organization and work of the centre, notably on the domiciliary side. The amount of home visiting was maintained at a high level, and an indicator system was set up to ensure that no patients are missed. A number of sub-centres are in operation, to cover the whole of Hyderabad city. Training of home visitors and other trainees was continued.

The laboratory continued to function effectively. Sensitivity testing was still on a small scale, owing to limited supplies. A permanent dark-room was built for the x-ray department.
<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Co-operating Agencies</th>
<th>Description</th>
</tr>
</thead>
</table>
| India 53   | TA             | (British Medical Research Council) (Indian Council of Medical Research) | **Tuberculosis Chemotherapy Centre, Madras** (Dec. 1955 - )  
(At the beginning of 1959 the related project India 102 was amalgamated with this project.)  
**Aim of the project.**  
(a) To determine what proportion of infective cases living in crowded urban areas can be rendered non-infective by treatment with drugs suitable for self-administration at home; (b) to determine how long those patients can be kept non-infective; (c) to compare the results of drug treatment of domiciliary patients with those of treatment of hospital patients; (d) later, to study the effects on the community of widespread chemotherapy of ambulant patients; (e) to provide facilities for training in research techniques.  
**Assistance provided by WHO during the year.**  
(a) A senior medical officer, an assistant medical officer, a bacteriologist, a laboratory technician, an x-ray technician, two public health nurses, an administrative officer and an administrative assistant; (b) two short-term consultants; (c) three twelve-month international fellowships; (d) supplies and equipment.  
**Probable duration of assistance.** Until the end of 1963.  
**Work during the year.** See pages 10 and 75. |
| India 71   | R              |                       | **Assistance to the All-India Institute of Mental Health, Bangalore** (March 1955 - )  
**Aim of the project.** To establish at the All-India Institute of Mental Health, Bangalore: (a) a postgraduate training programme in psychiatry and psychiatric nursing, and (b) a programme of research in psychiatry, neurology and neurosurgery; to train national counterparts to take over from the WHO personnel.  
**Assistance provided by WHO during the year.** A neuro-psychiatrist, a neurologist and two psychiatric nurses.  
**Probable duration of assistance.** Until the end of 1960.  
**Work during the year.** The neuro-psychiatrist and neurologist were withdrawn at the beginning of 1959. During their assignment, departments of neurology and neuroradiology, and an insulin coma therapy unit were established and put into full operation. New techniques of investigation and a programme of research were also introduced. The standard of the Institute's Diploma in Psychological Medicine is now believed to compare favourably with that of similar diplomas granted elsewhere. A further course was started for the certificate of psychiatric nursing, with twenty-three students. A third nursing counterpart was appointed, but two of the counterparts resigned after six months' service. A Nursing Committee was formed, in which matters of nursing care and administration are discussed at weekly meetings. |
| India 77   | TA             |                       | **Public Health Engineering, University of Madras** (Aug. 1955 - )  
**Aim of the project.** To establish a department of public health engineering at the University of Madras and to organize post-graduate courses and field training in public health engineering at the University; to train a national counterpart to take over from the professor provided by WHO.  
**Assistance provided by WHO during the year.** (a) A professor of public health engineering; (b) supplies and equipment.  
**Probable duration of assistance.** Until the end of 1961.  
**Work during the year.** The fourth post-graduate course (nine months of class work and six months of research for preparation of thesis) was started in July 1958, with fifteen students. The seventh short course for engineers and engineering subordinates was completed in April 1959, bringing the total number of students trained to 135 — 59 engineers and 76 engineering subordinates. The standard of the post-graduate course has been steadily raised by bringing it into line with similar courses in comparable universities. Facilities for training have been provided, such as a laboratory for research, a water treatment plant in conjunction with the college swimming pool and a sewage treatment plant (in an advanced stage of construction), and have helped to raise the level of this course. In April 1959, the WHO visiting professor completed his contract; another is being recruited. |
| India 84   | TA             |                       | **Environmental Sanitation, Uttar Pradesh** (March 1958 - )  
**Aim of the project.** To set up in a rural area a pilot project for improving water supplies and excreta disposal; to plan and carry out a sanitation programme including the design, operation and maintenance of simple, practical and cheap sanitary installations; to organize a programme of health education; to train technicians, sanitarians and other personnel. |
**India 85**

**Health Education (Ministry of Health in co-operation with Ministry of Education) (Dec. 1957 - )**

*Objective of the project.* To develop training and prepare experimental curricula for health education in one or more teacher-training institutions in Delhi.

*Assistance provided by WHO during the year.* (a) A health educator; (b) supplies and equipment.

*Probable duration of assistance.* Until the end of 1961.

*Work during the year.* The health educator began work in December 1958, in the Central Health Education Bureau of the Union Ministry of Health, and in close association with representatives of the Ministry of Education. She has assisted a Joint Committee on Health Education and Nutrition Education in the preparation of health education syllabuses and of programmes for teachers’ training colleges and for primary and secondary schools. Seminars for school-teachers were arranged and visits were paid to three states to study the present programmes for health education in schools.

**India 90**

**Vital and Health Statistics, Nagpur (March 1956 - )**

*Objective of the project.* To set up in an urban area a demonstration and training unit which will serve as a model health statistical service; to train personnel in health statistics.

*Assistance provided by WHO during the year.* (a) A health statistician; (b) supplies and equipment.

*Probable duration of assistance.* Until July 1960.

*Work during the year.* A model vital statistics report to demonstrate the practicability of modern techniques and a report on sample returns from dispensaries were in preparation.

Two further training courses were given for statistical assistants. Lectures were given to medical registrars, house officers, undergraduates and other groups. The Nagpur Corporation was helped to frame bye-laws governing registration.

The project has demonstrated how statistics can be provided to assist the health administration.

**India 91**

**Professors in Preventive and Social Medicine (Feb. 1956 - Dec. 1957; March 1959 - )**

*Objective of the project.* To develop the Departments of Preventive and Social Medicine in four selected medical colleges, integrating preventive medicine into the general curriculum and developing courses of instruction in preventive and social medicine for undergraduates; to establish centres for practical training; to give special training to selected students to prepare them for teaching and research; to train national counterparts to take over from the WHO professors.

*Assistance provided by WHO during the year.* (a) Two professors of preventive and of social medicine—one at the Topiwala National Medical College, Bombay, and one at the Medical College, Lucknow; (b) two twelve-month international fellowships.

*Probable duration of assistance.* For several years.

*Work during the year.* The visiting professor at the Topiwala National Medical College assisted in organizing a study of social medicine in four selected medical colleges, integrating preventive medicine into the general curriculum and developing courses of instruction in preventive and social medicine for undergraduates; to establish centres for practical training; to give special training to selected students to prepare them for teaching and research; to train national counterparts to take over from the WHO professors.

The professor assigned to the King George Medical College, Lucknow, took up his duties in October.
India 94

TA (Ford Foundation)

Aim of the project. To develop field programmes in health education procedures for public health and other personnel at the Singur Health Centre and at the All-India Institute of Hygiene and Public Health, Calcutta.

Assistance provided by WHO during the year. (a) A health educator; (b) supplies and equipment.

Work done. The Singur rural training and demonstration health centre provides rural field training for all categories of health personnel. This centre has also a research programme to find ways of attracting popular support for various measures for health improvement. The WHO health educator completed his two-year assignment in December 1958, and two national health educators are continuing health education work in the area of the centre. WHO's assistance was directed primarily to training programmes; in one year more than forty-five different groups (totalling 1330 students) came to Singur for training. Assistance was given to other work of the health centre, including educational programmes for the control of the more important endemic diseases such as smallpox, cholera and malaria. The health education aspects of the health services were organized and placed on a firm footing, and are being satisfactorily carried on by national staff.

Evaluation. This project has been very successful in demonstrating the different techniques that can be used in training health and community workers of different types. It has also demonstrated several ways of approaching different groups of people and communities, and of handling various subjects of practical importance to local development.

India 95

TA

Aim of the project. To set up a pilot project in a rural area for improving water supplies and excreta disposal; to plan and carry out a sanitation programme including the design, operation and maintenance of simple, practical and cheap sanitary installations; to organize a programme of health education; to train technicians, sanitarians and other personnel.

Assistance provided by WHO during the year. (a) A sanitary engineer and a sanitarian; (b) supplies and equipment.

Probable duration of assistance. Until the end of 1960.

Work during the year. Good progress was made in the construction of rural water supplies and excreta disposal facilities. Latrine construction has reached the targets fixed. Training was given to health inspectors and village workers. In health education, the work was mainly with teachers and headmasters of schools. Frequent talks and film shows on health projects were arranged. All nine master pilot areas were surveyed for intestinal parasitism; a high percentage of infestation was still present. The project is being expanded to the whole state.

India 98

R


Aim of the project. To plan and conduct short refresher courses for nurses, incorporating theoretical and practical instruction adapted to local conditions.

Assistance provided by WHO during the year. (a) Half the travel and maintenance expenses of twenty participants; (b) assistance from WHO nursing staff.

Probable duration of assistance. Further courses are planned for 1960 and 1961.

Work during the year. An eight-week refresher course for twenty sister tutors from different parts of India was held at the King George Hospital, Visakhapatnam. As in the previous course, the WHO nurses working with the Public Health Programme in Andhra Pradesh (India 151) assisted. Plans have been made to hold a course for twenty matrons and hospital superintendents at the Government General Hospital, Madras, in January 1960.

The two courses given in 1958 were described in the Annual Report for that year.

India 99

TA

Aim of the project. To integrate training in public health in the basic training of nurses; to provide supervised practical observation and experience for student nurses in three selected undergraduate schools of nursing.
**THE WORK OF WHO, 1959**

### Project No.

**Source of Funds**

**Co-operating Agencies**

**Description**

**Assistance provided by WHO during the year.** (a) Three public health nurses and a nurse tutor; (b) supplies and equipment.

**Probable duration of assistance.** Until the end of 1962.

**Work during the year.**

**Madras.** The curriculum for the basic nursing training programme was revised and the theory content considerably strengthened. A yearly rota of field observation trips and periods of practical field experience was planned; notes for nurse tutors on public health aspects of tropical medicine were prepared, and a programme of staff education was introduced. A one-week workshop was held for twenty tutors from various government hospital schools of nursing. In October the WHO public health nurse was transferred to project India 110.

**Nagpur.** The curriculum was broadened, and public health practice areas were designated. A small area for home-visiting services, a school health programme and observation visits to local markets, waterworks and sewage disposal works were introduced.

**Cuttack.** Two wards were allocated as demonstration and teaching units for student nurses. An antenatal clinic with a home delivery service was started and made encouraging progress. A maternal and child health centre was opened in the hospital compound; a rural health practice area was developed and a rural nurses’ hostel was allocated for students’ residence. A nurse tutor joined the public health nurse in November.

### India 101

**Trachoma Pilot Project** (Feb. - May 1956; Oct. 1956 - )

**Aim of the project.** (a) To make a survey of trachoma in parts of Uttar Pradesh; (b) to establish a pilot project to study (i) the incidence and pattern of trachoma and the factors favouring transmission, (ii) the minimum effective course of antibiotic treatment and the rate of relapse and reinfection, and (iii) the effect of repeated treatment on the epidemiology of associated conjunctivitis and on the clinical picture of trachoma; (c) to develop a mass control programme.

**Assistance provided by WHO during the year.** A trachomatologist.

**Probable duration of assistance.** Until the end of 1963, in the first instance.

**Work during the year.** The pilot project for trachoma control, which was started in Uttar Pradesh in 1956, with assistance from UNICEF and WHO, was completed at the end of 1958. From November 1958 to December 1959 two further programmes of survey and treatment of trachoma and conjunctivitis were carried out in co-operation with primary health centres in Rajasthan and Punjab, and a topographical map survey was made in eleven states. An evaluation of the pilot project was completed by the end of 1959.

In December 1959 a mass campaign will be started in five states in which antitrachoma work has been in operation.

### India 103

**National Tuberculosis Programme** (Oct. 1956 - )

**Aim of the project.** To plan and carry out a tuberculosis control programme for the whole of India, based on epidemiological findings and field research, and to train national personnel for this programme.

**Assistance provided by WHO during the year.** Two medical officers, a sociologist, an epidemiologist, a statistician and two public health nurses.

**Probable duration of assistance.** Until the end of 1965.

**Work during the year.** In January 1959 the senior medical officer and the sociologist began the detailed planning and the setting up of the National Tuberculosis Institute in Bangalore and its urban and rural field programmes. An epidemiologist and two public health nurses joined them in June and a statistician at the end of October. A skeleton national staff was appointed and a plan of the technical and administrative steps necessary to build up the Institute was prepared. Detailed plans for the first part of the urban programme and protocols for a pilot epidemiological study were also drawn up. Assistance was given in the preparation of the third report on BCG assessment in India.

### India 106

**Public Health Programme, Rajasthan** (March 1959 - )

**Aim of the project.** To expand health services in community development areas, and to train personnel; to organize other related rural health services, for integration into the community development programme under the second five-year plan.
Project List: South-East Asia

<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Co-operating Agencies</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>India 107</td>
<td>R</td>
<td>UNICEF</td>
<td>Assistance provided by WHO during the year. A public health officer and a public health nurse.</td>
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<td>Probable duration of assistance. Until the end of 1961, in the first instance.</td>
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<td>Work during the year. The public health nurse surveyed the facilities available in the state for the public health training of nursing personnel. She helped with the first public health orientation course for nurse midwives and planned a modified programme for a second group. The public health officer joined the project in November.</td>
</tr>
<tr>
<td>India 108</td>
<td>TA</td>
<td></td>
<td>Public Health Programme, Punjab (Dec. 1959 - )</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aim of the project. To expand health services in community development areas, and to train personnel; to organize other related rural health services, for integration into the community development programme under the second five-year plan.</td>
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<td></td>
<td></td>
<td></td>
<td>Assistance provided by WHO during the year. A public health officer, a public health nurse and a public health nurse midwife.</td>
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<td></td>
<td>Probable duration of assistance. Until the end of 1961, in the first instance.</td>
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<td>Work during the year. The WHO team made a preliminary survey of rural health services and teaching institutions, and afterwards assisted in upgrading and expanding primary health centres, training personnel for them, and setting up a referral system. The team also helped in planning and organizing the rural training areas at Verka and Bhadson. A plan for a demonstration district at Karnal was prepared and its first stage initiated. Training courses in serology and bacteriology for medical officers assigned to district hospital laboratories, and orientation courses for medical officers in charge of primary health centres, were organized. UNICEF stipends were obtained for all participants.</td>
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<td>The WHO nurses assisted the Government with revising programmes for the training of nurses and auxiliary nurse midwives, preparing job descriptions for senior nursing personnel, and organizing practical training in public health in rural areas. Assistance was also given in two short courses for nurse tutors attached to the training schools for auxiliary nurse midwives. Similar courses are to be given for nursing superintendents of hospitals.</td>
</tr>
<tr>
<td>India 108</td>
<td>TA</td>
<td></td>
<td>Health Education, States of Bombay, Uttar Pradesh and Bihar (March 1958 - )</td>
</tr>
<tr>
<td></td>
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<td>Aim of the project. To build up the Health Education Bureau in the Directorate of Public Health, and a pilot demonstration and field training area; to teach health education to public health personnel and others.</td>
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<td>Assistance provided by WHO during the year. (a) A health educator for Bombay State; (b) supplies, equipment and a vehicle.</td>
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<td>Probable duration of assistance. About two years for each state.</td>
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<td>Work during the year. Assistance has been given so far in Bombay State only, where the WHO health educator is attached to the State Health Education Bureau. The Bureau's work was concentrated on one of the six administrative divisions of the state and on training programmes for all categories of health personnel. A plan has been prepared for gradually expanding the work of the newly organized Bureau to other divisions of the state.</td>
</tr>
<tr>
<td>India 110</td>
<td>TA</td>
<td></td>
<td>Nursing Advisers to States (Madhya Pradesh, Madras and a State still Undesignated) (Dec. 1957 - )</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>Aim of the project. To organize and expand nursing education and nursing services in three selected states and to co-ordinate supervisory services so as to ensure uniformly high standards of nursing and midwifery in the health programmes of the states.</td>
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<td>Assistance provided by WHO during the year. Two nursing advisers—one for Madhya Pradesh and one for Madras State.</td>
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<td>Probable duration of assistance. Until the end of 1962.</td>
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<td>Work during the year.</td>
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<td>Madhya Pradesh. Several tours were made by the WHO nursing adviser and her counterparts. They visited hospitals to assess nursing education, nursing services and future requirements. Discussions were held on the nursing programme; school-teachers were approached on school and community health and recruitment of students for nurse training, and talks were given to schoolgirls on nursing</td>
</tr>
</tbody>
</table>
### Project No. 168
**Source of Funds**: TA, UNICEF

<table>
<thead>
<tr>
<th>Co-operating Agencies</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>India 111 TA</td>
<td>Medical Education in Non-clinical Subjects (Dec. 1958 - )</td>
</tr>
<tr>
<td></td>
<td>Aim of the project. To improve the teaching of non-clinical subjects in the medical courses of the rapidly expanding medical colleges in India by providing experienced professors and by awarding fellowships to teachers to enable them to widen their knowledge and experience.</td>
</tr>
<tr>
<td></td>
<td>Assistance provided by WHO during the year. Five international fellowships (one for six months and four for twelve).</td>
</tr>
<tr>
<td></td>
<td>Probable duration of assistance. For several years.</td>
</tr>
</tbody>
</table>

| India 114 R UNICEF    | Paediatric Education (Aug. 1958 - ) |
|                       | Aim of the project. To expand, upgrade and reorient the teaching of paediatrics in a number of medical colleges. |
|                       | Assistance provided by WHO during the year. (a) A visiting professor of paediatrics for Trivandrum Medical College; (b) two international fellowships (one for twelve months and one for five). |
|                       | Probable duration of assistance. Until the end of 1963. |
|                       | Work during the year. The Paediatric Department of Trivandrum Medical College was reorganized and set up as an independent unit. A Chair of Paediatrics was founded and the paediatric syllabus for undergraduate medical students was revised and expanded. Action started to upgrade four maternal and child health centres, for integrating curative and preventive care and for teaching. The visiting professor left the project in August. |

| India 115 R           | Fellowships |
|                       | Epidemiology and preventive medicine. A fellowship of five and a half months for study in the United States of America, the United Kingdom and Switzerland. |
|                       | Insect resistance. An eight-month fellowship for study in the Federal Republic of Germany, the United Kingdom and Italy. |
|                       | Leprosy. A three-month fellowship for study in Thailand, Nigeria and Uganda. |
|                       | Nursing. Two fellowships (one of four and a half months and one of twelve months) for study in the United Kingdom; two twelve-month fellowships for study in the United States of America, and a twelve-month fellowship for study in Canada. |
|                       | Opium addiction. A three-month fellowship for study in Singapore. |
|                       | Paediatrics. A twelve-month fellowship for study in the United Kingdom. |
|                       | Public health engineering. A twelve-month fellowship for study in the United States of America. |
|                       | Radiation medicine. A two-year fellowship for study in the United Kingdom. |
|                       | Sanitary engineering. A twelve-month fellowship for study in the United States of America, the United Kingdom and other countries in Europe. |

| India 116 TA          | Fellowships |
|                       | Environmental sanitation. A twelve-month fellowship for study in the United States of America. |
|                       | Trachoma. A twelve-month fellowship for study in the United States of America. |

| India 134 R UNICEF    | Assistance to the Upgraded Department of Paediatrics, Madras Medical College (Nov. 1957 - ) |
|                       | Aim of the project. To expand, upgrade and reorient the teaching of paediatrics at the Madras Medical College. |
|                       | Assistance provided by WHO during the year. A paediatrician and a paediatric nurse. |
|                       | Probable duration of assistance. Until the end of 1960. |
|                       | Work during the year. The teaching of undergraduate and postgraduate medical students was regularized and strengthened. In the paediatric service special attention was given to nutrition education and |
home visiting. Data were analysed on infant and childhood morbidity and its geographical distribution, and diagnosis on admission. Ward procedures for nursing newborn and sick children were considerably improved. An all-India course in paediatrics for hospital nurses was instituted.

Some of the objectives of the project have been secured by improvements in undergraduate and post-graduate paediatric education. A post-graduate course for the Diploma in Child Health was inaugurated and a course leading to the M.D. degree in paediatrics was being organized. A new type of service, "peripheral child health clinics", was created to provide integrated preventive and curative child care and continuity of services. The four units so far provided have been much used for teaching undergraduate medical students. Medical, nursing and paediatric services in the teaching hospitals have been improved; counterparts have been trained, and provision has been made for the continuation of training and services. The paediatrician left the project in October.

India 135
R
UNICEF

Assistance to the Upgraded Departments of Paediatrics of Three Medical Colleges, Bombay (May 1959 - )

Aim of the project. To expand, upgrade and reorient the teaching of paediatrics at the three medical colleges in Bombay.

Assistance provided by WHO during the year. A paediatrician.


Work during the year. The paediatrician helped to prepare a three-month course in paediatrics for undergraduate medical students. New forms for paediatric record keeping were prepared for the three paediatric departments, and a revised system for the registration of cases was started as a pilot scheme in one of the children's hospitals. A survey of nine maternal and child health centres was completed. Plans were prepared for the reorganization and upgrading of these centres into preventive, curative and peripheral child health clinics, with suitable training areas. A new fifteen-bed isolation ward for children was opened. Training courses for post-graduate medical officers and nurses were being started at the time of reporting.

India 137
TA

All-India Institute of Hygiene and Public Health, Calcutta (Exchange of Professors) (May 1959 - )

Aim of the project. To raise the standard of teaching in the Institute.

Assistance provided by WHO during the year. (a) A consultant in preventive and social medicine for three weeks; (b) a six-month international fellowship (another international fellowship was awarded under India 115).

Probable duration of assistance. Indefinite.

Work during the year. The consultant advised on teaching techniques and outlined a curriculum of training for teachers of preventive and social medicine. He discussed liaison with undergraduate medical colleges and the use of training areas. The WHO trachomatologist working with project India 101 assisted in a three weeks' course in epidemiology for public health administrators, held in November. The first training course for teachers of preventive and social medicine, attended by five holders of the DPH and sponsored by undergraduate teaching institutions, was co-ordinated by a former WHO fellow.

India 142
R
UNICEF

Assistance to the Department of Paediatrics, Osmania Medical College, Hyderabad (Feb. 1959 - )

Aim of the project. To expand, upgrade and reorient the teaching of paediatrics at Osmania Medical College, Hyderabad.

Assistance provided by WHO during the year. A consultant (bacteriologist) for three months.

Probable duration of assistance. Until the end of 1960.

Work during the year. The consultant helped to set up a bacteriological laboratory to serve the Children's Hospital, and to reorganize the biochemical and haematological laboratories. The Children's Hospital was expanded to provide better facilities for paediatric training and services. The WHO paediatrician working in Madras (India 134) spent six weeks in Hyderabad helping to organize peripheral paediatric clinics. By the time he left three more clinics had been set up and detailed plans for further development had been drawn up and approved by the Government.
Public Health Programme, Bihar (Jan. 1958 - )

*Aim of the project.* To expand health services in community development areas, and to train personnel; to organize other related rural health services, for integration into the community development programme under the second five-year plan.

*Assistance provided by WHO during the year.* A maternal and child health officer, a public health nurse and a midwife tutor. (A nursing arts instructor was provided under the Colombo Plan.)

*Probable duration of assistance.* Until the end of 1961, in the first instance.

*Work during the year.* The scope of the project was further expanded. Special attention was paid to the integration of health services, to technical supervision of staff and to the development of maternal and child health work at the primary health centres. Assistance was given to the training of different categories of rural health personnel. A new midwifery training centre was opened at Patna. Training at the two urban maternal and child health training centres at Patna and at the rural training centre at Raigir was further improved and expanded. Guides for health visitors and auxiliary nurse midwives working in community development areas were prepared.

Public Health Programme, Mysore (Jan. 1958 - )

*Aim of the project.* To expand health services in community development areas, and to train personnel; to organize other related rural health services, for integration into the community development programme under the second five-year plan.

*Assistance provided by WHO during the year.* A public health nurse.

*Probable duration of assistance.* Until the end of 1961, in the first instance.

*Work during the year.* The post of public health officer was vacant throughout the year. Work begun in 1958 was continued by the Health Department, and the WHO public health nurse gave technical assistance with nursing programmes. The primary health centres and the training of rural health personnel were strengthened and expanded. The Government agreed to provide a demonstration district at Shimoga. Five pilot projects were undertaken for integrating school health work into general health services.

A nursing bill was drafted and is likely to be enacted. Eight nurse midwives attended tutor courses in midwifery and nursing at different centres in India. Two more schools for auxiliary nurse midwives were started with assistance from the WHO nurse, and proposals were discussed for incorporating instruction on the social aspects of disease into the basic programme of one nurse training school.

Public Health Programme, Madhya Pradesh (May 1958 - )

*Aim of the project.* To expand health services in community development areas, and to train personnel; to organize other related rural health services, for integration into the community development programme under the second five-year plan.

*Assistance provided by WHO during the year.* (a) A public health officer, a public health nurse midwife, a public health nurse and a sanitarian; (b) supplies and equipment.

*Probable duration of assistance.* Until the end of 1961, in the first instance.

*Work during the year.* The public health officer assisted the Government in the upgrading and expansion of rural health services, referral hospitals and district laboratories. He also helped to assess future demands for rural health personnel and collaborated with the Departments of Social and Preventive Medicine on training programmes for rural field practice.

The sanitarian prepared a training syllabus for sanitary inspector students at Gwalior and assisted in their training. He advised on sanitation programmes in rural training areas and in model villages, on the co-ordination of rural sanitation work, and on the nature of the sanitation instructions to be given to village workers and rural masons.

The nurses planned and directed the first public health orientation course for nurse midwives and assisted in upgrading the training programme for auxiliary nurse midwives. Rural domiciliary nursing services and practice fields were organized.
Public Health Programme, Bombay (Jan. 1958 - )

Aim of the project. To expand health services in the community development areas, and to train personnel; to organize other related rural health services, for integration into the community development programme under the second five-year plan.

Assistance provided by WHO during the year. A public health officer, a public health nurse and a public health nurse midwife.

Probable duration of assistance. Until the end of 1961, in the first instance.

Work during the year. The public health officer continued to assist the Government in upgrading and expanding rural health services and advised on the training of personnel for them. Control cards were prepared for maintaining up-to-date information at state level on current changes in primary health centres. Family folders were introduced as an experiment in selected primary health centres. Plans for two demonstration districts were prepared. Progress in upgrading and expanding the rural training areas at Bavla, Palgar and Padra was slow.

The two nurses assisted with upgrading public health nursing services in primary health centres. The teaching programme of the public health orientation courses for nurse midwives was revised, and assistance was given to class-room tutors and field supervisors. Refresher courses for midwives were planned and conducted. The public health orientation programme was evaluated by following up ex-students at work in health centres, and a report was submitted. Technical advice was given by the public health nurse in the planning of a new training course for public health nurses in Bombay.

Public Health Programme, Andhra Pradesh (Jan. 1958 - )

Aim of the project. To expand health services in community development areas, and to train personnel; to organize other related rural health services, for integration into the community development programme under the second five-year plan.

Assistance provided by WHO during the year. A public health officer, a public health nurse, a public health nurse midwife and a midwife tutor.

Probable duration of assistance. Until the end of 1961, in the first instance.

Work during the year. The public health officer (replacement) joined the project in March, and following the work of his predecessor, who had made an initial survey of the health conditions and services in the state, he assisted the Government in upgrading and expanding rural health services and training of personnel, collaborated with the Departments of Social and Preventive Medicine in strengthening rural training areas and preparing syllabuses, and helped with the planning and development of the first demonstration district in the state. He visited selected referral hospitals and prepared plans for upgrading them.

The three nurses continued to give technical assistance in broadening the basic programme of a nurse training school so as to include public health, in upgrading two midwifery training schools and in organizing domiciliary nursing services and practice fields in urban and rural areas.

Public Health Programme, Assam (Jan. 1958 - )

Aim of the project. To expand health services in community development areas, and to train personnel; to organize other related rural health services, for integration into the community development programme under the second five-year plan.

Assistance provided by WHO during the year. (a) A public health officer, two public health nurses and a sanitarian; (b) supplies and equipment.

Probable duration of assistance. Until the end of 1961, in the first instance.

Work during the year. The WHO staff continued to assist the Government in upgrading and expanding rural health services and in training health personnel. Orientation courses were held for twelve medical officers in charge of primary health centres. Accommodation for staff in selected primary health centres was surveyed and improvements suggested. Family folders were introduced in some of the centres. A manual for rural health workers was in preparation. At the Chabua rural training centre, the training programmes were expanded and physical facilities improved.

The first public health orientation course for eleven nurse midwives and two auxiliary nurse midwives was completed in September and a new class started in November. To give further guidance, the WHO nurses visited primary health centres whose staff had been trained in the orientation courses.
The third course for sanitarians started in February with twenty-eight students; the rules of admission were stricter and the teaching programme was further upgraded.

India 153
MESA (ICA)

Malaria Eradication (Aug. 1958 - )

*Description*

Aim of the project. To extend the malaria control programme and convert it into a malaria eradication programme for the whole country.

Assistance provided by WHO during the year. (a) Two malariologists, two entomologists and four laboratory technicians; (b) travel cost of trainees, travel cost of conference participants and part payment of salaries of national personnel; (c) seven international travel fellowships; (d) supplies and equipment.

Probable duration of assistance. Until the end of 1962.

Work during the year. The eradication programme in India aims at protecting 390 million people; it is the world's largest and most important single public health undertaking. Six inter-state co-ordinating organizations have been set up; and nearly all the 390 units planned have been established. Training facilities at all levels have been increased, both at the centre and in the provinces.

Two WHO malaria advisory teams assisted in the assessment of the programme. One team, stationed at Coonoor, carried out surveys to determine the basic factors of malaria reproduction in Madras State, hitherto considered as hypoendemic. They were not able to find any evidence of transmission. The other team, stationed at Baroda, assessed the progress of malaria eradication in the Panchmahals district of Bombay State and studied the entomological factors in a part of the district where the interruption of malaria transmission has made slow progress. In November the Coonoor team moved to Bankura, West Bengal.

The special committee appointed by the Government of India to review the programme continued its meetings. At its meeting in August, as well as reviewing the progress of the work, it considered revised proposals for the Government's third five-year plan and made suitable recommendations.

India 169
R

Cardiac Surgery (Jan. 1959)

*Description*

Aim of the project. To improve the organization and development of thoracic surgery units.

Assistance provided by WHO. A short-term consultant.

Work done. The consultant spent a few days in each of the main thoracic surgery units in India. He assessed progress made in recent years, advised on future development, held discussions with national staff, and gave lectures and demonstrations.

India 170
TA

Water Supply and Sewage Disposal, Greater Calcutta (Oct. 1959 - )

*Description*

Aim of the project. To study what should be done to improve the water supply and drainage of Calcutta and the surrounding areas.

Assistance provided by WHO during the year. Four consultants, in sanitary engineering, metropolitan district organization, sanitary administration and epidemiology, for about three months.

Probable duration of assistance. Further consultant services are to be provided in 1961.

Work during the year. The Government of West Bengal constituted a General Advisory Committee and a Working Sub-Committee representing all the local agencies interested in the problems of water supply and sewage disposal in Greater Calcutta, to be responsible for the preparatory work and to assist the WHO team of consultants. In addition, an office was set up under the Chief Public Health Engineer of the Directorate of Health Services, West Bengal, to carry out the consultants' recommendations on further studies and to assist in all phases of the project. The consultants completed their field work at the end of November.

India

Participation in Inter-country Projects

See SEARO 3; SEARO 6; SEARO 22; SEARO 40; WPRO 56; WPRO 60; WPRO 63; Inter-regional 23.
**PROJECT LIST: SOUTH-EAST ASIA**

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<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Co-operating Agencies</th>
<th>Description</th>
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</thead>
<tbody>
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<td>Indonesia 1</td>
<td>TA</td>
<td>UNICEF</td>
<td>Yaws Control (May 1950 - )</td>
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<tr>
<td></td>
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<td><em>Aim of the project.</em> To reduce the reservoir of infection to a level at which existing rural health services can maintain control; to analyse the epidemiological information collected during the past years.</td>
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<td></td>
<td><em>Assistance provided by WHO during the year.</em> A steam launch named “PAM”. An epidemiologist was being recruited at the time of reporting.</td>
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<td></td>
<td><em>Probable duration of assistance.</em> Two years.</td>
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<tr>
<td>Indonesia 9</td>
<td>R</td>
<td>UNICEF</td>
<td>Leprosy Control (July - Sept. 1955; Sept. 1956 - )</td>
</tr>
<tr>
<td></td>
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<td><em>Aim of the project.</em> Second phase: To plan and carry out a long-term programme of leprosy control.</td>
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<td></td>
<td><em>Assistance provided by WHO during the year.</em> A leprologist.</td>
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<td></td>
<td><em>Probable duration of assistance.</em> Until 1963.</td>
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<td><em>Work during the year.</em> Programmes have continued in the four pilot project areas and it is now clear that the prevalence of the disease is comparatively low and does not justify the high cost of special teams for house-to-house case-finding surveys. Throughout the year existing health personnel, particularly yaws control workers, have been successfully tried for leprosy case-finding in rural areas. Plans have been made to follow up this more economical approach.</td>
</tr>
<tr>
<td>Indonesia 20</td>
<td>TA</td>
<td></td>
<td>Environmental Sanitation, Djakarta (June 1956 - Dec. 1959)</td>
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<td><em>Aim of the project.</em> To prepare a co-ordinated plan for environmental sanitation, particularly in rural areas; to devise and construct simple, practical and cheap sanitary facilities; to organize a programme of health education on the nature and causes of diseases resulting from faulty environment; to train sanitation personnel.</td>
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<td></td>
<td><em>Assistance provided by WHO during the year.</em> (a) A sanitary engineer, a sanitarian and a port health sanitarian; (b) supplies and equipment.</td>
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<td><em>Work during the year.</em> Progress in the project area was limited owing to uncertainty whether the project was to be moved to the Bekasi area. This move, which had been under consideration for over a year, was not made; but some equipment was temporarily transferred to Bekasi, and some exploratory wells were drilled for rural water supply. The training of sanitary inspectors and rural sanitarians was continued with the help of the Department of Sanitary Engineering and WHO personnel. The latter also continued the latrine and well construction programme up to April 1959 when the WHO sanitary engineer and the sanitarian left the project. The port health sanitarian continued his work until the end of the year, when his contract terminated. The one-year course for port sanitarians has been completed.</td>
</tr>
<tr>
<td>Indonesia 25</td>
<td>TA</td>
<td></td>
<td>Vital and Health Statistics (Aug. 1955 - )</td>
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<td><em>Aim of the project.</em> To expand the statistical organization in the Ministry of Health and train key members of the statistical staff; to develop a long-range statistical programme with a sound system of reporting for notifiable diseases, hospital services and general vital and health statistics; to develop an up-to-date service of vital and health statistics for planning and evaluation of health programmes.</td>
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<td><em>Assistance provided by WHO during the year.</em> (a) A health statistician; (b) supplies and equipment.</td>
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<td><em>Probable duration of assistance.</em> Until the end of 1959.</td>
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<td><em>Work during the year.</em> Work continued on improvement of vital registration and extension of the system to new areas. Vital statistics returns for the Indonesian population appeared for the first time in the 1957 Demographic Year Book; they covered certain regencies in Java only, the number ranging from 56 in 1952 to 93 in 1956. Tabulation of the 1956 cause-of-death certificates was completed and the revision of the medical certificate was undertaken. Other work begun was the compilation of data for the 1957 public health statistics report and the processing of a random sample of morbidity data from polyclinics. Training was given to several categories of auxiliary staff, including a three months’ course for statistical assistants. Statistical advice and assistance were given to the Institute of Nutrition, the Malaria Institute, the WHO-assisted environmental sanitation and trachoma projects, and to other institutes.</td>
</tr>
</tbody>
</table>
The Work of WHO, 1959

<table>
<thead>
<tr>
<th>Project No.</th>
<th>Description</th>
<th>Source of Funds</th>
<th>Co-operating Agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia 27</td>
<td>Strengthening of Health Services (Health Education) (Feb. 1957 - )</td>
<td>TA</td>
<td>Indonesia 27</td>
</tr>
<tr>
<td></td>
<td>Aim of the project. To develop and expand the health education programme and training in health education for all categories of health workers; to develop and increase the use of health education materials, including audio-visual aids.</td>
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<td></td>
<td>Assistance provided by WHO during the year. (a) A health educator; (b) supplies and equipment.</td>
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<tr>
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<td>Probable duration of assistance. Until 1963.</td>
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<tr>
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<td>Work during the year. The health educator completed a two-year assignment in June. She assisted the Sub-Department of Health Education in the Ministry of Health, and advised on training programmes for all categories of health personnel and community workers. Two national health educators, who had received WHO fellowships for training overseas, served as counterparts to the WHO health educator, and after her departure, continued and further developed the work started. Action was taken to appoint a successor to the health educator.</td>
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</table>

| Indonesia 29 | Strengthening of Health Services (Epidemiology) (Dec. 1958 - ) | TA | Indonesia 29 |
|             | Aim of the project. To set up an epidemiological unit in the Ministry of Health which will determine the prevailing disease pattern and plan appropriate measures for control; to advise all branches of the medical sciences on the use of the epidemiological method. | | |
|             | Assistance provided by WHO during the year. (a) An epidemiologist; (b) supplies, equipment and transport. | | |
|             | Probable duration of assistance. Until the end of 1963. | | |
|             | Work during the year. The main tasks of the epidemiologist were to develop contacts with the administrative, preventive, diagnostic and curative services to explain the objectives and functions of the epidemiological unit and to advise on the administrative structure under which it could best develop. A study was begun of the existing system for reporting communicable disease, and the introduction of standard criteria of diagnosis for reportable diseases was considered. The epidemiological unit started a monthly epidemiological bulletin which summarizes the information received from the provinces and comments on reports of special interest. There has been a marked improvement in the system of reporting. Epidemiological investigations were carried out on smallpox and diphtheria in Djakarta, on poliomyelitis in the island of Bangka and also on the major influenza epidemic that occurred in the country during 1959. Assistance was given in preparing a plan for country-wide smallpox control. | | |

| Indonesia 30 | Dental Health (April - June 1955; Sept. 1959 - ) | R | Indonesia 30 |
|             | Aim of the project. To upgrade undergraduate dental education in Airlangga University. | | |
|             | Assistance provided by WHO during the year. A visiting professor of dentistry. | | |
|             | Probable duration of assistance. Until the end of 1961. | | |
|             | Work during the year. The professor studied the national plans for organization of dental services in Djakarta and later training given at the Dental Faculty, Airlangga University. He left at the end of October. | | |

| Indonesia 32 | Malaria Eradication (May 1955 - ) | MESA TA (ICA) | Indonesia 32 |
|             | Aim of the project. To eradicate malaria throughout the country in progressive stages, and completely before the end of 1969. | | |
|             | Assistance provided by WHO during the year. (a) Ten malarialogists, two entomologists, nine assistant malarialogists, three sanitarians, an administrative officer and a secretary-stenographer; (b) a six-month international fellowship; (c) transport, supplies and equipment. | | |
|             | Probable duration of assistance. Until 1969. | | |
|             | Work during the year. See page 76. | | |

| Indonesia 34 | Assistance to Medan Medical School (Sept. 1956 - ) | R | Indonesia 34 |
|             | Aim of the project. To upgrade the Departments of Anatomy, Physiology and Pharmacology at the Medan Medical School and to develop curricula in those subjects; to improve the pre-clinical training programme; to train national counterparts. | | |
Project No. | Description
--- | ---
Indonesia 40 | Vaccine and Sera Production (April 1959)

**Aim of the project.** To advise on the production of antisera.

**Assistance provided by WHO during the year.** (a) A consultant for three weeks; (b) a three-and-a-half-month international fellowship.

**Work done.** The consultant advised the Pasteur Institute, Bandung, on techniques for the production, purification and concentration of antisera. A fellowships programme was started for the special training of national personnel at the Institute.

Indonesia 41 | Nursing Adviser (Oct. 1957 - )

**Aim of the project.** To strengthen, expand and co-ordinate programmes for training all categories of nursing and midwifery staff, and to establish a Division of Nursing.

**Assistance provided by WHO during the year.** (a) A nursing adviser; (b) a twelve-month international fellowship.

**Probable duration of assistance.** Until the end of 1962.

**Work during the year.** Nineteen public health nurses and twelve midwife teachers graduated from the Post-graduate School of Nursing in February. The needs of the curriculum for the two-year course at the Post-basic School, Bandung, were studied and recommendations made. Plans were prepared for a two-year qualifying course for "old-type" nurses. The nursing adviser and her counterpart were transferred to Djakarta in February to assist the Planning Board of the Ministry of Health, pending the establishment of a Nursing Division. Assistance was given in preparing job descriptions for the various categories of public health nursing personnel.

The nursing adviser left the project at the end of July. A replacement was being recruited.

Indonesia 45 | Assistance to Faculty of Medicine, Surabaya (Pharmacology) (Sept. 1957 - )

**Aim of the project.** To upgrade the Department of Pharmacology at the University of Surabaya and to improve teaching and training facilities.

**Assistance provided by WHO during the year.** (a) A professor of pharmacology; (b) supplies and equipment.

**Probable duration of assistance.** Until the end of 1959.

**Work during the year.** The professor of pharmacology continued his teaching programme. His counterpart returned in September from fellowship studies abroad. The study of pharmacology has been extended to two years, and there are four teacher-assistants in the Department.

The Faculty of Medicine, Surabaya, is entering into an affiliation with the University of California, which was formerly associated with the Faculty of Medicine at Djakarta, for a term of five years.

Indonesia 48 | Fellowships

**Dentistry.** A twelve-month fellowship for study in the United States of America.

**Filarialis control.** Two two-week fellowships for study in Kuala Lumpur.

**Nursing.** A twelve-month fellowship for study in Australia, Singapore and Malaya and another twelve-month fellowship for study in Australia.

**Paediatrics.** A nine-month fellowship for study in Europe.

**Tuberculosis.** A one-month fellowship for study in India.
Indonesia 55

**TA**

**Description**

**Strengthening of Health Services (Sept. 1959 -)**

*Aim of the project.* To plan improvements to the health services; to evaluate health work, particularly all aspects of the training of personnel; to study staffing patterns and formulate administrative procedures.

*Assistance provided by WHO during the year.* A vehicle.

*Probable duration of assistance.* Until the end of 1964.

*Work during the year.* Pending recruitment of a public health administrator, the WHO Area Representative in Indonesia assumed this function, in addition to his normal duties.

Indonesia

**Participation in Inter-country Projects**

See SEARO 6; SEARO 22; WPRO 60; WPRO 63; WPRO 78; Inter-regional 23.

Maldive Islands 4

**TA**

**Fellowships**

*Nursing.* A twelve-month fellowship for study in India.

Maldive Islands 5

**R**

**MESA (ICA)**

**Public Health Administration (Oct. 1959 -)**

*Aim of the project.* To study the health situation and to train health assistants for the future health service.

*Assistance provided by WHO during the year.* A public health officer.

*Probable duration of assistance.* Indefinite.

*Work during the year.* The public health officer made a study for the project in Delhi and Colombo before going to the Maldive Islands early in December.

Nepal 1

**R**

**MESA (ICA)**

**Malaria Eradication (June 1954 -)** (Extension of former malaria control project, Rapti Valley)

*Aim of the project.* To eradicate malaria throughout the country in progressive stages, and completely before the end of 1966.

*Assistance provided by WHO during the year.* (a) Three malariologists, three entomologists, two sanitarians, an administrative officer, three auxiliary workers and three secretary-stenographers; (b) a twelve-month international fellowship and a two-month regional fellowship; (c) vehicles, supplies and equipment, and two prefabricated aluminium houses for WHO staff stationed at Amlekganj.

*Probable duration of assistance.* Until 1966.

*Work during the year.* The eradication programme in Nepal started in December 1958 as a tripartite enterprise of the Government, ICA and WHO. The plan provides for a progressive and phased expansion of malaria eradication in the country, beginning in the middle zone with approximately 3 000 000 people. This zone was divided into three sectors, in each of which national and international personnel made the pre-eradication survey, including geographical reconnaissance. The national and international personnel carried out an intensive training programme in which 194 personnel were trained in groups in Kathmandu and in the field. The malariologists and entomologists have been sent with fellowships from WHO and ICA, for international training courses in Jamaica or Delhi. A feature of the programme is an autonomous Malaria Eradication Board, with the Minister of Health as the Chairman, the national Director of the Eradication Service as secretary and international staff as advisers. Subject to the general policy direction of this Board, a programme committee, consisting of the national Director, advised by the malariologists and other members of ICA and WHO, directs and co-ordinates the programme in the field. This committee is advised by a WHO administrative officer through the senior WHO malariologist.

The Rapti Valley areas were sprayed in 1959, before the start of the eradication programme, and further areas were added for spraying on the basis of information obtained in the pre-eradication survey. The areas sprayed in 1959 include a belt within five miles of the India/Nepal border in the southern sector of the middle zone of Nepal.

Nepal 2

**TA**

**Training of Nurses, Kathmandu (Nov. 1954 -)**

*Aim of the project.* To train nurses for institutional, domiciliary and public health work.

*Assistance provided by WHO during the year.* (a) Three nurse tutors; (b) supplies, equipment and a vehicle.

*Probable duration of assistance.* Until the end of 1962.
### Training of Health Assistants, Kathmandu (June 1955 - )

**Aim of the project.** To establish a school for health assistants in Kathmandu to give theoretical and practical training; to plan a programme of rural health services which will make the best use of the health assistants.

**Assistance provided by WHO during the year.** (a) A medical officer (public health specialist) and a sanitarian; (b) fourteen one-month regional fellowships; (c) supplies and equipment.

**Probable duration of assistance.** Until the end of 1964.

**Work during the year.** The final examination of the first-year class and the final Health Assistants’ Certificate examination of the second-year class were held in January. Twelve students who qualified in this examination and two others who had qualified previously were sent to the Orientation and Training Centre at Najafgarh (Delhi) with a month’s fellowship, for field training in rural health work. There were thirty students in the next first-year group. The second-year students continued to receive clinical teaching daily in the Bir Hospital.

Plans to establish a public health practice field at Bhaktapur did not mature. The sanitarian arranged demonstration visits, and a demonstration centre was set up at the school.

### Assistance to Central Health Directorate (Aug. 1957 - )

**Aim of the project.** To organize the work of the Central Health Directorate and to develop short-term and long-term health plans to meet the country’s basic health and medical problems.

**Assistance provided by WHO during the year.** (a) A public health adviser and an administrative assistant; (b) supplies and equipment.

**Probable duration of assistance.** Indefinite.

**Work during the year.** The public health adviser submitted proposals on certain aspects of the cholera epidemic which broke out in the Nepal Valley towards the end of 1958, including measures for combating the epidemic and machinery for organizing future prophylactic and control measures. He also made suggestions for the reorganization of the offices of the Ministry of Health and the Directorate of Health Services.

It is urgently necessary to provide a public health practice field for health assistants and nurse trainees, and consideration is being given to starting a semi-urban public health service and appointing demonstrators in the Health Assistants’ Training School.

### Fellowships

**Basic medicine.** A five-year fellowship for study in India.

**Nursing (midwifery).** Fourteen twelve-month fellowships for study in India.

### Participation in Inter-country Projects

See Inter-regional 23.

### Fellowships

**Mental health.** A twelve-month fellowship for study in India.

**Sanitary engineering.** A twelve-month fellowship for study in the United States of America.

### Fellowships

**Anaesthesiology.** A twelve-month fellowship for study in Denmark.
### Project No. Source of Funds Co-operating Agencies

<table>
<thead>
<tr>
<th>Description</th>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Co-operating Agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Portuguese India 7 TA</strong></td>
<td><strong>Nursing Education (Oct. 1959 - )</strong></td>
<td></td>
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</tr>
<tr>
<td><strong>Aim of the project.</strong> To upgrade and expand the training of nurses for institutional and public health nursing services; to establish a central nurse training school. <strong>Assistance provided by WHO during the year.</strong> A twelve-month international fellowship. <strong>Probable duration of assistance.</strong> Until 1964.</td>
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<tr>
<td><strong>Portuguese India Participation in Inter-country Projects</strong></td>
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<tr>
<td><strong>See EURO 52.</strong></td>
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<tr>
<td><strong>Thailand 2 TA UNICEF</strong></td>
<td><strong>Yaws Control (May 1950 - )</strong></td>
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<tr>
<td><strong>Aim of the project.</strong> To carry out systematic control of yaws throughout the country; to reduce the reservoir of infection to a level at which the disease can be controlled by rural health authorities; to train local personnel; to incorporate yaws control in the permanent public health services. <strong>Assistance provided by WHO during the year.</strong> (a) A yaws specialist; (b) supplies and equipment. <strong>Probable duration of assistance.</strong> Until the end of 1963.</td>
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<tr>
<td><strong>Work during the year.</strong> The campaign progressed satisfactorily. Some of the important points were: (a) the re-establishment of thirty-one field teams and their re-deployment in areas of priority, which produced a greater concentration of effort and better supervision; (b) gradual conversion of the team members into multi-purpose workers; (c) integration of yaws control into existing rural health centres in five provinces; (d) re-centralization of the administration of the treponematoses control programme; (e) completion of the training course for forty-eight health workers at the Rajburi School; (f) final arrangements for the proposed co-operation and exchange of training facilities between the yaws and the leprosy control projects; and (g) simplification of the record system.</td>
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<tr>
<td>By the end of August forty-five provinces had been covered by the campaign, 17 556 858 people had been examined at initial treatment surveys, resurveys and in the clinics, and 1 333 170 patients had been treated.</td>
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<tr>
<td><strong>Thailand 17 R</strong></td>
<td><strong>Mental Health (March 1955 - Feb. 1957; Nov. 1958 - Feb. 1959)</strong></td>
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<tr>
<td><strong>Aim of the project.</strong> To improve and develop mental health services and train all categories of mental health workers. <strong>Assistance provided by WHO during the year.</strong> A short-term consultant. <strong>Work done.</strong> The psychologist provided by WHO completed his contract in February 1957 and since then work has been continued by Thai personnel. In November 1958 a consultant was assigned by WHO for three months to study the organization of mental health services, the conditions in the country’s five mental hospitals, and the training in psychological medicine given to medical undergraduates and nurses.</td>
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<tr>
<td><strong>Thailand 21 TA</strong></td>
<td><strong>Nursing Education (April 1954 - )</strong></td>
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<tr>
<td><strong>Aim of the project.</strong> To co-ordinate, expand and upgrade the undergraduate and post-graduate nursing education programmes to meet the needs of the country, and to improve nursing services, particularly in institutions that are used for teaching. <strong>Assistance provided by WHO during the year.</strong> (a) Two nurse educators; (b) two two-year international fellowships. <strong>Probable duration of assistance.</strong> Until the end of 1962.</td>
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<tr>
<td><strong>Work during the year.</strong> A rotation plan for theoretical and clinical experience and a block system of nursing education were introduced in the School of Nursing of the Women’s Hospital, Bangkok. Much assistance in administration, reorganization and supervision was given to the Paediatric Department. A nursery for new-born babies and one for homeless babies were set up and nursing care was organized. The Children’s Hospital was helped to determine nursing routines and ward procedures, and changes were introduced in the nursing aspects of hospital administration. Plans were prepared for isolation wards and for central supply services. The second nurse educator joined the project in July.</td>
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</tbody>
</table>
Rural Health Programme (Nursing Supervision) (May 1954 - Dec. 1958)

**Aim of the project.** To develop the nursing and midwifery aspects of rural health services; to provide adequate guidance and supervision of nursing and midwifery services.

**Assistance provided by WHO during the year.** A public health nurse midwife.

**Work done.** During the course of the project, the public health nurse midwife visited twenty-five provinces, most of which had national nursing supervisors, whom she advised on methods of supervision. One centre was chosen for demonstration of a simple plan of work, including a weekly antenatal session and a child-care and immunization session. As a result of these visits the importance of supervision was better appreciated and team work was improved.

The nurse also helped with the revision of the refresher courses for midwives, the preparation of a country-wide scheme for the training and supervision of indigenous midwives, and the revision and preparation of reports and records; and assisted the Working Committee on Public Health Nursing to draw up job descriptions for all categories of nursing and midwifery personnel.

A plan of organization, including staff requirements, was prepared for the new Division of Public Health Nursing in the Department of Health.

The WHO nurse completed her assignment in December 1958. The activities of the project are being continued by the Public Health Nursing Division.

**Evaluation.** Perhaps the main achievement of the project has been to show how real is the need for supervision in nursing and midwifery in Thailand. For years nursing and midwifery staffs have been working with no professional guidance and little contact with one another. The importance of supervision is now fully appreciated, as well as the need to train carefully selected personnel for supervisory posts. A realistic supervisory system has been introduced in the provinces and considerable improvements in records and record supervision have been secured.

Leprosy Control (Oct. 1955 - )

**Aim of the project.** To organize a pilot project in Khon Kaen Province for demonstrating modern methods of leprosy control, with emphasis on case-finding, domiciliary treatment and surveillance of contacts; to train personnel; to extend the control programme to other parts of the country.

**Assistance provided by WHO during the year.** Two leprologists and a leprosy control officer.

**Probable duration of assistance.** Until the end of 1961.

**Work during the year.** The leprosy control work under the guidance of the WHO leprologist was extended to three more provinces. In the original pilot area of Khon Kaen Province, where the case prevalence is 1.5 per cent., the work is being consolidated, and the special teams are being gradually withdrawn. To provide for further expansion of leprosy control services, a training school has been set up and WHO has provided another leprologist and a leprosy control officer to assist with training and field supervision.

Vajira School of Nursing, Bangkok (Aug. 1957 - June 1959)

**Aim of the project.** To upgrade the education programme of the School of Nursing and the nursing services at the Vajira Hospital, with particular reference to midwifery.

**Assistance provided by WHO during the year.** A nurse educator.

**Work done.** During the two years of WHO’s assistance to the project, nursing procedures in the labour rooms, lying-in rooms and nurseries at the Vajira Hospital were discussed; the duties of graduate nurses were defined, and some improved nursing techniques were tried out.

Improved techniques were introduced in the wards. Follow-up post-natal visits to mothers and babies discharged from the Hospital on the third day were started. Procedures for nursing in the maternity wards and for nursing of premature babies were revised.

Specialized courses for post-graduate students were arranged, and a short course on midwifery was given to future midwifery teachers. Domiciliary training for fourth-year students was planned and outlines for the midwifery course were prepared.

The activities of the project have been continued by the national staff since the withdrawal of the WHO nurse in June 1959.

**Evaluation.** Achievements in the Maternity Department were disappointing, but a basis was laid for improved nursing care. One of the great needs is to increase the number of home deliveries and thus ease the burden in the hospital and make more beds available for other cases. The public health
sector was well developed and the total teaching programme in the School of Nursing showed much improvement. There are now three qualified tutors in the School, which may mean that the actual teaching will soon be increased, thus implementing one of the first recommendations of the WHO nurse educator.

Thailand 36


**Aim of the project.** To survey the nutritional situation; to investigate the problem of endemic goitre and beriberi.

**Assistance provided by WHO during the year.** A medical nutritionist.

**Work done.** WHO assistance was concentrated on three main objectives: assessment of the incidence of endemic goitre; examination of the incidence of beriberi and consideration of control measures; evaluation of the general nutritional status.

It was not possible to make fully reliable estimates, because of imperfections in the collection of statistical data and difficulties in carrying out surveys. From the evidence adduced, it appeared that the incidence of all stages of goitre in the four northern provinces varied from 19 to 54 per cent. The overall incidence of beriberi was thought to be between 1 and 2 per cent. The incidence in adults appeared relatively greater than in children, possibly because of the widespread use of high thiamin-content bananas in infant feeding. In many areas the nutritional status was satisfactory; in others it was marginal and in some frankly bad.

**Evaluation.** The project was first conceived with fairly broad objectives, but when national resources in personnel and equipment were known, it became apparent that these aims were too ambitious. Hence it was not possible to formulate a national nutrition programme, although some work was done to prepare the possible lines of advance. Control of goitre by the use of iodized salt is possible, but formidable administrative difficulties would have to be overcome. Better case-reporting, health education and increased production and consumption of pulses might reduce beriberi and improve the general nutritional status.

Thailand 37

**Vital and Health Statistics (Aug. 1957 - July 1959)**

**Aim of the project.** To strengthen the Division of Vital Statistics by developing health statistics and improving the system of reports from rural services.

**Assistance provided by WHO during the year.** A health statistician.

**Work done.** A punch-card for centralized processing of vital statistics returns was designed. A study was made of a sample of rural death certificates to discover what additions to the existing Thai alphabetical list were required. An investigation was made into differences in cause-of-death reporting by type of certifier.

A new form of monthly activities report from rural health centres was introduced on a trial basis. Returns received were checked and revisions in the form recommended.

**Evaluation.** The project is an example of timely assistance to a national statistical service. Although lack of space and shortage of personnel persisted, staff were trained in the new techniques required when centralized processing is introduced. New electronic computer equipment was installed. An outbreak of cholera in 1958 subjected the reporting system to a severe test; the statistician recommended improvements in the reporting of infectious diseases, and supplied the Government with figures on the cholera outbreak from his own records. The annual statistical report was reviewed carefully and revisions (such as the submission of separate cause-of-death statistics) were suggested. Many other statistical improvements were introduced.

Thailand 38

**School of Public Health, Bangkok (Dec. 1955 - March 1956; Dec. 1956 - March 1957; July 1959 - )**

**Aim of the project.** To strengthen the School of Public Health, Bangkok, by advice on various aspects of public health and on the teaching of certain subjects.

**Assistance provided by WHO during the year.** (a) A visiting professor of sanitary engineering; (b) a consultant in health education for two and a half months; (c) a twelve-month international fellowship.

**Probable duration of assistance.** Until the end of 1961.
**Work during the year.** The health education consultant first made a study of the health education training given in the School of Public Health, Bangkok. A large part of her time was devoted to teaching in the health education course for MPH students and to preparing outlines for it. Attention was given to needs and possibilities for field training and to the future development of health education at the School. The consultant’s recommendations have been submitted to the Government.

The visiting professor of sanitary engineering joined the project in September and started teaching in a course for sanitarians and a post-graduate course in public health.

**National Tuberculosis Programme : Pilot Project (First phase: Oct. 1958 - May 1959)**

**Aim of the project.** To carry out a community case-finding and treatment programme in Bangkok, and, later, to develop a tuberculosis programme outside Bangkok, the first stage of which will be a pilot prevalence survey in one province.

**Assistance provided by WHO during the year.** Two consultants (a medical officer and a public health nurse).

**Probable duration of assistance.** Until the end of 1963.

**Work done.** The medical officer carried out a survey of local conditions; a plan of operations based on his report was drawn up for a pilot project of case-finding, treatment and prevention in a limited area of Bangkok. The purposes of the project are (a) to reduce the prevalence of tuberculosis throughout the community, (b) to obtain information on the prevalence of tuberculosis in the area selected and its distribution by sex, age, race, etc., and (c) to train personnel in fundamental survey methods. WHO is to provide a team to assist with this pilot project.

The public health nurse assisted the Government in improving the domiciliary follow-up and treatment scheme which forms part of the services of the Bangkok Tuberculosis Centre.

**Trachoma Control (July 1959 - )**

**Aim of the project.** To survey the endemicity of trachoma in the country and to plan possible control measures.

**Assistance provided by WHO during the year.** (a) A trachoma consultant for six weeks; (b) a two-week regional travel fellowship.

**Probable duration of assistance.** Until the end of 1963.

**Work during the year.** The consultant made epidemiological investigations to determine the pattern and extent of trachoma and bacterial conjunctivitis in Thailand.

**Hospital Statistics (Nov. 1957 - )**

**Aim of the project.** To improve the collection of hospital statistics and to develop training programmes for medical records officers and statistical clerks.

**Assistance provided by WHO during the year.** (a) A statistician; (b) supplies and equipment.

**Probable duration of assistance.** Until the end of 1962.

**Work during the year.** The statistician took up his duties in August 1959. Arrangements have been made for the installation of equipment for processing data.

The Women’s and Children’s Hospitals have been chosen for starting the project work. Study of the in-patient records was begun, but priority was given to work on the out-patient records of the Children’s Hospital. An outline course in medical statistics for the Graduate School of Nursing was prepared. An improved method was devised for distributing hospital costs between in-patient and out-patient departments.

**Fellowships**

*Freeze-dried smallpox vaccine manufacture.* Two two-month fellowships for study in the United Kingdom.

*Malaria eradication.* A three-month fellowship for study in India and a four-month fellowship for study in Jamaica.

*Venereal disease control.* A two-week fellowship for study in India.


*Yaws control.* Two three-week fellowships for study in Indonesia.
**Project No.**

**Source of Funds**

**Co-operating Agencies**

<table>
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<tr>
<th>Thailand 47</th>
<th>Description</th>
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<tbody>
<tr>
<td>TA</td>
<td>Fellowships</td>
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<tr>
<td></td>
<td>Parasitology. A three-month fellowship for study in Japan.</td>
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</tbody>
</table>

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<tr>
<th>Thailand 57</th>
<th>Description</th>
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<tbody>
<tr>
<td>R</td>
<td>Assistance to University of Medical Sciences (School of Tropical Medicine and Endemic Diseases) (Aug. 1959 - )</td>
</tr>
</tbody>
</table>

**Aim of the project.** To organize a School of Tropical Medicine and Endemic Diseases at the University of Medical Sciences, Bangkok, and to prepare the curriculum.

**Assistance provided by WHO during the year.** A consultant in tropical medicine for five weeks.

**Probable duration of assistance.** Further consultant services to be provided in 1961.

**Work during the year.** The consultant examined the needs for specialized teaching in tropical medicine. He visited hospitals, teaching centres and other related institutions in Bangkok and elsewhere. Discussions were held with appropriate individuals and ad hoc groups, and special meetings were arranged for studying the social and economic implications of endemic diseases. His report contains detailed recommendations for the creation and development of the proposed school of tropical medicine and endemic diseases, including an outline for a syllabus. It has been submitted to the Government.

**Thailand**

**Participation in Inter-country Projects**

See SEARO 6; SEARO 7; SEARO 22; WPRO 56; WPRO 60; WPRO 63; WPRO 78; Inter-regional 23; Inter-regional 62.
EUROPE

Travelling Seminar on Public Health Administration, Union of Soviet Socialist Republics (15 Sept. - 17 Oct. 1959)

**Aim of the project.** To enable senior public health administrators from the European Region to visit and study medical and health services in the Union of Soviet Socialist Republics and to exchange ideas and experience.

**Assistance provided by WHO.** (a) A consultant for two months; (b) cost of attendance of twenty-three participants from Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, Finland, France, the Federal Republic of Germany, Iceland, Italy, Monaco, Morocco, the Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, Turkey, the United Kingdom and Yugoslavia.

**Work done.** Visits were made to various medical institutions, medical schools, research establishments, health services in cities and rural areas, and in factories, sanatoria and spas. The itinerary included Moscow, Leningrad, Minsk, Kiev, Yalta and Stalingrad. The seminar ended in Moscow with a visit to the Semashko Institute of Public Health and Medical History, a day of discussions on the impressions gathered during the study tour, and a final meeting at the Academy of Medical Sciences under the sponsorship of the Ministry of Health of the USSR.

Conference on Health and Welfare of Seafarers, Marseilles (16-21 Feb. 1959)

**Aim of the project.** To collect and exchange information on the health and welfare needs of seamen and the services existing for them in Europe.

**Assistance provided by WHO.** (a) A consultant for six weeks; (b) four temporary advisers; (c) cost of attendance of thirteen participants from France, the Federal Republic of Germany, Greece, Italy, the Netherlands, Poland, Portugal, Sweden, Turkey, the Union of Soviet Socialist Republics, the United Kingdom and the United States of America.

**Work done.** See page 81.

Study on Pregnancy Wastage (1953 - )

**Aim of the project.** To promote and co-ordinate the study of pregnancy wastage.

**Assistance provided by WHO during the year.** (a) A consultant for two months; (b) a fellowship of two and a half months for study in the United States of America.

**Work during the year.** The consultant visited Sweden, Denmark, the United Kingdom and Ireland in January and February to study the work planned and in progress. He then went on a fellowship to the United States of America to study similar research carried out there under the auspices of the National Institutes of Health. He spent the month of June in Copenhagen, making also a short visit to Stockholm, and held discussions on further plans for the project. See also page 81.

Conference on the Control of Infectious Diseases through Vaccination Programmes, Rabat (23 - 31 Oct. 1959)

**Aim of the project.** To discuss the planning and execution of mass vaccination campaigns.

**Assistance provided by WHO.** (a) Five discussion leaders; (b) cost of attendance of nineteen participants from Albania, Austria, Belgium, Bulgaria, Czechoslovakia, Finland, France, the Federal Republic of Germany, Greece, Ireland, Italy, Norway, Poland, Portugal, Spain, Sweden, Switzerland, Turkey and Yugoslavia. (See also Morocco 17.)

**Work done.** The work of the conference was based on information collected in almost all countries of the Region and on papers prepared by the discussion leaders and WHO staff. The participants included health administrators and other specialists engaged in vaccination programmes. Practical information and recommendations on vaccines, methods of vaccination, timing and dosage, and prevention of risks and other complications were embodied in a report which was prepared at the end of the conference. The report also contains recommendations on the means by which immunization of the population can successfully be achieved through well-organized vaccination programmes.
Ninth Anaesthesiology Training Course, Copenhagen (Jan. - Dec. 1959)

Aim of the project. To stimulate the development and improve the standards of national anaesthesiology services by training courses for medical personnel.

Assistance provided by WHO. (a) Two lecturers from the United Kingdom; (b) eighteen fellowships to trainees — five from the European Region (Greece, Spain, Turkey and Yugoslavia), two from the African Region (Angola and the Federation of Rhodesia and Nyasaland), one from the Americas (Peru), six from the Eastern Mediterranean Region (Iran, Iraq, Israel, Jordan, Lebanon, and the United Arab Republic (Province of Syria)), one from the South-East Asia Region (Portuguese India) and three from the Western Pacific Region (China, Japan and the Republic of Korea).

In addition six fellowships for this course were awarded under projects Bulgaria 7, Czechoslovakia 8, Germany 16, Poland 13 and USSR 1.

Tuberculosis Training Courses, Istanbul (21 Sept. - 10 Oct. 1959)

Aim of the project. To provide physicians and nurses with post-graduate training in tuberculosis control and in the public health and social aspects of tuberculosis, by two training courses at the International Tuberculosis Training and Demonstration Centre in Istanbul.

Assistance provided by WHO. (a) Three visiting lecturers; (b) thirteen fellowships to physicians and nurses — eleven from the European Region (France (Algeria), Greece, Morocco, Spain and Yugoslavia), one from the African Region (Belgian Congo), one from the Eastern Mediterranean Region (Lebanon).

In addition, fellowships were awarded for the 1959 course under projects in Cameroons, Iran, Somalia and Tunisia.

Rural Public Health Training Course, Uusimaa (7 Sept. - 3 Oct. 1959)

Aim of the project. To provide training in rural health to public health administrators of the European Region, with special regard to newer developments in public health.

Assistance provided by WHO. (a) Four lecturers; (b) fellowships to ten public health administrators from Czechoslovakia, Denmark, Finland, Iceland, Ireland, Norway, Poland, Sweden, the Union of Soviet Socialist Republics, and Yugoslavia.

Work done. The course, which was organized in collaboration with the Finnish Government, was given in English at the Public Health Teaching Area at Uusimaa. The subjects taught were general public health administration, vital statistics, mental health, health education, housing problems in rural areas and maternal and child health. Demonstrations and field visits played an important part.

Meeting of Consultants on Drinking-Water Standards, Copenhagen (23 - 26 Nov. 1959)

Aim of the project. To review the application in Europe of the WHO International Standards for Drinking-Water and the approved methods for analysis; and to suggest modifications, on the basis of the experience in application and of new knowledge made available since the last similar regional meeting in 1956.

Assistance provided by WHO and work during the year. Eleven temporary advisers from Belgium, Czechoslovakia, Finland, France, the Federal Republic of Germany, Greece, Italy, the Netherlands, the Union of Soviet Socialist Republics, the United Kingdom and Yugoslavia met at the Regional Office in Copenhagen to study and discuss the subject and prepare a report.

Assistance to Post-basic Nursing Educational Institutions (1954 - )

Aim of the project. To develop post-basic nursing education, by giving advanced training to nurses, to prepare them for positions of leadership in nursing education and nursing administration.

Assistance provided by WHO during the year. Seven fellowships, in nursing education, public health nursing and nursing administration, to nurses from Belgium, Denmark, Finland, the Federal Republic of Germany, Poland and the United Kingdom. Four were for twelve months' study in the United States of America; one was for four months' study in Finland, Sweden, Denmark and the United Kingdom, one for two-and-a-half months' study in the United States of America, and one for three months' study in Finland, Sweden and the United Kingdom.
**PROJECT LIST: EUROPE**

<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Description</th>
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<tbody>
<tr>
<td>EURO 88.2</td>
<td>R (UN)</td>
<td><strong>Joint WHO/UN Seminar on the Role of Health Workers and Social Workers in meeting Family Needs, Geneva (19 - 24 Oct. 1959)</strong></td>
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<td><strong>Aim of the project.</strong> To study family needs, what health and social workers can do to meet them, and what training they require.</td>
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<td><strong>Assistance provided by WHO.</strong> (a) A consultant for one month, and two temporary advisers—one for six weeks and one for a week; (b) cost of attendance of twelve participants from Austria, Belgium, Denmark, Finland, France, the Federal Republic of Germany, Italy, the Netherlands, Poland, Switzerland, the United Kingdom and Yugoslavia.</td>
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<td><strong>Work done.</strong> The seminar was based on the recommendations of the joint UN/WHO Advisory Group on Social and Medico-social Work which met in Amsterdam in December 1955. The WHO participants included public health administrators, medical and nursing teachers and public health nurses. The United Nations participants, numbering thirteen, included representatives of professional groups in the social field from the countries listed above. The United Nations provided a consultant and a temporary adviser.</td>
</tr>
<tr>
<td>EURO 93</td>
<td>R</td>
<td><strong>Fourth Training Course for Scandinavian Municipal Engineers, Göteborg and Copenhagen (3 - 29 Aug. 1959)</strong></td>
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<td><strong>Assistance provided by WHO and work done.</strong> This course was similar to those held in 1956, 1957 and 1958. Thirteen lecturers from the Scandinavian countries were mainly responsible for the teaching. WHO provided two visiting lecturers—one in sanitary engineering and one in epidemiology—and fellowships for twenty municipal engineers—four from Denmark, six from Finland, five from Norway and five from Sweden.</td>
</tr>
<tr>
<td>EURO 100.6</td>
<td>R</td>
<td><strong>Course on Radiation Protection, Harwell, England (6 - 24 July 1949)</strong></td>
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<td><strong>Aim of the project.</strong> To provide training in radiation protection for officers of public health services.</td>
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<tr>
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<td><strong>Assistance provided by WHO.</strong> Fellowships to twelve trainees from the European Region (Czechoslovakia, Denmark, Finland, the Federal Republic of Germany, Greece, Ireland, the Netherlands, Norway, Sweden, the Union of Soviet Socialist Republics, the United Kingdom and Yugoslavia) and to four from the Eastern Mediterranean Region (Iraq, Israel and the United Arab Republic (Province of Egypt)). In addition, a fellowship for the course was awarded under project Austria 11.</td>
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<td></td>
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<td><strong>Work done.</strong> The course was given at St Peter's Hall, Oxford, and at the Isotope School, Harwell, and was arranged under the auspices of the United Kingdom Ministry of Health and the Atomic Energy Authority, with the co-operation of WHO. In addition to those mentioned above, it was attended by twelve medical officers from the United Kingdom. The regional health officer for environmental sanitation attended the opening meeting.</td>
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<tr>
<td>EURO 100.7</td>
<td>R</td>
<td><strong>Course on Radiation Protection, Saclay (2 - 20 March 1959)</strong></td>
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<td></td>
<td></td>
<td><strong>Aim of the project.</strong> To provide training in radiation protection for officers of public health services.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Assistance provided by WHO.</strong> (a) Two visiting lecturers; (b) fellowships to nine trainees from the European Region (Belgium, Bulgaria, Czechoslovakia, Luxembourg, Poland, Spain, Switzerland and Turkey), to one from the African Region (Belgian Congo) and to two from the Eastern Mediterranean Region (Israel and Lebanon). In addition, a fellowship for the course was awarded under Poland 13.</td>
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<tr>
<td></td>
<td></td>
<td><strong>Work done.</strong> The course was given at the Centre d'Etudes nucléaires, Saclay, and was arranged under the auspices of the French Ecole nationale de la Santé publique and the Commissariat à l'Energie atomique, with the co-operation of WHO. The WHO lecturers spoke on legislation and codes of practice, and on the development of exposure standards. In addition to those mentioned above, the course was attended by nine medical officers of health from France. The regional health officer for environmental sanitation attended the opening meeting.</td>
</tr>
<tr>
<td>EURO 108.2</td>
<td>R</td>
<td><strong>Seminar on the Mental Health of the Subnormal Child, Milan (19 - 30 May 1959)</strong></td>
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<td><strong>Aim of the project.</strong> To discuss the mental health problems of subnormal children and their families, and the help needed to enable these children to find their place in society.</td>
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</tbody>
</table>
|             |                 | **Assistance provided by WHO.** (a) A consultant for six weeks; six lecturers and discussion leaders from France, Italy, Norway, the Union of Soviet Socialist Republics and the United Kingdom; (b) cost of attendance of thirty-eight participants from Austria, Belgium, Bulgaria, Czechoslovakia, Denmark,
Finland, France, the Federal Republic of Germany, Greece, Ireland, Italy, the Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland, the Union of Soviet Socialist Republics, the United Kingdom and Yugoslavia.

Work done. The seminar was conducted in close collaboration with the Provincial Administration of Milan and was held at the Palazzo Isimbardi. It comprised lectures and discussions, and visits for the purpose of examining and discussing the services in Milan and province. UNESCO was officially represented by an observer.

**European Schools and Training Centres of Public Health (Jan. 1956 - )**

**Aim of the project.** To give support to schools of public health and similar training centres in the European Region, especially by means of a programme of exchange of personnel and study visits.

**Assistance provided by WHO during the year.** (a) Two consultants for two months and eight lecturers; (b) twenty-seven fellowships.

**Belgium.** Three visiting lecturers spoke on rickettsioses, treponematoses and nutrition at the Institute for Tropical Medicine, Antwerp.

**France.** Two fellowships were awarded — one of four weeks for the study of public health services in Sweden, and one of five weeks for the study of epidemiology in Italy.

**Luxembourg.** A fellowship of six months was awarded for the study of pneumology in Switzerland.

**Netherlands.** Two visiting lecturers spoke on trypanosomiasis and scientific research as a contribution to public health policy at the Institute of Preventive Medicine, Leyden, and at the Institute of Tropical Medicine, Amsterdam. A two-month fellowship was awarded for the study of social medicine in the United Kingdom.

**Switzerland.** Two lecturers took part in the teaching at the Faculty of Medicine, University of Geneva.

**Turkey.** Two consultants (for two months) and a lecturer taught sanitary engineering and nutrition at the School of Public Health, Ankara. (See also Turkey 16.)

**Yugoslavia.** Twenty-three physicians and veterinarians from the School of Public Health, Zagreb, were awarded three-week fellowships for study in Denmark and the Netherlands, to prepare them for their responsibilities in connexion with a DPH and VDPH course organized by the School.

**Study of Air Pollution Problems (1959)**

**Aim of the project.** To follow up the recommendations for international action made by the Conference on Public Health Aspects of Air Pollution held in Milan in 1957 under WHO sponsorship.

**Assistance provided by WHO and work done.** Member States in the European Region were consulted about the organizations and institutions which carry out research and control work on the public health aspects of air pollution. After this information had been collected two consultants were recruited for one month—one to help with co-operative studies of such work, particularly in relation to instrumentation and methods of air analysis, and the other to advise on the co-ordination of epidemiological studies in various countries (particularly studies of the relation of chronic bronchitis to air pollutants, especially smoke).

**Assistance to Training Institutes for Specialized Sanitation Personnel (1956 - )**

**Aim of the project.** To strengthen the teaching of sanitary engineering by providing lecturers and awarding fellowships to members of the teaching staff; to organize and promote training courses for sanitary engineers.

**Assistance provided by WHO and work during the year.** (a) Four visiting lecturers for a post-graduate refresher course on food microbiology which was held in Lille from 4 to 23 May 1959. This course, the fourth in a series, was organized by the Institut Pasteur, Lille, and formed part of a four-year cycle of courses on various aspects of food microbiology. (b) Fellowships for four Italian engineers to attend a WHO-assisted post-graduate specialization course in sanitary engineering organized by the Institute of Hydrology and Hydraulic Construction of the University of Naples. The course was held from 10 January to 23 July 1959, and nine Italian engineers, including the four WHO fellows, successfully completed it. (c) A visiting lecturer for a one-day conference on sanitary engineering which was organized by the German Federal Ministry of Atomic Energy and Water Management, and held in Bad Godesberg on 10 September 1959.
<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Co-operating Agencies</th>
<th>Description</th>
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<tbody>
<tr>
<td>EURO 118.4</td>
<td>R</td>
<td>(UN)</td>
<td>Prevention of Crime and Treatment of Offenders</td>
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<td>WHO provided a temporary adviser to attend the meeting of the Working Group of the United Nations European Consultative Group on the Prevention of Crime and the Treatment of Offenders in Strasbourg in 1959, at which the problems relating to short-term imprisonment were discussed.</td>
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<tr>
<td>EURO 128.3</td>
<td>R</td>
<td></td>
<td>Assistance to Public Health Laboratories (1959 - )</td>
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<td></td>
<td><strong>Aim of the project.</strong> To help to develop public health laboratories in the European Region so that they may give better service to national health services and administrations; and to promote international collaboration between them.</td>
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<td><strong>Assistance provided by WHO and work during the year.</strong> (a) A temporary adviser for twelve days who advised a laboratory in Czechoslovakia on how to improve the typing of streptococci, so that it could serve as a national and later as an international reference laboratory; (b) a two-month fellowship to a staff member of the Institute of Epidemiology and Microbiology in Prague for study in the United Kingdom.</td>
</tr>
<tr>
<td>EURO 133</td>
<td>R</td>
<td></td>
<td>Conference on the Organization and Administration of Nursing Services, Bad Homburg (11 - 20 Nov. 1959)</td>
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<td><strong>Aim of the project.</strong> To consider problems connected with nursing administration and the functions and training of nurse administrators.</td>
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<td><strong>Assistance provided by WHO.</strong> (a) A consultant in nursing administration for three and a half months, and five lecturers; (b) attendance of forty-one participants from Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, Finland, France, the Federal Republic of Germany, Greece, Ireland, Italy, the Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland, Turkey, the Union of Soviet Socialist Republics, the United Kingdom and Yugoslavia.</td>
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<td><strong>Work done.</strong> The conference was organized in accordance with the recommendations made by the Regional Group on Nursing Administration which met in Geneva in December 1957. In preparation for the conference, the participating countries convened groups to consider the subject and presented reports on the conclusions reached. These reports served as a basis for the working documents. The conference consisted mainly of group discussions; the rest of the time was devoted to lectures and visits of interest to the participants. The conference discussed the preparation which nurses require to enable them to carry out their responsibilities as members of the health team in charge of the planning and administration of nursing services, and reached agreement on the essential principles of the organization and administration of those services.</td>
</tr>
<tr>
<td>EURO 138.1</td>
<td>R</td>
<td></td>
<td>Course in Medical Services Administration, Edinburgh (Dec. 1958 - )</td>
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<td><strong>Aim of the project.</strong> To contribute to the general development of health services in the European Region and elsewhere by establishing a diploma course in medical services administration.</td>
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<td><strong>Assistance provided by WHO during the year.</strong> (a) Seven temporary advisers to attend a planning meeting; (b) a three-month fellowship for study in the United States of America; five one-year fellowships to trainees from Belgium, the Federal Republic of Germany, the Netherlands, Portugal and the United Kingdom.</td>
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<td><strong>Work during the year.</strong> A planning meeting took place in Copenhagen in December 1958, after which the University of Edinburgh agreed to establish, with the assistance of WHO, a course in medical services administration and to institute a Diploma in Medical Services Administration. The course started on 13 October 1959. It is available to students from the United Kingdom and other countries and six places are reserved for WHO fellows. The University of Edinburgh will also carry out research on hospital and medical administration and on suitable methods of teaching this specialty, and will provide a training and research centre for medical or non-medical administrators of modern hospitals and medical services administrations.</td>
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<tr>
<td>EURO 140</td>
<td>R</td>
<td></td>
<td>Training In Health Education of the Public (1958 - )</td>
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<td><strong>Aim of the project.</strong> To prepare personnel for health education work, particularly those who will take up leading posts in national or provincial administrations.</td>
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<td><strong>Assistance provided by WHO during the year.</strong> (a) A lecturer for a week to review and plan health education programmes at the Institute of Education, University of London; (b) two twelve-month fellowships</td>
</tr>
</tbody>
</table>
to enable a physician from Greece and a public health nurse from France to attend the Diploma Course in the Content and Methods of Health Education given at the Institute of Education; and five one-month fellowships to enable three trainees from the United Kingdom and two from Sweden attending the same course to participate in a study tour in Switzerland, Yugoslavia and the Federal Republic of Germany.

**EURO 142**  
Training in Foetal and Neonatal Pathology (1958)

*Aim of the project.* To provide training for pathologists, especially in foetal and neonatal pathology; to contribute to uniformity in pathological techniques in a study on perinatal mortality and allied problems.  

This project was merged with EURO 39.2 in 1959.

*Assistance provided by WHO during the year.* A one-month fellowship to a candidate from the Netherlands for study in the United Kingdom, Sweden and Denmark.

**EURO 144**  
Training in Child Psychotherapy (1957 - )

*Aim of the project.* To strengthen the services for child psychotherapy in certain European countries by providing fellowships and training courses.

*Assistance provided by WHO during the year.* (a) Four temporary advisers who visited Barcelona (one regularly) to train a group in that city; (b) a six-month fellowship to a candidate from Portugal for study in France.

**EURO 154**  
Tuberculosis Control (Nov. 1957 - )

*Aim of the project.* To assist various countries in Europe in making tuberculosis surveys and in evaluating their tuberculosis programmes, so as to develop national tuberculosis services and increase international co-operation in the inter-country tuberculosis control programme in Europe.

*Assistance provided by WHO during the year.* A tuberculosis medical officer and a statistician.

*Work during the year.* The medical officer and the statistician advised the Governments of Czechoslovakia, Poland and Turkey on tuberculosis control, particularly on prevalence surveys for the purpose of establishing reliable statistics of tuberculosis morbidity. Attempts to increase the comparability of tuberculosis morbidity statistics within the European Region were continued; a questionnaire on tuberculosis statistics was sent to all the Member States of the Region and a preliminary analysis of the replies was prepared.

**EURO 158.2**  
Conference on Trachoma, Tunis

*See EMRO 40.*

**EURO 162**  
Public Health Nursing Training Course, Soissons (6 April - 30 May 1959)

*Aim of the project.* To promote the development of public health nursing in Europe, by an intensive training course in the subject.

*Assistance provided by WHO.* (a) A consultant in public health nursing for two and a half months to assist in the organization and conduct of the course; and a temporary adviser in health education of the public for a week; (b) fellowships to nine trainees from Austria, Bulgaria, Czechoslovakia, Greece, Poland, Portugal, Spain and Yugoslavia. In addition, three fellowships for the course were awarded under Morocco 9.

*Work done.* The course was planned as a follow-up of the Conference on Public Health Nursing which took place in Helsinki in August 1958. It included theoretical and practical instruction, study visits and field demonstrations organized to meet the special interests and needs of the students. The programme centred on the comprehensive health services required to meet family health needs, and provided the trainees with ample opportunities of obtaining information on matters of interest to them.

**EURO 163**  

*Aim of the project.* To study the contribution of the industrial medical officer to the psycho-social environment in industry.

*Assistance provided.* (a) Fourteen temporary advisers from Austria, Belgium, France, the Federal Republic of Germany, Italy, the Netherlands, Poland, Sweden, the Union of Soviet Socialist Republics and the United Kingdom; (b) two lecturers.
PROJECT LIST: EUROPE

<table>
<thead>
<tr>
<th>Project No.</th>
<th>Description</th>
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<tr>
<td>EU 170</td>
<td>Travelling Seminar on Maternal and Child Health, Norway and Poland (3 - 23 June 1959)</td>
</tr>
<tr>
<td>EU 173</td>
<td>Conference on Mental Hygiene Practice, Helsinki (24 June - 3 July 1959)</td>
</tr>
<tr>
<td>EU 175</td>
<td>Meeting of Consultants on Medical and Public Health Aspects of Radiation, Copenhagen (1 - 4 April 1959)</td>
</tr>
<tr>
<td>EU 177.1</td>
<td>Training Course on Pest and Rodent Control, Amsterdam and Liverpool (3 Aug. - 1 Sept. 1959)</td>
</tr>
</tbody>
</table>

**Work done.** The conference was organized jointly by ILO and WHO. The European Economic Community, European Coal and Steel Community and European Productivity Agency, as well as the United Kingdom Ministry of Labour, were invited to send observers. A large industrial company contributed the services of one of its medical staff members who served as consultant to the conference. During the discussions, useful information was collected on the functions of the industrial medical officer in connexion with the psycho-social environment in industry in the participating countries.

**Travelling Seminar on Maternal and Child Health, Norway and Poland (3 - 23 June 1959)**

**Aim of the project.** To study the organization of maternal and child health services in two countries of the Region.

**Assistance provided by WHO.** (a) A consultant for one month; (b) cost of attendance of twenty-five participants from Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, Finland, France, the Federal Republic of Germany, Greece, Ireland, Italy, Morocco, the Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, Turkey, the Union of Soviet Socialist Republics, the United Kingdom and Yugoslavia.

**Work done.** See page 81.

**Conference on Mental Hygiene Practice, Helsinki (24 June - 3 July 1959)**

**Aim of the project.** To discuss the principles and practice of mental hygiene, with particular reference to community psychiatric services, national mental health administration, training of physicians and nurses, and health education of the public in principles of mental health.

**Assistance provided by WHO.** (a) A consultant for two months; five temporary advisers from Finland, France, the Netherlands and the United Kingdom; (b) cost of attendance of forty-three participants from Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, Finland, France, the Federal Republic of Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Morocco, the Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, Turkey, the Union of Soviet Socialist Republics, the United Kingdom and Yugoslavia.

**Work done.** Most of the work of the conference was conducted in small groups and committees. Reports were made on the organization of community psychiatric services, the problems of national mental administration, teaching in medical schools, the training of public health nurses, and health education of the public in principles of mental health. They are to be included in a general report covering the whole field.

**Meeting of Consultants on Medical and Public Health Aspects of Radiation, Copenhagen (1 - 4 April 1959)**

**Aim of the project.** To study the public health and medical aspects of the peaceful uses of ionizing radiation; to make recommendations for WHO's programme in this field in Europe.

**Assistance provided by WHO and work done.** Eight temporary advisers, specialists in various disciplines related to the subject, met with an observer from the International Atomic Energy Agency and representatives of the staff of WHO headquarters and the Regional Office for Europe. The temporary advisers reviewed present problems, the technical measures required to deal with them, and existing legislation; and considered the principles of the organization and administration of control services, including the types and training of personnel needed for their operation. Suggestions were made regarding the content of the long-term programme of the WHO Regional Office for Europe in this connexion. A document giving the views and conclusions of the meeting was prepared for the ninth session of the Regional Committee for Europe.

**Training Course on Pest and Rodent Control, Amsterdam and Liverpool (3 Aug. - 1 Sept. 1959)**

**Aim of the project.** To give additional training in the application of control measures against insects and rodents to persons already possessing some knowledge of the subject.

**Assistance provided by WHO.** (a) A consultant for one month and a lecturer; (b) eleven fellowships to trainees from Greece, Spain, Turkey and Yugoslavia.

**Work done.** The course was given in the Institute of Tropical Hygiene and Geographical Pathology (Royal Tropical Institute) in Amsterdam, and in the School of Tropical Medicine and School of Public Health, University of Liverpool. It was followed by a two-day visit to London, where demonstrations and discussions took place in the Port and in the Wellcome Institute of Medical Research. The main subjects taught were entomology, malaria, leptospiroses, rickettsioses, insect control and pest control. The course included demonstrations and field visits to various parts of the Netherlands and the United Kingdom.
European Technical Conference on Food-borne Infections and Intoxications, Geneva (16 - 21 Feb. 1959)

Aim of the project. To review public health problems connected with food-borne diseases, with special reference to diagnosis and epidemiological investigation; to consider how best to control food-borne diseases at the national level, and how international co-operation can be established.

Assistance provided by WHO. (a) A consultant for one month; (b) ten temporary advisers from Denmark, France, Greece, Italy, the Netherlands, Norway, Poland, Switzerland, the Union of Soviet Socialist Republics and the United Kingdom.

Work done. The main subject discussed was the control and prevention of food-borne diseases. The incidence of food-borne diseases in Europe was reviewed and an attempt was made to assess the magnitude of the problem. The subject was examined in the light of international trade in food, and its control, bearing in mind the importance of food imports from Europe and other parts of the world. The conference considered how public health administrations, hospital services and laboratories in each country could co-operate in detecting and combating these diseases. A representative of FAO attended as observer.

Cardiovascular Diseases (1958 -  )

Aim of the project. To study, in five countries of the European Region, the statistical aspects of registration, processing, interpretation and reporting of deaths from arteriosclerotic and degenerative heart diseases.

Assistance provided by WHO during the year. (a) A temporary adviser; (b) cost of attendance at a planning meeting of five participants from Denmark, France, Sweden and the United Kingdom.

Work during the year. The study was undertaken as a follow-up of the recommendations of the Regional Group on Cardiovascular Diseases which met in Copenhagen in April 1958. A planning group was convened in June 1959, also in Copenhagen, to evaluate the progress of the study, and to discuss ways of extending it to the epidemiological and pathological fields.

Participation in Seminars and Conferences of the United Nations and other Agencies

Organization for European Economic Co-operation/European Productivity Agency

The regional officer for occupational health and a temporary adviser attended as observers an international conference on "Fitting the Job to the Worker" organized by the European Productivity Agency and held in Zurich from 2 to 7 March 1959. The aim of this conference was to present to the employers' and workers' representatives the purposes, methods, techniques and results of the biological sciences applied to the science of ergonomics. The meeting was attended by some two hundred participants including forty physicians, representing thirteen European countries.

United Nations Technical Assistance Administration

WHO provided the services of two temporary advisers, one to attend the planning meeting, which was held in London on 1 and 2 December 1958, and the other to prepare a document on the medico-social aspects of urbanization and serve as discussion leader at the United Nations European Seminar on Community Development and Social Welfare in Urban Areas, held in Bristol from 12 to 22 September 1959. This activity was organized by the European Office of the United Nations Technical Assistance Administration within the framework of the United Nations Special European Social Welfare Programme, to study the problems of community development in towns and especially in newly-urbanized areas.

International Association of Gerontology

WHO was represented by an observer at a congress which was organized by the European Clinical Section of the International Association of Gerontology and which took place in Nancy and Vittel from 25 to 28 June 1959.

European and Mediterranean Plant Protection Organization

A WHO temporary adviser attended a working party on the use of chemical products for the control of diseases and pests (including weeds) of agricultural crops. The working party, which met in Vienna from 29 September to 1 October, was organized by the European and Mediterranean Plant Protection Organization, in consultation with FAO.
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<thead>
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<th>Project No.</th>
<th>Description</th>
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<th>Co-operating Agencies</th>
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<tr>
<td>EURO 185</td>
<td>Follow-up of Inter-Country Activities on a National Basis (1958 - )</td>
<td>R</td>
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<tr>
<td></td>
<td><strong>Aim of the project.</strong> To assist governments in developing national activities arising out of the inter-country programme of the European Region.</td>
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<td><strong>Assistance provided by WHO and work done during the year.</strong> Two lecturers for a national seminar on veterinary public health which took place at Zagreb during the first week of June. The seminar grouped some seventy physicians and veterinarians who discussed zoonoses and the interrelationship of human and animal health.</td>
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<tr>
<td>EURO 186</td>
<td>European Technical Conference on Medical Rehabilitation, Copenhagen (6 - 11 April 1959)</td>
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<td></td>
<td><strong>Aim of the project.</strong> To discuss medical rehabilitation needs and services in the Region; and to consider future developments in medical rehabilitation in the light of the recommendations made by the Expert Committee on Medical Rehabilitation which met in Geneva in February 1958.</td>
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<td><strong>Assistance provided by WHO.</strong> (a) A short-term consultant; two lecturers; (b) eight temporary advisers from Austria, Denmark, France, Greece, Italy, Poland, the Union of Soviet Socialist Republics and the United Kingdom.</td>
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<td><strong>Work done.</strong> The conference discussed European practices and policies for rehabilitation of the disabled; the need for further investigation; rehabilitation after injuries caused by accidents in industry; rehabilitation and assessment of working capacity; rehabilitation in psychiatry; the role of different categories of medical personnel; the rehabilitation team and its leaders, and their training; the organization of medical rehabilitation and related services, and their relationship with welfare, vocational and educational services. During the discussions, which proved very stimulating, practical examples of rehabilitation services in Europe were given. A short report, prepared by the consultant and secretariat, was approved at the last meeting. A final report on the conference will be distributed. Two observers, one from the United Nations and one from the International Labour Organisation, attended.</td>
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<tr>
<td>EURO 191.1</td>
<td>Medical and Social Problems of Children suffering from Cancer and Leucoses</td>
<td>R</td>
<td>(International Children's Centre)</td>
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<tr>
<td></td>
<td>WHO provided fellowships for four physicians, from Sweden, Switzerland, the Union of Soviet Socialist Republics and the United Kingdom, to attend the Training Course on Medical and Social Problems of Children suffering from Cancer and Leucoses, organized by the International Children's Centre in Paris from 9 to 20 March.</td>
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<tr>
<td>EURO 191.2</td>
<td>Social Paediatrics</td>
<td>R</td>
<td>(International Children's Centre)</td>
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<tr>
<td></td>
<td>WHO provided fellowships for five physicians, from Czechoslovakia, the Federal Republic of Germany, the Netherlands, Poland and Turkey, to attend the Training Course on Social Paediatrics, organized by the International Children's Centre in Paris from 6 April to 4 July 1959. The course included a study tour in Switzerland and France.</td>
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<tr>
<td>EURO 191.3</td>
<td>Problems of Children deprived of Family Life</td>
<td>R</td>
<td>(International Children's Centre)</td>
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<tr>
<td></td>
<td>WHO provided fellowships for two physicians and a nurse, from Iceland, Italy and Ireland, to attend the Training Course on Problems of Children deprived of Family Life, organized by the International Children's Centre in Paris from 28 September to 17 October 1959.</td>
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<tr>
<td>EURO 191.4</td>
<td>Mother and Child Care</td>
<td>R</td>
<td>(International Children's Centre)</td>
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<td></td>
<td>WHO provided fellowships for a public health administrator and two public health nurses, from Portugal, Czechoslovakia and Poland, to attend the Training Course on Mother and Child Care, organized by the International Children's Centre in Paris from 26 October to 20 December 1959.</td>
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<tr>
<td>EURO 191.5</td>
<td>Prevention and Treatment of Tuberculosis in Childhood</td>
<td>R</td>
<td>(International Children's Centre)</td>
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<tr>
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<td>WHO provided a fellowship for a physician from Spain to attend the Training Course on Prevention and Treatment of Tuberculosis in Children, organized by the International Children's Centre in Paris from 18 May to 6 June 1959.</td>
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<tr>
<td>Project No.</td>
<td>Source of Funds</td>
<td>Description</td>
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<td>Albania 1</td>
<td>Source of Funds</td>
<td>Fellowships</td>
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<td>R</td>
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<td>Albania</td>
<td>Participation in Inter-country Projects</td>
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<td></td>
<td>Source of Funds</td>
<td>See EURO 47.2.</td>
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<tr>
<td>Austria 11</td>
<td>Source of Funds</td>
<td>Fellowships</td>
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<tr>
<td></td>
<td>Austria</td>
<td>Heart surgery. A three-month fellowship for study in Sweden and the United States of America.</td>
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<tr>
<td></td>
<td>R</td>
<td>Infectious diseases. A six-month fellowship for study in the United Arab Republic (Province of Egypt), India and Switzerland.</td>
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<td></td>
<td>Austria</td>
<td>Occupational health. Three fellowships — one of six weeks for study in the Union of Soviet Socialist Republics and Italy, one of six weeks for study in Sweden, and one of two months for study in the United Kingdom.</td>
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<tr>
<td></td>
<td>Source of Funds</td>
<td>Radioactivity and radiation protection. Two fellowships, of two and three months respectively, one for study in the United Kingdom and the Federal Republic of Germany, the other for study in the United Kingdom.</td>
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<tr>
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<td>Source of Funds</td>
<td>Stomach surgery. A one-month fellowship for study in Japan.</td>
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<td></td>
<td>Source of Funds</td>
<td>Tuberculosis rehabilitation. A three-month fellowship for study in the United States of America.</td>
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<tr>
<td>Austria 12</td>
<td>Source of Funds</td>
<td>Maternal and Child Health (Premature Infants) (Oct. 1957 - )</td>
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<td></td>
<td>R</td>
<td>Aim of the project. To strengthen and extend facilities for the care of premature infants.</td>
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<td></td>
<td>UNICEF</td>
<td>Assistance provided by WHO during the year. Six fellowships — three of one month and three of three months — to physicians and nurses for study in the United Kingdom (one), France (one) and the Federal Republic of Germany (four).</td>
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<td></td>
<td>Source of Funds</td>
<td>Work during the year. A plan of operations covering the years 1959 and 1960 was concluded. It aims at converting the centres in Vienna, Graz and Linz into demonstration and training centres, and at establishing service centres in ten other main towns in Austria.</td>
<td></td>
</tr>
<tr>
<td>Belgium 9</td>
<td>R</td>
<td>Fellowships</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cancer surgery. A four-month fellowship for study in the United States of America.</td>
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<tr>
<td></td>
<td>Cobalt therapy. A four-month fellowship for study in the United States of America.</td>
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<tr>
<td>Belgium</td>
<td>R</td>
<td>Participation in Inter-country Projects</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Source of Funds</td>
<td>See EURO 12.5; EURO 47.2; EURO 88.2; EURO 108.2; EURO 133; EURO 162; EURO 163; EURO 170; EURO 173; EURO 186.</td>
<td></td>
</tr>
<tr>
<td>Bulgaria 7</td>
<td>R</td>
<td>Fellowships</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Air pollution. A three-month fellowship for study in the Federal Republic of Germany.</td>
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</tr>
<tr>
<td></td>
<td>Anaesthesiology. A twelve-month fellowship for study in Denmark.</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Communicable diseases. A four-month fellowship for study in the Union of Soviet Socialist Republics.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Project List: Europe

<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Co-operating Agencies</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Construction of medical establishments.</strong> A three-month fellowship for study in the Union of Soviet Socialist Republics.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Dietetics.</strong> A three-month fellowship for study in the Union of Soviet Socialist Republics.</td>
</tr>
<tr>
<td></td>
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<td></td>
<td><strong>Neurology.</strong> A six-month fellowship for study in the Union of Soviet Socialist Republics.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Occupational health.</strong> Two fellowships — one of six months and one of three months — for study in the Union of Soviet Socialist Republics.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Plastic surgery.</strong> A six-month fellowship for study in France.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Radiology.</strong> Two fellowships, of three and four months respectively.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Virology.</strong> A six-month fellowship for study in the Union of Soviet Socialist Republics.</td>
</tr>
</tbody>
</table>

**Bulgaria**

**Participation in Inter-country Projects**

See EURO 12.5; EURO 47.2; EURO 100.7; EURO 108.2; EURO 133; EURO 162; EURO 170; EURO 173.

**Czechoslovakia**

### Fellowships

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anaesthesiology</td>
<td>A twelve-month fellowship for study in Denmark.</td>
</tr>
<tr>
<td>Antibiotics</td>
<td>A three-month fellowship for study in India.</td>
</tr>
<tr>
<td>Atherosclerosis</td>
<td>Two fellowships of four and a half months — one for study in the United Kingdom and Sweden, the other for study in the United Kingdom.</td>
</tr>
<tr>
<td>Biochemistry</td>
<td>Three fellowships — two of three months and one of six weeks — for study in the United Kingdom.</td>
</tr>
<tr>
<td>Cardiology</td>
<td>A one-month fellowship for study in Denmark and Sweden.</td>
</tr>
<tr>
<td>Epidemiology</td>
<td>A four-month fellowship for study in the United Kingdom.</td>
</tr>
<tr>
<td>Health statistics</td>
<td>A one-month fellowship for study in the United Kingdom.</td>
</tr>
<tr>
<td>Immunology</td>
<td>A three-month fellowship for study in Switzerland.</td>
</tr>
<tr>
<td>Laboratory services and methods</td>
<td>Two fellowships, of two and three months respectively — one for study in Italy, the other for study in the United Kingdom.</td>
</tr>
<tr>
<td>Obstetrics</td>
<td>A two-month fellowship for study in France.</td>
</tr>
<tr>
<td>Paediatrics</td>
<td>A six-week fellowship for study in the United States of America.</td>
</tr>
<tr>
<td>Physiology</td>
<td>Two six-month fellowships — one for study in Switzerland and the other for study in Sweden.</td>
</tr>
<tr>
<td>Poliomyelitis vaccine</td>
<td>A six-week fellowship for study in Sweden.</td>
</tr>
<tr>
<td>Rabies vaccine</td>
<td>Two one-month fellowships for study in Austria.</td>
</tr>
<tr>
<td>Radiotherapy</td>
<td>A six-month fellowship for study in the United Kingdom.</td>
</tr>
<tr>
<td>Rehabilitation</td>
<td>A six-week fellowship for study in the Federal Republic of Germany, and Sweden.</td>
</tr>
<tr>
<td>Traumatology</td>
<td>Two fellowships — one of two months for study in the Union of Soviet Socialist Republics, the other of three months for study in Austria.</td>
</tr>
<tr>
<td>Urology</td>
<td>A two-month fellowship for study in France.</td>
</tr>
<tr>
<td>Virology</td>
<td>A four-month fellowship for study in the United Kingdom.</td>
</tr>
</tbody>
</table>

### Assistance to Training Institutes (1959 - )

**Aim of the project.** To develop national institutes for training in medicine and public health.

**Assistance provided by WHO during the year.** Books and laboratory equipment for the Post-graduate Medical Training Institute and medical schools in Czechoslovakia.

### Czechoslovakia Participation in Inter-country Projects

See EURO 12.5; EURO 47.2; EURO 61.2; EURO 66.2; EURO 100.6; EURO 100.7; EURO 108.2; EURO 128.3; EURO 133; EURO 154; EURO 162; EURO 170; EURO 173; EURO 191.2; EURO 191.4; Inter-regional 62.
THE WORK OF WHO, 1959

**Denmark 8**

**Post-graduate Training in Psychiatry (1953 - )**

- **Description:** To assist a national training course for post-graduate specialization in psychiatry.

- **Assistance provided by WHO during the year:**
  - (a) A financial contribution to the Danish Psychiatric Society for the payment of lecturers for the first annual systematic post-graduate course in psychiatry;
  - (b) two three-month fellowships — one for study in the United Kingdom and France, the other for study in the United States of America.

**Denmark 11**

**Fellowships**

- **Food and school hygiene.** A three-month fellowship for study in the United States of America.
- **Mental health.** Two fellowships — one of six months and one of two and a half months — for study in the United States of America.

**Denmark**

**Participation in Inter-country Projects**

See EURO 12.5; EURO 39.2; EURO 52; EURO 61.2; EURO 77; EURO 88.2; EURO 93; EURO 100.6; EURO 108.2; EURO 133; EURO 170; EURO 173; EURO 178; EURO 179.1; EURO 186; Inter-regional 62.

**Finland 12**

**Fellowships**

- **Accidents in childhood.** A two-month fellowship for study in the United Kingdom, the Netherlands and France.
- **Arctic medicine and hygiene.** A two-month fellowship for study in the United States of America.
- **Care of mentally deficient children.** A six-week fellowship for study in Denmark and Switzerland.
- **Child psychiatry.** A three-month fellowship for study in Austria.
- **Clinical chemistry.** Three fellowships, of three months, six weeks and six months respectively, two for study in the United Kingdom and one for study in the Netherlands.
- **Food hygiene.** A two-month fellowship for study in Sweden.
- **Medical services for prisoners.** A three-week fellowship for study in Italy.
- **Mental health.** A six-week fellowship for study in the Federal Republic of Germany and the United Kingdom.
- **Nutrition.** A two-month fellowship for study in the United Kingdom and the Netherlands.
- **Prevention of accidents in industry.** A five-week fellowship for study in Switzerland, the Federal Republic of Germany, France and Sweden.
- **Radioisotopes in medicine.** A two-month fellowship for study in the United Kingdom and the Federal Republic of Germany.

**Finland 14**

**Child Psychiatry (1959 - )**

- **Aim of the project.** To strengthen child psychiatry services.

- **Assistance provided by WHO and work done during the year:** A medical consultant who visited Helsinki for one month to conduct case conferences in child psychiatry, and to lead a seminar on the psychotherapy of children, which was attended by psychiatrists, paediatricians, psychologists and social workers.

**Finland**

**Participation in Inter-country Projects**

See EURO 12.5; EURO 47.2; EURO 61.2; EURO 66.2; EURO 77; EURO 88.2; EURO 93; EURO 100.6; EURO 108.2; EURO 133; EURO 170; EURO 173.

**France 28**

**Fellowships**

- **Blood transfusion services.** Two one-month fellowships — one for study in Denmark and Sweden and one for study in the United Kingdom.
- **Cancer statistics.** A one-month fellowship for study in Israel and Iran.
- **Cancer surgery.** A two-month fellowship for study in the United Kingdom.
### PROJECT LIST: EUROPE

<table>
<thead>
<tr>
<th>Project No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Communicable diseases. A one-month fellowship for study in the Union of Soviet Socialist Republics.</td>
</tr>
<tr>
<td></td>
<td>Drug production and distribution. A one-month fellowship for study in the Union of Soviet Socialist Republics.</td>
</tr>
<tr>
<td></td>
<td>Food hygiene and environmental sanitation. A one-month fellowship for study in the Federal Republic of Germany.</td>
</tr>
<tr>
<td></td>
<td>Hospital administration and organization. Six fellowships, of three and four weeks, two for study in the Federal Republic of Germany, the Netherlands and Belgium, one for study in Czechoslovakia and Italy, one for study in Italy, one for study in Switzerland and one for study in the United Kingdom.</td>
</tr>
<tr>
<td></td>
<td>Hospital statistics. A one-month fellowship for study in the Federal Republic of Germany, the Netherlands and Belgium.</td>
</tr>
<tr>
<td></td>
<td>Lung diseases. A two-month fellowship for study in the United Kingdom.</td>
</tr>
<tr>
<td></td>
<td>Maternal and child health. Two one-month fellowships — one for study in Poland and the other for study in Poland and Czechoslovakia.</td>
</tr>
<tr>
<td></td>
<td>Mental health and alcoholism. Five fellowships — one of three weeks for study in Switzerland and four of one month, for study in Yugoslavia (two), Sweden (one), and Poland and Czechoslovakia (one).</td>
</tr>
<tr>
<td></td>
<td>Narcotic drugs and toxic substances. A three-week fellowship for study in the Federal Republic of Germany and Austria.</td>
</tr>
<tr>
<td></td>
<td>Public health organization. A one-month fellowship for study in the Union of Soviet Socialist Republics.</td>
</tr>
<tr>
<td></td>
<td>Virology. A three-month fellowship for study in the United Kingdom and the Netherlands.</td>
</tr>
</tbody>
</table>

### France

#### Participation in Inter-country Projects

*See EURO 12.5; EURO 13.2; EURO 47.2; EURO 66.2; EURO 88.2; EURO 100.7; EURO 108.2; EURO 110; EURO 115; EURO 133; EURO 140; EURO 162; EURO 163; EURO 170; EURO 173; EURO 178; EURO 179.1; EURO 186; AFRO 12; AFRO 54; AFRO 62; Inter-regional 62.*

### France Algeria 1

#### Communicable Eye Disease Control (1956 - )

**Aim of the project.** To establish a pilot sector for the training of personnel and the development of effective control measures against seasonal epidemic conjunctivitis and trachoma.

**Assistance provided by WHO during the year.** (a) A short-term consultant; (b) two fellowships — one of two months to study the virology of trachoma in the United Kingdom, and one of six weeks to study trachoma control in Italy and Spain.

**Work during the year.** The school campaign was continued. More than 250,000 children were examined and 40,000 treated. Trials with various methods of treatment were continued. The first trials of collective treatment of trachoma in the social centres were made.

### France Algeria

#### Participation in Inter-country Projects

*See EURO 56; EMRO 40.*

### Germany 16

#### Fellowships

**Anaesthesiology.** A twelve-month fellowship for study in Denmark.

**Child psychiatry.** A three-month fellowship for study in France.

**Epidemiology.** A six-month fellowship for study in the United States of America.

**Hospital administration.** A one-month fellowship for study in Denmark, Sweden and Finland.

**Mental health.** A three-month fellowship for study in the United States of America.

**Public health administration and organization.** Two fellowships — one of nine months for study in the United Kingdom, and one of six weeks for study in Yugoslavia, Austria and Switzerland.

### Germany

#### Participation in Inter-country Projects

*See EURO 12.5; EURO 13.2; EURO 47.2; EURO 66.2; EURO 77; EURO 88.2; EURO 100.6; EURO 108.2; EURO 115; EURO 133; EURO 138.1; EURO 163; EURO 170; EURO 173; EURO 191.2; Inter-regional 62.*
<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greece 3</td>
<td>R UNICEF</td>
<td>Rehabilitation of Physically Handicapped Children (Sept. 1952 - )</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Aim of the project.</strong> To establish a national rehabilitation plan which provides, <em>inter alia</em>, for improvement of facilities for diagnosis and treatment, particularly of handicapped children; to carry out an up-to-date training and demonstration programme in the rehabilitation centres of the Athens area.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Assistance provided by WHO during the year.</strong> (a) A consultant for two weeks; (b) two fellowships — one of four months for study in Denmark, the other of twelve months for study in the United Kingdom.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Work during the year.</strong> The consultant discussed with the Government the expanding into a national rehabilitation programme of the work already done, and drafted a plan of operations.</td>
</tr>
<tr>
<td>Greece 13</td>
<td>TA</td>
<td>Rural Sanitation in Maternal and Child Health Projects (1956 - 1958)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>This project was described in the Annual Report for 1958. In December 1958 two fellowships were awarded — one of six months for study of sanitary engineering in the United Kingdom and the Netherlands, and one of three months for study of public health nursing in the United Kingdom, Finland and Denmark.</td>
</tr>
<tr>
<td>Greece 17</td>
<td>TA</td>
<td>Nursing Education and Administration (1956 - )</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Aim of the project.</strong> To train nursing personnel for teaching and administrative positions in the future post-basic school of nursing and the public health nursing services.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Assistance provided by WHO during the year.</strong> Two fellowships — one of four months to study post-basic nursing education in the United Kingdom, France, Belgium and Finland, and the other, of twelve months, to study nursing administration in the United States of America.</td>
</tr>
<tr>
<td>Greece 19</td>
<td>TA</td>
<td>Health Statistical Services (1959 - )</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Aim of the project.</strong> To develop the national health statistical services.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Assistance provided by WHO and work during the year.</strong> A consultant who, with a statistician from headquarters, paid a two-month visit to Greece to make recommendations for the development of basic vital and health statistics services in the Ministry of Health, and to assist in selecting fellowship candidates.</td>
</tr>
<tr>
<td>Greece 20</td>
<td>R</td>
<td>Mental Health (1956 - )</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Aim of the project.</strong> To strengthen national psychiatric services, particularly as regards mental hospital practice.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Assistance provided by WHO during the year.</strong> (a) A consultant for one month; (b) a twelve-month fellowship to study clinical psychology in the United States of America.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Work during the year.</strong> To follow up visits made in 1956 and 1957, the consultant visited mental hospitals and psychiatric services and discussed proposed new legislation with representatives of the Government. Reports containing his recommendations on the proposed legislation and on the development of psychiatric services were sent to the Government.</td>
</tr>
<tr>
<td>Greece 21</td>
<td>R</td>
<td>Fellowships</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Child surgery.</strong> Three fellowships — one of nine months for study in Sweden, one of six months for study in the United Kingdom, and one of six months for study in the United Kingdom and Canada.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Hospital records.</strong> A three-month fellowship for study in the United Kingdom.</td>
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<td></td>
<td></td>
<td><strong>Management and administration of paediatric clinics.</strong> A three-month fellowship for study in Denmark, Sweden, the Netherlands, the United Kingdom and the Federal Republic of Germany.</td>
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<tr>
<td></td>
<td></td>
<td><strong>Thoracic surgery.</strong> A three-month fellowship for study in Sweden and the United Kingdom.</td>
</tr>
<tr>
<td>Greece 25</td>
<td>TA UNICEF</td>
<td>Health Demonstration Area (1958 - )</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Aim of the project.</strong> To organize comprehensive and co-ordinated health services in a rural area where new methods of public health administration can be tested, all categories of public health personnel given practical training, and demonstration and research carried out.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Assistance provided by WHO during the year.</strong> (a) Two consultants — one in public health administration for two months and one in public health nursing for a month; (b) a five-week fellowship to the future director of the pilot area for study in Finland, Denmark and France.</td>
</tr>
</tbody>
</table>
Work during the year. After a visit by the consultant in public health administration in 1958 a provisional plan of action was drafted, in co-operation with UNICEF, for the establishment of the pilot area in the region of Larissa. On his second visit, in 1959, the consultant helped to prepare a final and detailed plan of operations. Towards the end of November a consultant in public health nursing began helping to organize the nursing services in the pilot area.

Respiratory Centre for the Treatment of Poliomyelitis, Athens (July - Aug. 1959)

Aim of the project. To improve services at the Respiratory Centre.

Assistance provided by WHO and work done. Three consultants — two physicians specialized in the treatment and rehabilitation of poliomyelitis cases, for six weeks and two months respectively, and a physiotherapist for two weeks, all from the Blegdams Hospital, Copenhagen, who helped with the routine work of the Centre, collaborated in the training of personnel, and advised the Government on the establishment of a new rehabilitation centre.

Insecticide Testing Team (April - Dec. 1959)

Aim of the project. To try out new insecticides (organophosphorus compounds) in an area where the vector, *Anopheles sacharovi*, has become resistant to the chlorinated hydrocarbons.

Assistance provided by WHO. (a) A team consisting of an entomologist, a chemist, an entomological assistant and a chemical assistant; (b) vehicles, laboratory equipment and supplies.

Work done. With the collaboration of the Greek Government, the team installed a laboratory for chemical analyses and an entomological laboratory at Skala (Lakonia). A number of villages and experimental dwellings were treated with various organophosphorus insecticides and biological tests and chemical analyses were carried out on various types of wall surfaces. The toxicity of the insecticides was studied by means of cholinesterase tests carried out on the inhabitants of the sprayed villages.

The organophosphorus insecticides have proved to be unstable and to have little residual effect, but they are not toxic in the concentrations used so far and in the conditions under which the team's trials were carried out.

Participation in Inter-country Projects

See EURO 13.2; EURO 47.2; EURO 52; EURO 56; EURO 66.2; EURO 100.6; EURO 108.2; EURO 133; EURO 140; EURO 162; EURO 170; EURO 173; EURO 177.1; EURO 178; EURO 186.

Iceland 7

Fellowships

Public health nursing. A twelve-month fellowship for study in the United States of America.

Iceland

Participation in Inter-country Projects

See EURO 12.5; EURO 61.2; EURO 173; EURO 191.3.

Ireland 13

Fellowships

Child health. A one-month fellowship for study in the Netherlands and Belgium.

Dental public health. A six-week fellowship for study in the United States of America.

Diabetes mellitus. A one-month fellowship for study in Belgium, Denmark and the United Kingdom.

Education and training of handicapped children. A two-month fellowship for study in the United States of America.

Environmental sanitation. A one-month fellowship for study in the United Kingdom.

Gynaecological carcinoma. Two two-week fellowships for study in Austria.

Hospital administration. A one-month fellowship for study in the United Kingdom.

Mental health services. Six one-month fellowships — three for study in the United Kingdom, two for study in the Netherlands and Denmark and one for study in the Netherlands, Denmark and Sweden.

Neurology. A one-month fellowship for study in the United Kingdom.

Nursing services. A one-month fellowship for study in Denmark and Finland.

Paediatric cardiology. A one-month fellowship for study in Sweden and Denmark.
**Project No.**
**Source of Funds**
**Co-operating Agencies**

**Description**

**Public health services.** Two one-month fellowships for study in the Netherlands, Denmark and Sweden.

**Radiology.** Two fellowships — one of one month for study in Sweden and the Netherlands, and one of six weeks for study in the United Kingdom.

**Surgery.** A one-month fellowship for study in the United Kingdom.

**Thoracic surgery.** A one-month fellowship for study in Sweden, Denmark, the Netherlands and the United Kingdom.

**Tuberculosis and chest services.** A one-month fellowship for study in Denmark and Sweden.

**Ireland**

**Participation in Inter-country Projects**

See EURO 39.2; EURO 47.2; EURO 61.2; EURO 100.6; EURO 108.2; EURO 133; EURO 170; EURO 173; EURO 191.3.

**Italy 21**

**Fellowships**

**Food microbiology.** A one-month fellowship for study in France.

**Gastro-enterology.** An eight-month fellowship for study in the United Kingdom.

**Handicapped children.** A six-week fellowship for study in the United Kingdom and France.

**Health education.** A six-week fellowship for study in France, Belgium and the Netherlands.

**Ionizing radiations for preservation of foodstuffs.** A two-month fellowship for study in the United Kingdom.

**Metabolism.** A four-month fellowship for study in the United Kingdom.

**Mycology.** A two-month fellowship for study in France and the Netherlands.

**Narcotic drug control.** A three-week fellowship for study in France.

**Neuro-surgery.** A two-month fellowship for study in Denmark.

**Orthodontology.** A two-month fellowship for study in the United Kingdom.

**Public health administration.** Two nine-month fellowships for study in the United Kingdom.

**Quarantine services.** Two fellowships — one of one month for study in Denmark, Norway and Sweden, and one of six weeks for study in Spain, France, Belgium, the Netherlands and the Federal Republic of Germany.

**Radioisotopes in medicine.** A four-month fellowship for study in Sweden, the Federal Republic of Germany and the United Kingdom.

**Rehabilitation.** A two-month fellowship for study in Switzerland.

**Sanitary engineering.** A five-week fellowship for study in Belgium, France and Switzerland.

**Virology.** A two-month fellowship for study in the Netherlands, Sweden, Denmark and the Federal Republic of Germany.

**Italy**

**Participation in Inter-country Projects**

See EURO 12.5; EURO 13.2; EURO 47.2; EURO 66.2; EURO 88.2; EURO 108.2; EURO 115; EURO 133; EURO 163; EURO 170; EURO 173; EURO 178; EURO 186; EURO 191.3; Inter-regional 62.

**Luxembourg 5**

**Sanitary Engineering Consultation on Water Supply (1958 - )**

**Aim of the project.** To advise on the design and construction of water purification installations for a reservoir newly constructed to provide a supplementary potable water supply for regional and municipal distribution systems.

**Assistance provided by WHO during the year.** A temporary adviser in sanitary engineering.

**Luxembourg**

**Participation in Inter-country Projects**

See EURO 100.7; EURO 110; EURO 173.

**Monaco**

**Participation in Inter-country Projects**

See EURO 12.5.
### Morocco 1

- **Project No.:** Morocco 1
- **Source of Funds:** TA
- **Co-operating Agencies:** UNICEF

**Description:** Communicable Eye Diseases Control (March 1953 -

**Aim of the project.** To develop a nation-wide campaign for the control of trachoma and seasonal conjunctivitis using the following methods: mass antibiotic treatment and prophylaxis of the population in hyperendemic areas; systematic case-finding, treatment and follow-up of trachomatous children in schools throughout the country; health education; a programme of epidemiological, therapeutic and laboratory studies designed to develop more effective, simpler or cheaper methods of control.

**Assistance provided by WHO during the year.** (a) A statistician for six months; (b) a short-term consultant in ophthalmology; (c) teaching equipment.

**Work during the year.** The school treatment project approached its target of making collective treatment available to every trachomatous schoolchild, even in the remotest rural schools. Further comparative trials were made of the effectiveness of various antibiotics applied according to an intermittent schedule. The summer mass campaign was extended; in general, the plan made was adhered to, about 1 450 000 people being covered.

### Morocco 2

- **Project No.:** Morocco 2
- **Source of Funds:** TA
- **Co-operating Agencies:** UNICEF

**Description:** Syphilis Control (Aug. 1954 -

**Aim of the project.** To reduce the incidence of syphilis, especially among mothers and children.

**Assistance provided by WHO during the year.** (a) A medical statistician for six months; (b) a consultant for six weeks.

**Work during the year.** In connexion with the “ Opération famille ”, the statistician designed an individual notification card for venereal disease patients to be used in all health centres. The card is progressively being introduced in the centres, and it is expected that it will help in obtaining a clear evaluation of the results of the “Opération collectivité”. The consultant made a survey of the situation and helped to prepare a plan of operations for the continuation of the project.

### Morocco 9

- **Project No.:** Morocco 9
- **Source of Funds:** TA
- **Co-operating Agencies:** UNICEF

**Description:** Training of Public Health Personnel (Oct. 1957 -

**Aim of the project.** To train various categories of health personnel, especially auxiliary public health personnel, for general public health work, including maternal and child health.

**Assistance provided by WHO during the year.** A two-month fellowship to the Director of the Male School of Nursing in Rabat for study in Portugal, Belgium, Switzerland and France and three eight-week fellowships to train nurses in rural health nursing in Soissons, France.

### Morocco 12

- **Project No.:** Morocco 12
- **Source of Funds:** TA

**Description:** Environmental Sanitation (1958 -

**Aim of the project.** To develop a national programme of environmental sanitation; to train auxiliary health personnel for environmental sanitation work.

**Assistance provided by WHO and work done during the year.** A sanitary engineer who gave technical advice and helped to prepare a curriculum for training public health personnel, particularly “agents de santé”, in environmental sanitation.

### Morocco 15

- **Project No.:** Morocco 15
- **Source of Funds:** R

**Description:** Fellowships

**Hospital administration.** A three-month fellowship for study in Yugoslavia, Denmark and Sweden.

### Morocco 17

- **Project No.:** Morocco 17
- **Source of Funds:** TA

**Description:** Health Education Services (1958 -

**Aim of the project.** To develop a health education programme.

**Assistance provided by WHO and work done during the year.** A consultant for two months, who advised on the development of services for health education and lectured at the Conference on the Control of Infectious Diseases through Vaccination Programmes, which was held in Rabat (see EURO 47.2).

### Morocco 19

- **Project No.:** Morocco 19
- **Source of Funds:** TA

**Description:** Nursing Education (Oct. 1959 -

**Aim of the project.** To extend and improve nursing education programmes and nursing services.

**Assistance provided by WHO during the year.** A nursing instructor to assist in the training of nursing personnel and advise on the administration of nursing schools.

**Work during the year.** As a first step, plans were made to organize a pilot school of nursing in Rabat.
Malaria Pre-eradication Survey Team (Oct. 1958 - Sept. 1959)

**Aim of the project.** To make a survey of malaria throughout the country and to draw up a plan of operations for eradication of the disease.

**Assistance provided by WHO during the year.** (a) A malariologist, an entomologist, a laboratory technician and a sanitarian; (b) a five-month fellowship for study in Jamaica, Mexico, El Salvador and Guatemala; (c) two vehicles and laboratory equipment.

**Work during the year.** The team carried out numerous epidemiological investigations throughout the country. These revealed that the malarious areas, which are in general hypoendemic, are very extensive, and include the areas situated south of the Atlas range and up to an altitude of 1200 metres. Six-and-a-half million people would have to be protected with insecticides during the attack phase. The entomologist studied the local vectors and their susceptibility to insecticides. A number of microscopists were trained.

**Evaluation.** The main task of the WHO survey team was to prepare for the transformation of the Government's malaria control programme into an eradication programme to be carried out with WHO assistance. The extensive surveys made by the team have yielded a wide range of significant data which have helped to define the present situation from both an epidemiological and an organizational point of view. Full discussions regarding the eradication phase were held with the Moroccan authorities; however, it appears that it will be at least two years before all the necessary preparations can be completed for the effective implementation of an eradication programme.

Outbreak of TOCP Poisoning (Sept. 1959 - )

**Aim of the project.** To advise on an outbreak of paralysis in the area of Meknès; to assist in a rehabilitation programme for the victims.

**Assistance provided by WHO during the year.** Three temporary advisers — two in neurology and one in rehabilitation.

**Work during the year.** During the second week of September, some 700 cases presenting paralysis of the extremities were reported in the region of Meknès. Two WHO temporary advisers were immediately sent to Morocco to assist national services in finding the etiology of the disease, which was later discovered to be poisoning due to contamination of cooking oil with tri-ortho-cresyl-phosphate. In spite of the energetic measures taken by the Government, the number of cases increased rapidly and a third WHO temporary adviser, this time in rehabilitation, went to Morocco to survey the situation and make recommendations for the treatment and rehabilitation of the victims, who were later reported to number over 10,000. Further WHO assistance is planned.

Participation in Inter-country Projects

See EURO 12.5; EURO 47.2; EURO 56; EURO 170; EURO 173; AFRO 42; EMRO 40.

Fellowships

**Bacteriology.** A one-month fellowship for study in Italy.

**Epidemiology.** A four-month fellowship for study in the United Kingdom.

**Family care.** A six-week fellowship for study in Norway and Finland.

**Measurement of radioactivity in the body.** A one-month fellowship for study in the United Kingdom.

**Metabolism of chemical compounds.** A six-month fellowship for study in the United Kingdom.

**Paediatrics.** A four-month fellowship for study in the United States of America.

**Psychiatry.** Three fellowships — one of two-and-a-half months for study in the United Kingdom, and two, of three and six months respectively, for study in the United States of America.

**Pulmonary function test.** A two-month fellowship for study in the United Kingdom.

**Serology.** A three-week fellowship for study in the United Kingdom.

**Social medicine.** A two-week fellowship for study in the United States of America.

**Speech and voice therapy.** A six-month fellowship for study in Denmark, Austria, the Federal Republic of Germany, and France.

Participation in Inter-country Projects

See EURO 12.5; EURO 13.2; EURO 66.2; EURO 88.2; EURO 100.6; EURO 108.2; EURO 110; EURO 133; EURO 138.1; EURO 142; EURO 163; EURO 170; EURO 173; EURO 177.1; EURO 178; EURO 191.2; Inter-regional 62.
Project List: Europe

Project No. | Source of Funds | Co-operating Agencies | Description
--- | --- | --- | ---
Norway 10 | R | | Fellowships

Environmental sanitation. A ten-week fellowship for study in the United Kingdom.

Public health. Two twelve-month fellowships for study in the United States of America.

Radiation protection. A three-month fellowship for study in the United Kingdom.

Norway 11 | R | | Assistance to Mental Health Training Institutes (1956 -)

WHO provided three temporary advisers to conduct short seminars on the subjects of epilepsy, group psychotherapy and cultural anthropology, which were organized in Oslo by the Norwegian Association of Child Psychiatry.

Norway | | | Participation in Inter-country Projects

See EURO 12.5; EURO 47.2; EURO 61.2; EURO 93; EURO 100.6; EURO 108.2; EURO 133; EURO 170; EURO 173; EURO 178; Inter-regional 62.

Poland 7 | R | UNICEF | Rehabilitation of Handicapped Children (1959 -)

Aim of the project. To establish a comprehensive and long-term programme for the medical, social, educational and vocational rehabilitation of handicapped children up to eighteen years of age.

Assistance provided by WHO and work done during the year. A consultant from 1 March to 5 April. He advised on the extension and upgrading of existing rehabilitation services and on the establishment of new services, and helped to prepare a draft plan of operations for the first phase of a total rehabilitation project which would require assistance from the United Nations Technical Assistance Administration, UNICEF, ILO and WHO.

Poland 12 | R | UNICEF | Maternal and Child Health Services (1957 -)

Aim of the project. To increase training facilities for personnel for the expanding maternal and child health services.

Assistance provided by WHO and work done during the year. (a) A consultant for a month to advise the Government on the problem of child and infant mortality; (b) a six-month fellowship for study in France, the United Kingdom, Ireland and Denmark.

Poland 13 | R | | Fellowships

Air pollution. A six-week fellowship for study in the United Kingdom.

Anaesthesiology. A twelve-month fellowship for study in Denmark.

Child neurology. Two fellowships — one of three months for study in Switzerland, the other of six months for study in Austria.

Disinfection. A three-month fellowship for study in Denmark, the United Kingdom, Switzerland and Italy.

Environmental sanitation. A three-month fellowship for study in the United Kingdom, the Netherlands and Switzerland.

Gamma globulin production. A six-month fellowship for study in the United States of America.

Haematology. A six-month fellowship for study in the Netherlands and the United Kingdom.

Microbiology. Two fellowships — one of six months for study in the United Kingdom and Denmark, the other of one month for study in France.

Nutrition. A three-month fellowship for study in Denmark, Norway and the Netherlands.

Pathomorphology of cancer. A three-month fellowship for study in France.

Public health. Four fellowships — three of nine months and one of six months — for study in the United Kingdom.

Public health engineering. A twelve-month fellowship for study in the United Kingdom.

Radiation protection. A one-week fellowship for study in France.

Rheumatology. A three-month fellowship for study in Sweden and Denmark.
### Assistance to Training Institutes (1958 - )

**Poland 15**

**R**

**Description**

1. **Statistics and epidemiology.** A four-month fellowship for study in the United Kingdom.
2. **Syphilis.** A two-month fellowship for study in Austria, France and Denmark.
3. **Tropical hygiene.** A five-month fellowship for study in the United Kingdom.
4. **Tuberculosis.** Two two-month fellowships for study in Denmark.

**Poland 15**

**Portugal 4**

**R**

**Maternal and Child Health Services (1959 - )**

**Aim of the project.** To develop maternal and child health services.

**Assistance provided by WHO during the year.** Three two-month fellowships — one for study in Finland, Denmark and the Netherlands, one for study in France and one for study in Belgium and Switzerland.

**Portugal 6**

**R**

**Assistance to Training Institutes (1959 - )**

**Aim of the project.** To improve facilities for training in public health in the Dr Ricardo Jorge Institute of Hygiene, Lisbon.

**Assistance provided by WHO during the year.** A temporary adviser in public health went to Lisbon in August to make preliminary arrangements for a one-month assignment in January 1960.

**Portugal 17**

**R**

**Fellowships**

1. **Air pollution.** An eight-month fellowship for study in France and Belgium.
2. **Chromatography.** A three-month fellowship for study in France.
3. **Food bacteriology and microbiology.** Two fellowships — one of three months and one of nine months — for study in France.
4. **Health education.** A ten-month fellowship for study in the United States of America.
5. **Nutrition.** A ten-month fellowship for study in the United Kingdom.
6. **Paediatrics.** A six-month fellowship for study in the United States of America, and Canada.

**Portugal**

**Participation in Inter-country Projects**

See EURO 12.5; EURO 13.2; EURO 47.2; EURO 61.2; EURO 77; EURO 88.2; EURO 100.7; EURO 108.2; EURO 133; EURO 154; EURO 162; EURO 163; EURO 170; EURO 173; EURO 178; EURO 186; EURO 191.2; EURO 191.4; Inter-regional 62.
<table>
<thead>
<tr>
<th>Project No.</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Romania 1</td>
<td>Fellowships</td>
</tr>
<tr>
<td>R</td>
<td>Virology. A seven-month fellowship for study in France, the United Kingdom and Sweden.</td>
</tr>
</tbody>
</table>

| Romania 3 | Malaria Eradication (1959- ) |
| MESA      | Aim of the project. To extend the system of active surveillance to all the endemic malaria areas; to concentrate the final attack phase on the areas presenting evidence of transmission. |
|           | Assistance provided by WHO during the year. (a) A short-term consultant; (b) vehicles, supplies and equipment. |
|           | Probable duration of assistance. Until 1962. |
|           | Work during the year. 1,173,635 persons have been protected with insecticides. A system of active surveillance covering a population of about 3,069,000 was started. |

| Romania   | Participation in Inter-country Projects |
|          | See EURO 12.5; EURO 170; EURO 173. |

| Spain 3 and 23 | Rehabilitation of Handicapped Children (1956- ) |
| R             | Aim of the project. To develop a national programme for the rehabilitation of handicapped children; to establish training centres and expand the services for handicapped children throughout the country. |
| TA           | Assistance provided by WHO and work done during the year. (a) A consultant for three weeks in May and June to assist the Government in the preparation of a draft plan of operations; (b) three three-month fellowships - two for study in France, and one for study in Denmark, Sweden, the United Kingdom and France - and a twelve-month fellowship for study in France. |
| UNICEF      | |

| Spain 8     | Venereal Disease Control (1955- ) |
| TA         | Aim of the project. To organize systematic examination and treatment of infants, children and pregnant women as part of the maternal and child health services; to organize case-finding and diagnosis of syphilis in various population groups; to improve facilities and methods for the diagnosis of syphilis. |
| UNICEF     | Assistance provided by WHO during the year. A one-month fellowship for study of congenital syphilis in Denmark and the Netherlands. |

| Spain 10    | Premature Infant Care (1955- ) |
| TA         | Aim of the project. To set up a network of centres for the specialized care of premature infants; to train staff for further development of the centres. |
| UNICEF     | Assistance provided by WHO during the year. Two one-month fellowships for study in France. |
|            | Work during the year. After the visit of a WHO consultant in November 1957, a plan of operations was signed for the second phase of the project, which includes the establishment of five additional centres in Granada, San Sebastián, Santa Cruz de Tenerife, Seville and Madrid. |

| Spain 11    | Communicable Eye Diseases Control (1955- ) |
| TA         | Aim of the project. To learn more of the local epidemiology of trachoma and associated infections in Spain; to develop and apply throughout the endemic area effective methods of case-finding and treatment, family supervision and health education; to train personnel. |
| UNICEF     | Assistance provided by WHO during the year. (a) A short-term consultant in communicable eye diseases; (b) two five-week fellowships for study in Yugoslavia and Italy. |
|            | Work during the year. Auxiliary workers were trained and employed in villages of the provinces of Granada, Málaga, Almería and Murcia included in the mass treatment programme. It was decided to extend the validity of the second addendum to the plan of operations to 1960, since another year will be needed to complete the 1958-1959 programme. |
Spain 17
R

Fellowships

**Dermatology and syphilis.** A twelve-month fellowship for study in the United Kingdom.

**Epidemiology.** A two-month fellowship for study in France.

**Food hygiene.** A three-month fellowship for study in France and the United Kingdom.

**Helminthology.** A two-month fellowship for study in the Federal Republic of Germany.

**Organization of health services.** A two-month fellowship for study in France.

**Public health.** A two-month fellowship for study in France and Italy.

**Serological methods for the diagnosis of virus diseases.** A two-month fellowship for study in France.

**Social medicine.** A two-month fellowship for study in France and Italy.

Spain 20
R

**Water Supplies and Sewage Disposal (1958 - )**

*Aim of the project.* To develop, through fellowships, post-graduate training in sanitary engineering, particularly water supplies and sewage disposal.

*Assistance provided by WHO during the year.* Seven one-month fellowships, for short observational visits to various European sanitation installations and teaching and research institutions, to future members of the teaching staff of a post-graduate refresher course for sanitary engineers at the University of Madrid.

Spain 23

*See Spain 3.*

Spain 24
MESA

**Malaria Eradication (1959 - )**

*Aim of the project.* To apply the system of active surveillance to the formerly endemic areas where eradication is in the consolidation phase; to confirm the results obtained in all the other areas, which are in the maintenance phase.

*Assistance provided by WHO during the year.* Vehicles, microscopes and drugs were ordered.

*Probable duration of assistance.* Until the end of 1961.

*Work during the year.* A plan of operations was signed in November. In preparation for the programme in 1960, the Government undertook training of personnel and a pilot scheme of surveillance in some areas.

Spain 25
TA

**Virus Diseases (Oct. 1959 - )**

*Aim of the project.* To develop the virus laboratory in Madrid, particularly as regards diagnostic procedures for virus diseases.

*Assistance provided by WHO during the year.* (a) A consultant for one month; (b) laboratory monkeys and equipment.

Spain

*Participation in Inter-country Projects*

*See EURO 12.5; EURO 47.2; EURO 52; EURO 56; EURO 100.7; EURO 108.2; EURO 133; EURO 144; EURO 162; EURO 170; EURO 173; EURO 177.1; EURO 191.5.*

Sweden 12
R

**Fellowships**

*Child psychiatry.* A seven-week fellowship for study in the United Kingdom, the Netherlands and Switzerland.

*Food and drug control.* A three-month fellowship for study in the United States of America.

*Geriatrics.* A two-month fellowship for study in the United Kingdom.

*Mental health.* Two two-month fellowships for study in the United Kingdom and the Netherlands.

*Orthodontics.* A six-week fellowship for study in the United Kingdom and the Federal Republic of Germany.

*Psychosomatic diseases.* A two-month fellowship for study in the United Kingdom.

*Sanitary engineering.* A one-month fellowship for study in the Federal Republic of Germany.
Vertebrae fractures with paraplegia. Two six-week fellowships for study in the United Kingdom and France.

Sweden

Participation in Inter-country Projects

See EURO 12.5; EURO 13.2; EURO 39.2; EURO 47.2; EURO 61.2; EURO 93; EURO 100.6; EURO 108.2; EURO 133; EURO 140; EURO 163; EURO 170; EURO 173; EURO 179.1; EURO 191.1; Inter-regional 62.

Switzerland 15

Fellowships

Care and rehabilitation of paraplegics. A three-month fellowship for study in the United Kingdom.

Dermatology. A two-month fellowship for study in the United Kingdom.

Handicapped children. Two fellowships — one of three months for study in the United States of America and one of one month for study in the Netherlands and Belgium.

Occupational health. A six-week fellowship for study in the United Kingdom.

Occupational health nursing. A two-month fellowship for study in the United Kingdom and Sweden.

Paediatric endocrinology and metabolism. A fellowship of three and a half months for study in the United States of America.

Psychiatry. A two-month fellowship for study in France, the Netherlands and Belgium.

Public health nursing education. Two three-month fellowships for study in the United Kingdom, Finland and Denmark.

Switzerland

Participation in Inter-country Projects

See EURO 12.5; EURO 47.2; EURO 88.2; EURO 100.7; EURO 108.2; EURO 110; EURO 133; EURO 170; EURO 173; EURO 178; EURO 191.1; Inter-regional 62.

Turkey 13

Tuberculosis Control (1952 -)

Aim of the project. To continue the mass campaign of tuberculin testing and BCG vaccination of children and young adults; to establish a national tuberculosis survey team to carry out prevalence surveys in samples of selected population groups.

Assistance provided by WHO during the year. Three four-month fellowships for the training of two physicians and a nurse at the Tuberculosis Research Office. Another fellowship for a statistician was awarded under project Turkey 36.

Work during the year. The first round of the BCG vaccination campaign was completed and a second round started. The WHO Tuberculosis Advisory Team (see EURO 154) visited Turkey in May and October 1959 and prepared a draft plan of operations for the continuation and expansion of the project until 1962.

Turkey 16

Assistance to School of Public Health, Ankara (July 1953 -)

Aim of the project. To reorganize the School of Public Health in Ankara.

Assistance provided by WHO and work done during the year. A consultant for three months, who lectured on epidemiology at the School of Public Health. WHO lecturers in nutrition and sanitary engineering assisted in the teaching at the School (see EURO 110).

Turkey 23

Malaria Eradication (1956 -)

Assistance provided by WHO during the year. (a) An advisory team, consisting of a malarialogist, an entomologist, a laboratory technician and a sanitarian; (b) a consultant malarialogist for one month to assist in the revision of the plan of operations; an administrative consultant for four months; a short-term consultant (malarialogist) to organize special courses for Turkish doctors engaged in the campaign, and a consultant malarialogist to direct the course for three months; and a short-term consultant to assist in the organization of the statistical service for the eradication campaign.

Probable duration of assistance. The team until 1962, and visits by consultants until 1964.

Work during the year. The campaign was completely reorganized in order to overcome the difficulties previously encountered. Provision was made for greater decentralization (into 21 regions, 68 zones and 300 sectors). A course in eradication techniques was organized for chiefs of zones and of sectors. 6,985,606 people living in 13,298 villages were protected by means of insecticides. A system of active surveillance
The difficulties caused by the resistance of *Anopheles sacharovi* to DDT in the Adana region have been overcome by the use of dieldrin, with which 900,000 people have been protected.

**Communicable Eye Diseases Control (1955 - )**

**Aim of the project.** To continue studies of the local epidemiology of trachoma and associated infections; to develop suitable control methods; to train personnel; to introduce and expand progressively a system of control of these diseases in the southern provinces of Anatolia.

**Assistance provided by WHO during the year.** A short-term consultant in communicable eye diseases.

**Work during the year.** Treatment of the trachomatous population by house-to-house visits was extended to more villages. In places where a high prevalence of trachoma was found (60 per cent. or more) the whole population was treated. A large number of cases were cured and this method appears likely to limit transmission. Treatment in schools, epidemiological studies and premarital examinations were continued. A second addendum to the plan of operations, covering the period 1 October 1959 to 30 September 1961, was concluded.
<table>
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<tr>
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<th>Co-operating Agencies</th>
<th>Description</th>
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<tbody>
<tr>
<td></td>
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<td></td>
<td>Hospital design and planning. Two five-week fellowships for study in the Federal Republic of Germany, Switzerland and Italy.</td>
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<td>Mental health. A one-month fellowship for study in the Netherlands.</td>
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<td></td>
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<td></td>
<td>Nursing education and services. Two fellowships — one of four months for study in the United States of America, and one of one month for study in Denmark and Sweden.</td>
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<td></td>
<td>Pregnancy wastage. A fellowship of two and a half months for study in the United States of America.</td>
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<td>Sanitary engineering. A two-month fellowship for study in the Union of Soviet Socialist Republics.</td>
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<td></td>
<td>School health services. A five-week fellowship for study in the Netherlands, Belgium, Denmark and Sweden.</td>
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</table>

**United Kingdom**

**Participation in Inter-country Projects**

See EURO 12.5; EURO 13.2; EURO 39.2; EURO 52; EURO 66.2; EURO 77; EURO 88.2; EURO 100.6; EURO 108.2; EURO 133; EURO 140; EURO 163; EURO 170; EURO 173; EURO 177.1; EURO 178; EURO 179.1; EURO 186; EURO 191.1; AFRO 12; AFRO 62; Inter-regional 62.

**Fellowships**

Actinomycosis. A four-month fellowship for study in the United Kingdom.

Anaesthesiology. Two twelve-month fellowships for study in Denmark.

Antibiotics. A two-month fellowship for study in the United Kingdom.

Biochemistry. Three fellowships — one of two months for study in the United Kingdom, one of twelve months for study in Switzerland and one of six months for study in Sweden.


Division processes of tissue cells. A three-month fellowship for study in the United Kingdom.

Epidemiology. A two-month fellowship for study in the United Kingdom.

Experimental genetics. A three-month fellowship for study in the United Kingdom and Denmark.

Immunology. A three-month fellowship for study in the Netherlands.

Metabolism of plasma protein. A three-month fellowship for study in the United Kingdom.

Neurophysiology. A three-month fellowship for study in France and Belgium.

Oncology. A four-month fellowship for study in the United States of America.

Pertussis and immunization. A three-month fellowship for study in the United States of America.

Public health. A one-month fellowship for study in the United Kingdom.

Radiobiology. A three-month fellowship for study in Sweden.

Surgery. Two fellowships — one of two months for study in Sweden, and one of four months for study in the United Kingdom.

Surgical treatment of deafness. A four-month fellowship for study in the United Kingdom and the Federal Republic of Germany.

**USSR 1**

**Participation in Inter-country Projects**

See EURO 12.5; EURO 13.2; EURO 39.2; EURO 52; EURO 66.2; EURO 77; EURO 88.2; EURO 100.6; EURO 108.2; EURO 133; EURO 140; EURO 163; EURO 170; EURO 173; EURO 177.1; EURO 178; EURO 179.1; EURO 186; EURO 191.1; AFRO 12; AFRO 62; Inter-regional 62.

**Fellowships**

**USSR 2**

**Assistance to Training Institutes (1959 - )**

Aim of the project. To develop national institutes for training in medicine and public health.

Assistance provided by WHO. A four-month fellowship for study of heart surgery in the United Kingdom.

**Yugoslavia 6**

**Premature Infants (1958 - )**

Aim of the project. To strengthen and extend facilities for the care of premature infants.

Assistance provided by WHO during the year. Five fellowships — two of one month for study in the United Kingdom, and three of three months — one for study in France and two for study in the United Kingdom.
Rehabilitation of Handicapped Children (Nov. 1955 - )

*Description*

*Aim of the project.* To improve and extend rehabilitation facilities for the handicapped, particularly children, and to train staff.

*Assistance provided by WHO during the year.* (a) A consultant for three weeks; (b) three four-month fellowships — one for study in Sweden, one for study in the United Kingdom and Denmark and one for study in the United Kingdom.

*Work during the year.* The consultant made a survey of institutions providing rehabilitation services and prepared a report covering programme developments during the past two years.

Rehabilitation of the Physically Handicapped (1958 - )

*Description*

Three fellowships were awarded — one of three and one of four months for study in Denmark and the Federal Republic of Germany, and one of six months for study in the United Kingdom. Some training equipment was delivered.

Sera and Vaccine Production (1953 - )

*Description*

*Aim of the project.* To reduce the prevalence of certain endemo-epidemic diseases which are still a serious problem in Yugoslavia.

*Assistance provided by WHO during the year.* (a) A consultant for one month; (b) three fellowships of four to eight months — one for study in the Netherlands, France and Italy, one for study in Denmark and the United Kingdom, and one for study in the United Kingdom; (c) laboratory equipment and chemicals.

Tuberculosis Control (1953 - )

*Description*

*Aim of the project.* To extend the antituberculosis services.

*Assistance provided by WHO during the year.* Three fellowships — two of four months for study in the United Kingdom, Norway, Denmark, the Netherlands and Czechoslovakia, and one of nine months for study in Denmark and Norway.

Communicable Eye Diseases Control (1954 - )

*Description*

*Aim of the project.* To learn more of the epidemiology of trachoma and associated infections in Yugoslavia; to develop and apply throughout the endemic areas effective methods of case-finding and treatment, family supervision and health education; to train personnel.

*Assistance provided by WHO during the year.* A short-term consultant in communicable eye diseases.

*Work during the year.* Mass case-finding surveys were extended to fresh areas. Treatment of cases in centres and by house-to-house visits was continued.

Assistance to Institutes of Public Health and Institutes of Hygiene (1953 - )

*Description*

*Aim of the project.* To promote further the technical development of institutes of public health and of hygiene.

*Assistance provided by WHO during the year.* (a) Five fellowships of three to twelve months for study in the following countries: France and Belgium; the Federal Republic of Germany; the United Kingdom; the United Kingdom, Denmark, Sweden and Finland; the United Kingdom and Sweden; (b) laboratory equipment.

Maternal and Child Health (1953 - )

*Description*

*Aim of the project.* To expand maternal and child health services as part of the general public health structure; to establish in each Republic a demonstration centre which will train and supervise the staff of the peripheral health centres and health stations; to provide essential supplies for these units.

*Assistance provided by WHO during the year.* (a) Two paediatricians and a public health nurse for two months; (b) six fellowships — two of six months for study in France, one of one month for study in France, one of three months for study in the United Kingdom, one of three months for study in the United Kingdom, Denmark, Sweden and Finland, and one of seven months for study in France, the United Kingdom, Sweden and Finland.
**Project List: Europe**

<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Co-operating Agencies</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td></td>
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<td><em>Work during the year.</em> The WHO team visited Yugoslavia from 18 April to mid-June to make an evaluation of the project, together with members of the maternal and child health staff of the Yugoslav Health Department. They were accompanied by a nutritionist from FAO. The WHO team members met again in October with the members of the national team to prepare the final report.</td>
</tr>
</tbody>
</table>

**Yugoslavia 16.11**

**Health Statistical Services (1954 - )**

*Aim of the project.* To develop the statistical services and promote the use of modern statistical methods.

*Assistance provided by WHO and work done during the year.* (a) A temporary adviser who lectured at a national seminar on health statistics which was organized by the Federal Institute of Public Health in Belgrade and took place in Opatija from 1 October to 7 November; (b) six fellowships of from one to nine months — three for study in the United Kingdom, and three for study in the United Kingdom, Sweden and Denmark.

**Yugoslavia 16.12**

**Occupational Health (1954 - )**

*Aim of the project.* To promote occupational health services.

*Assistance provided by WHO during the year.* (a) Two fellowships of five months, one for study in the United Kingdom, the other for study in the United Kingdom and Italy; (b) laboratory equipment.

**Yugoslavia 20**

**Public Health Administration (1956 - )**

*Assistance provided by WHO during the year.* (a) Five fellowships of three to six months, two for study in France, Belgium and Switzerland, one for study in the Federal Republic of Germany and France, one for study in Finland, Denmark, the Netherlands and the United Kingdom, and one for study in the Federal Republic of Germany; (b) equipment.

**Yugoslavia 23**

**Fellowships**

*Gynaecological endocrinology.* A five-month fellowship for study in Switzerland and France.

*Polio vaccine control and production.* A twelve-month fellowship for study in the United Kingdom.

*Quarantinable disease control.* A five-month fellowship for study in the United Kingdom, the Federal Republic of Germany, the United Arab Republic (Province of Egypt) and India.

*Toxicological chemistry.* A five-month fellowship for study in France.

**Yugoslavia 25**

**Nursing Education (1959 - )**

*Aim of the project.* To develop nursing education programmes.

*Assistance provided by WHO during the year.* A twelve-month fellowship for study in the United States of America and the United Kingdom.

**Yugoslavia 27**

**Radiation Protection and Medical Application of Isotopes (1958 - )**

Four fellowships of three and a half to six months were awarded — one for study in the United Kingdom, one for study in France, one for study in the United Kingdom and France and one for study in the United Kingdom, Sweden and Denmark.

**Yugoslavia 28**

**Child Mental Health (1958 - )**

*Aim of the project.* To promote the development of psychiatric services.

*Assistance provided by WHO during the year.* (a) A consultant for one month; (b) four fellowships — one of three months for study in the United Kingdom, one of five months for study in the United Kingdom and Sweden, one of six months for study in Belgium and France, and one of ten months for study in the United Kingdom and France; (c) supplies.

*Work during the year.* The consultant gave lectures and consultations and conducted a seminar on problems of child mental health.
Yugoslavia 30

Description

Malaria Eradication (1959 - )

Aim of the project. To eradicate malaria from the areas where the disease is still endemic; to consolidate the results obtained.

Assistance provided by WHO during the year. (a) A maliariologist; (b) supplies and equipment.

Work during the year. A geographical reconnaissance of the malarious areas was made, a malaria eradication service was set up, and personnel were recruited and trained.

Yugoslavia 33

Description

Chronic Nephritis (1959 - )

Aim of the project. To investigate the causes of chronic nephritis in certain parts of Yugoslavia.

Assistance provided by WHO and work done during the year. A consultant for one month; he made an epidemiological study of the causes of the disease, which appears in rural areas along rivers in some parts of Yugoslavia. The first basic symptom is albuminuria and the disease usually results in uraemia with a fairly high percentage of mortality. It is probable that further investigations will be needed.

Yugoslavia

Participation in Inter-country Projects

See EURO 12.5; EURO 47.2; EURO 52; EURO 56; EURO 61.2; EURO 66.2; EURO 88.2; EURO 100.6; EURO 108.2; EURO 110; EURO 133; EURO 162; EURO 170; EURO 173; EURO 177.1; EURO 185; Inter-regional 62.
<table>
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<th>Project No.</th>
<th>Source of Funds</th>
<th>Co-operating Agencies</th>
<th>Description</th>
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<tbody>
<tr>
<td>EMRO 5</td>
<td>TA</td>
<td>EMRO 5</td>
<td>Higher Institute of Nursing, Alexandria (Oct. 1953 - )</td>
</tr>
</tbody>
</table>

**Aim of the project.** To raise the standard of nursing education in the United Arab Republic and other countries of the Region, to meet the needs of expanding health service programmes by a four-year basic professional programme leading to a bachelor's degree in nursing; to provide post-basic courses for graduate nurses and to promote study and research on nursing within the Region.

**Assistance provided by WHO during the year.** (a) A senior nurse educator, six nurse educators and an administrative assistant; (b) an undergraduate fellowship for twelve months' study of nursing in the United States of America (prolongation) and an undergraduate fellowship for twelve months' study in the Province of Egypt, United Arab Republic; (c) teaching and demonstration equipment.

**Probable duration of assistance.** Until 1965.

**Work during the year.** The first class of students from the Higher Institute of Nursing, University of Alexandria, completed in June the four-year requirements for the Bachelor of Nursing degree. Five students graduated, four from the United Arab Republic (Province of Egypt) and one from Sudan. They are receiving experience in teaching and ward administration while working as counterparts to WHO nurse educators.

Forty-seven students, the largest class in the Institute's history, were enrolled on 19 September 1959. At the time of reporting 112 students were on the roll, six of whom were WHO fellows—four from Sudan, one from Jordan, and one from the United Arab Republic (Province of Syria).

The curriculum was revised, on the experience of the past four years, to allow students to start clinical work earlier than hitherto.

A ward in the University hospital has been made into a demonstration unit for the programme of the Institute. Two in-service courses, each of one week, one in surgical nursing and the other in medical nursing, were held for hakimas (trained nurse midwives) from various hospitals.

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<tr>
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<tbody>
<tr>
<td>EMRO 7</td>
<td>TA</td>
<td>EMRO 7</td>
<td>Arab States Fundamental Education Centre, Sirs-el-Layyan (May 1953 - )</td>
</tr>
</tbody>
</table>

**Aim of the project.** To train national staff from all Arab States in the principles of fundamental education. This is primarily a UNESCO-assisted project, in which WHO helps with the health aspects.

**Assistance provided by WHO during the year.** An adviser on training in public health, and a health educator.

**Probable duration of assistance.** Beyond 1961.

**Work during the year.** The public health adviser and the health educator taught in the seventh training course organized by the Centre and assisted in many other short courses for staff from various ministries of countries of the Region.

The health educator completed his assignment in June 1959. The public health adviser arranged a co-operative plan of training with Ein Shams University Medical School. He also taught the eighth course, which started in October with eighty trainees.

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<tbody>
<tr>
<td>EMRO 16</td>
<td>R</td>
<td>EMRO 16</td>
<td>Smallpox Survey (Dec. 1958 - )</td>
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</tbody>
</table>

**Aim of the project.** To investigate the epidemiology of smallpox in countries of the Region; to study the existing smallpox control services and the laws on vaccination and control, the availability of vaccinators, techniques of vaccination, and the methods used for the production of smallpox vaccine; also to investigate the possibilities of carrying out mass vaccination campaigns.

**Assistance provided by WHO during the year.** (a) An epidemiologist and a laboratory expert; (b) a lyophilization apparatus for Ethiopia.

**Probable duration of assistance.** Until the end of 1960.

**Work done.** See page 86.
Second Regional Conference on Malaria Eradication, Addis Ababa (16 - 21 Nov. 1959)

Aim of the project. To give leading malaria workers and WHO senior advisers in the Region the opportunity of exchanging information on malaria eradication work, of discussing problems connected with the campaigns in frontier areas and of co-ordinating the activities of WHO with those of other agencies (UNICEF, Economic Commission for Africa, United States International Co-operation Administration, etc.) and of learning the latest developments in the philosophy and techniques of malaria eradication.

Assistance provided by WHO. (a) Fares of thirteen participants from Ethiopia, French Somaliland, Iran, Iraq, Jordan, Pakistan, Somalia, Sudan, Tunisia and the United Arab Republic (Province of Egypt); (b) supplies and equipment.

Work done. The conference was attended by fourteen participants from the countries listed above, nine WHO field staff, two consultants and eight persons from the Regional Office, including the Regional Director.

The agenda included a general review of the magnitude and features of the malaria programme in the Region, the planning of eradication programmes, administrative and financial considerations, technical studies and international co-ordination. Fifty-one technical papers were submitted, many of them with maps, graphs and charts.

The discussions were held in plenary meetings in the mornings and in four committees in the afternoons. The salient problem of co-ordinating activities between countries with common boundaries was comprehensively treated. The importance of administrative and financial decentralization was discussed in detail and workable solutions were reached.

The national press gave great publicity to the conference and its debates. All the visitors from abroad were received in audience by the Emperor of Ethiopia.

Regional Malaria Eradication Training Centre (Jan. 1959 - )

Aim of the project. To assist the United Arab Republic (Province of Egypt) and neighbouring countries of the Eastern Mediterranean Region to train technical staff and to promote study and research on technical problems encountered in malaria eradication.

Assistance provided by WHO during the year. (a) A senior adviser and a technician; (b) demonstration supplies and equipment for malaria eradication.

Probable duration of assistance. Until 1966.

Work during the year. Three courses of instruction were held during the year. Two were junior courses for malaria eradication supervisors: in the first there were eighteen students from Saudi Arabia, Sudan, Jordan, Libya and the United Arab Republic (Province of Egypt); in the second there were twenty-one students from Libya, Saudi Arabia, Somalia and the United Arab Republic (Province of Syria). The third course, which was a senior course for medical officers and engineers, started in October.

Dental Health Survey (June 1958 - July 1959)

Aim of the project. To advise on the future development of dental health services in various countries.

Assistance provided by WHO during the year. A dental health adviser.

Work during the year. The dental health adviser made surveys of the prevalence of dental diseases in Iran, Sudan and the Syrian and Egyptian Provinces of the United Arab Republic.

It was found that the prevalence of dental caries is low but that the prevalence of periodontal diseases is high. There is a lack of dentists and many of the public are unaware of the importance of good oral hygiene.

Conference on Trachoma, Tunis (15 - 24 Oct. 1959)

Aim of the project. To discuss various aspects of trachoma and other communicable eye diseases.

Assistance provided by WHO. (a) A consultant for two months; (b) cost of attendance of twenty-four participants from the Eastern Mediterranean Region (Ethiopia, Iran, Iraq, Jordan, Lebanon, Libya, Pakistan, Sudan, Tunisia, United Arab Republic—Province of Egypt and Province of Syria) and of three from the European Region (France (Algeria), and Morocco).

Yemen was represented by the participants from the United Arab Republic.

Work done. Sec page 88.
<table>
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<tr>
<td>EMRO 41</td>
<td>R</td>
<td>UNICEF</td>
<td>Regional Tuberculosis Prevalence Survey Team (Dec. 1958 - )&lt;br&gt;&lt;br&gt;&lt;em&gt;Aim of the project.&lt;/em&gt; To obtain for countries of the Eastern Mediterranean Region, by standardized case-finding, tuberculin testing, x-ray and bacteriological examinations, epidemiological information to be used in planning tuberculosis control; to assist countries in planning tuberculosis prevalence surveys; to train national personnel in all aspects of survey work; to integrate survey methods in comprehensive tuberculosis control programmes.&lt;br&gt;&lt;br&gt;&lt;em&gt;Assistance provided by WHO during the year.&lt;/em&gt; (a) A medical officer, a nurse, a laboratory technician, an x-ray engineer-technician, and a statistician; (b) laboratory supplies.&lt;br&gt;&lt;br&gt;&lt;em&gt;Probable duration of assistance.&lt;/em&gt; Until mid-1961.&lt;br&gt;&lt;br&gt;&lt;em&gt;Work during the year.&lt;/em&gt; Plans for the prevalence survey in Libya were agreed with the Government. The WHO team started the survey in Benghazi in April with the national team, which was complete except for the medical officer. Contact was made with the Government Statistical Department in Tripoli on preparing the sampling pattern for the country and for the statistical analyses of the survey results. The sampling survey for the Province of Cyrenaica was completed during the third quarter and analysis of the results was undertaken. In September the team transferred to Tunisia.</td>
</tr>
<tr>
<td>EMRO 42</td>
<td>R</td>
<td></td>
<td>Medical Education (First phase: Jan. - March 1959)&lt;br&gt;&lt;br&gt;&lt;em&gt;Aim of the project.&lt;/em&gt; To obtain detailed information on the present facilities for medical education in the Region in preparation for the medical education conference to be held in 1961.&lt;br&gt;&lt;br&gt;&lt;em&gt;Assistance provided by WHO during the year.&lt;/em&gt; A short-term consultant.&lt;br&gt;&lt;br&gt;&lt;em&gt;Work during the year.&lt;/em&gt; The consultant visited thirteen faculties of medicine in Iran, Lebanon and Pakistan to collect information on the medical education and training facilities and to discuss proposals for the conference on medical education planned for 1961.</td>
</tr>
<tr>
<td>EMRO 46</td>
<td>R</td>
<td></td>
<td>Training Course on Industrial Health, Alexandria (27 June - 10 Aug. 1959)&lt;br&gt;&lt;br&gt;&lt;em&gt;Aim of the project.&lt;/em&gt; To offer an opportunity to physicians, engineers and chemists engaged in industrial health services, either in an administrative or supervisory capacity, within various ministries or directly in industry, to receive special training, accompanied by demonstrations, in advanced techniques of industrial health work.&lt;br&gt;&lt;br&gt;&lt;em&gt;Assistance provided by WHO. (a) A short-term consultant, and help from two WHO advisers assigned to another project; (b) eleven one-and-a-half month fellowships in industrial health to trainees from Cyprus, Iran, Jordan, Lebanon, Saudi Arabia and Sudan, for study in the United Arab Republic (Province of Egypt); (c) publications on industrial health. Work done.&lt;/em&gt; The course was attended by fifteen physicians, eight engineers, two chemists, one pharmacist and one factory inspector with engineering background. One of the participants left the course at the beginning. The programme of the course included medical subjects, administration, field visits and discussions.</td>
</tr>
</tbody>
</table>
| Cyprus 1    | TA              |                       | Nursing Education, Nicosia (Sept. 1954 - Oct. 1959)<br><br><em>Aim of the project.</em> To develop a school of nursing adapted to local needs and resources, and to provide graduate and auxiliary nursing personnel for health services.<br><br><em>Assistance provided by WHO during the year.</em> A nurse educator.<br><br><em>Work during the year.</em> Working committees were set up to assist in recruitment, to study the training activities, and to find out how the school and the hospital nursing services could be better co-ordinated. The General Nursing Council for England and Wales has recognized the first two years of the three-year professional programme in Cyprus so that registered nurses from Cyprus can take their final examination in the United Kingdom after one year of additional studies there. Training programmes continued for various categories of nursing and midwifery personnel. Nursing procedures, teaching aids and manuals were prepared and translated into Turkish and Greek. The programme of studies for nursing auxiliary workers was revised.<br><br><em>Evaluation.</em> The nurse educator worked on the project for five years. The main objectives of the project were accomplished: training programmes for professional nurses were started and a minimum number of teaching staff was trained. The Nuffield Foundation Trust made a grant for a new educational and residential building for the school of nursing.
Nurses returning from fellowships in the United Kingdom are working in ward services and the teaching programme for different levels of midwifery and nursing personnel is being successfully implemented. Despite the difficulties—often legislative—that have been encountered, the project has been of significant value in directing the future course of nursing services on the island.

**Cyprus 3**

**Source of Funds**

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**Co-operating Agencies**

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**Description**

Public health administration. Two eleven-month fellowships for study in Lebanon.

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**Ethiopia 3**

**Public Health Administration (Oct. 1952 - )**

*Aim of the project.* To improve public health administration generally, and incorporate the several services in a long-term basic health programme.

*Assistance provided by WHO during the year.* A public health administrator.

*Probable duration of assistance.* Until the end of 1960.

*Work during the year.* The public health administrator continued to advise the Government on all aspects of public health development and to co-ordinate projects assisted by UNICEF and WHO, particularly the projects for control of tuberculosis, communicable eye diseases, leprosy and venereal diseases. He also acted as co-ordinator in the planning of a malaria pre-eradication survey.

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**Ethiopia 4**

**Venereal Disease Control, Addis Ababa (June 1952 - )**

*Aim of the project.* To demonstrate modern methods of venereal disease control and to survey the problem in various parts of the country; to implement mass control programmes in areas of high prevalence.

*Assistance provided by WHO during the year.* (a) A public health nurse; two short-term consultants, a serologist and a venereologist; (b) VDRL antigen.

*Probable duration of assistance.* Until the end of 1961.

*Work during the year.* The work at the Addis Ababa venereal diseases clinic and demonstration centre continued on a large scale, particularly in the training of national personnel (chiefly interns of the Gondar Health Training Centre). No significant progress can be reported as regards venereal diseases in the Addis Ababa area; plans are being considered to deal with this situation.

One of the field teams completed a mass treatment campaign in the Dessie area where there has been a clear and significant reduction of clinical syphilis. The second field team, working in the Lekemti area, has also reported significant progress. The work in the Gondar area has not yet started because no Ethiopian medical officer has been available. The consultant in serology visited the project and made suggestions on laboratory techniques and especially checking of seropositive cases by TPI tests which are being carried out at the Statens Seruminstitut in Copenhagen.

The venereologist made a thorough study of the project in order to ascertain whether continued international help was desirable.

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**Ethiopia 6**

**Tuberculosis Control Demonstrtion and Training Centre (March 1959 - )**

*Aim of the project.* To plan and carry out a comprehensive national tuberculosis control programme, well integrated into the national public health system; to set up a tuberculosis control demonstration centre in Addis Ababa, to train health workers; to extend BCG vaccination campaigns in Ethiopia; to collect epidemiological information about infection and incidence; to extend co-operation with social welfare agencies.

*Assistance provided by WHO during the year.* (a) A senior adviser, an x-ray technician and a public health nurse (from October); (b) laboratory supplies and equipment.

*Probable duration of assistance.* Until 1961.

*Work during the year.* See page 87.
## Ethiopia 9

### Description

**Health Training Centre, Gondar (March 1954 - )**

**Aim of the project.** To provide at Gondar a centre for training auxiliary personnel; to organize a model health service for the Province of Begemedir and the town of Gondar; to investigate local health conditions; to establish training health centres as required; to extend health services to the whole country.

**Assistance provided by WHO during the year.** (a) Two medical officers, a nurse, a sanitary engineer and a public health officer; (b) teaching and demonstration supplies.

**Probable duration of assistance.** Beyond 1961.

**Work during the year.** At the beginning of 1959, 154 students were attending the classes of the training centre. The midwifery and home delivery services developed very satisfactorily and a counterpart to the WHO nurse midwife was provided. Formal teaching, hospital services and laboratory work continued as planned. Outbreaks of smallpox and malaria were brought under control with the help of the trainees. The sanitary engineer surveyed the Gondar water supplies and reported to the appropriate authorities. He also visited the Shoa Province to advise on the site for a health centre. During a visit by the Emperor to the project, diplomas were distributed to the students.

Some improvements in field training have been discussed and are being realized. Plans are under consideration to prolong the health officers' training by a year and to give them a degree at the end of their internship instead of a diploma after their three years' training. Two new training centres were opened, at Dabat and Gorgora.

### Ethiopia 14

### Description

**Malaria Pilot Project (Aug. 1956 - )**

**Aim of the project.** To develop methods for eliminating malaria transmission in the Awash valley, and to study the biology of the vectors and their reaction to various insecticide formulations and dosages. A malaria training centre is attached to this project to train national staff for the future malaria eradication programme.

**Assistance provided by WHO during the year.** (a) A malariologist, an entomologist, a sanitarian and a laboratory technician; (b) some entomological supplies.

**Probable duration of assistance.** The pilot project will finish in 1959. The training centre will continue until the end of 1960. A pre-eradication survey team will work during 1960.

**Work during the year.** Residual DDT spraying was carried out for the third year in the Awash valley and directly protected 132,400 inhabitants. Surveillance covered about 40,000 inhabitants. The results of the pilot project indicate that malaria eradication is feasible under local conditions. A country-wide pre-eradication survey, on which to base a comprehensive plan of operation for an eradication programme, will be started early in 1960.

The training centre started in June with a first group of twenty-five students, who will be trained as supervisors for malaria eradication.

### Ethiopia 16

### Description

**Communicable Eye Diseases (Jan. 1959 - )**

**Aim of the project.** To assist the Government in providing a communicable eye diseases control unit in the Ministry of Public Health at Addis Ababa which, in co-operation with appropriate institutions, will train national staff for a communicable eye diseases control campaign; to make a preliminary survey in schools and to start control work in some areas.

**Assistance provided by WHO during the year.** (a) An ophthalmologist; (b) repository sulfonamides (sulfamethoxypyridazine) and laboratory supplies.

**Probable duration of assistance.** Until December 1961.

**Work during the year.** The WHO adviser selected national staff for training, made a survey in the schools of Addis Ababa, Gondar and Harrar and planned a control campaign against communicable eye diseases in these three areas in the 1959-1960 scholastic year. Control work started in October 1959. Laboratory facilities were provided at the Pasteur Institute in Addis Ababa.

### Ethiopia 18

### Description

**Fellowships**

**Laboratory techniques.** Two twelve-month fellowships for study in Lebanon and the United Arab Republic (Province of Egypt).

**Public health nursing.** A twelve-month fellowship for study in Lebanon.

**Surgery.** A twelve-month fellowship for study in the United Kingdom.
Undergraduate medical studies. Ten twelve-month fellowships — six for study in Lebanon, two for study in France and two for study in Italy.

Undergraduate pharmacy studies. A twelve-month fellowship for study in Lebanon.

Ethiopia 19
TA

Fellowships
Dried smallpox vaccine production techniques. A one-month fellowship for study in the United Kingdom.
Undergraduate medical studies. Three twelve-month fellowships for study in Lebanon.

Ethiopia

Participation in Inter-country Projects
See EMRO 16; EMRO 18; EMRO 40; AFRO 32.

French Somaliland

Participation in Inter-country Projects
See EMRO 18.

Iran 1
MESA
UNICEF

Malaria Eradication (1957 -

Aim of the project. To eliminate malaria by stages. Over a period of seven years it is hoped to eliminate it from forty thousand villages with twelve million inhabitants.

Assistance provided by WHO during the year. (a) An administrative officer; (b) a short-term consultant; (c) a seven-month fellowship for study in Jamaica, Mexico and the United States of America and three four-month fellowships for study in Jamaica and Mexico.

Probable duration of assistance. Until 1964.

Work during the year. 1959 was the third year of the eradication programme. During the year three out of the four zones of the country were covered with residual spraying, protecting by the end of July over 6 000 000 inhabitants in nearly 25 000 villages. DDT was used in the northern parts of the country and dieldrin in the south. Surveillance covered a population of approximately 1 140 000.

Iran 4
TA
UNICEF

Venereal Disease Control, Teheran (Nov. 1952 - Dec. 1958)

Aim of the project. (a) To expand and improve the control of venereal diseases in Teheran and its neighbourhood; to set up a venereal disease centre in Teheran with a laboratory for serological tests and to train serologists and technicians; to train professional and technical personnel (including a team to take over from the WHO team); (b) to provide venereal disease centres in other parts of the country and improve control work; (c) eventually to control venereal disease throughout the country by a mass campaign.

Assistance provided by WHO during the year. A medical adviser. With the completion of his assignment in December 1958, WHO assistance to the project ended. The adviser's final report has not yet been completed.

Evaluation. A final assessment is not yet possible. The general progress and achievement of this project can be gauged partially by the good work done by the field laboratory unit, which was set up by the WHO team, and by the consistent training and re-training given to members of the mass campaign teams. Difficulties in reporting from provincial centres were encountered.

Iran 10
TA
UNICEF


Aim of the project. To demonstrate modern methods of prenatal, infant and child care, and domiciliary midwifery services, and to train medical and auxiliary personnel; ultimately to plan maternal and child health services as part of the general health services for the whole country.

Assistance provided by WHO during the year. A social paediatrician in December 1958.

Work during the year. During his last month on the project, the social paediatrician rounded up WHO assistance and prepared for the final taking over by Iranian personnel.

Evaluation. The project has influenced services throughout the country, and has led to many advances in training; a new centre was opened in December 1958, and programmes have been started for institu-
Iran 19


*Description:*

To advise on a campaign against leprosy and on development of preventive measures and treatment of leprosy patients by new drugs.

*Assistance provided by WHO during the year.* A medical officer.

*Work done.* The leprosy services in Teheran were organized. A medical officer was appointed by the Government, and was fully trained by the WHO medical officer. A census taken of all known leprosy cases in Iran revealed about 2000 cases. A new system of records was established. A leprosy clinic was set up in Teheran and has been in full operation since October 1958. The leprosaria at Meshed and Tabriz were completely reorganized and hospitalization of leprosy cases was made voluntary. Extensive field trips were made in several provinces of Iran to obtain first-hand information on the epidemiology of leprosy.

The medical officer completed his assignment in mid-December 1958 and submitted his report.

*Evaluation.* The project resulted in immediate improvements of existing services and provided a useful basis for the future development of leprosy control measures in Iran. Bad communications, which made it difficult to treat leprosy patients in districts far from the main centres, were the chief problem. The WHO medical officer stressed the need for more advanced epidemiological surveys. The fact that the same medical officer had carried out the preliminary survey in 1955 was partly responsible for the good results of the recent work.

Iran 21

**Midwifery School, Teheran (Nov. 1954 - )**

*Description:*

To reopen the Midwifery School at the University Women's Hospital and provide a fifteen-month course in institutional and district midwifery for qualified nurses.

*Assistance provided by WHO during the year.* Two nurse midwife educators.

*Probable duration of assistance.* Until 1961.

*Work during the year.* The third group of nurse midwifery students from the Higher Institute of Midwifery completed their fifteen-month course. By the end of the year the project had thus provided the country with thirty-six qualified nurse midwives for teaching and various health service programmes. Fifteen pupil-midwives enrolled in December 1958 for the fourth course. The fifth course began in September 1959 with twelve pupils. In future graduate nurses can enter this programme from any recognized school of nursing. Practical work for pupil-midwives began in two new teaching areas — the gynaecological out-patient clinics and the maternal and child health centre, where restricted domiciliary midwifery practice has started.

The faculty assisted the public health department in making for television a short film on post-partum nursing care. Two groups of student nurses from the Red Lion and Sun School of Nursing completed a twelve-week course of theoretical teaching and practice at the Institute. Charts and visual aid materials have been compiled to assist in teaching. Nurse counterparts have assumed more responsibility for the programme.

Iran 22

**Radiology, Firoosabadi Hospital, Teheran (First phase: Sept. 1955 - April 1956; second phase: Nov. 1959 - )**

*Description:*

To develop the Radiological Department of the Hospital; to train the staff in the use of the Hospital's diagnostic x-ray apparatus and therapeutic x-ray apparatus and radium.

*Assistance provided by WHO during the year.* A consultant, who had already carried out a similar mission in 1956 at the same hospital, from 21 November.

*Probable duration of assistance.* Until mid-May 1960.
Public Health Laboratory (March 1955 -

**Aim of the project.** To set up a central public health laboratory and organize a public health laboratory service for the whole country.

**Assistance provided by WHO during the year.** A laboratory director (scientist) and a food and drug analyst.

**Probable duration of assistance.** Until the end of 1961.

**Work during the year.** The WHO staff continued their work in the laboratory services in Teheran and advised on the improvement of those services in the provinces. The central public health laboratory in Teheran was transferred to new premises. Training of Iranian staff continued.

The laboratory director completed his assignment in June 1959 and is being replaced by a medical officer (bacteriologist).

Mental Health (May 1959 -

**Aim of the project.** To extend and improve preventive and curative mental health services; to train personnel and co-ordinate related activities (e.g. education and prevention of juvenile delinquency); to establish a central administrative, co-ordinating and planning unit as a mental health section of the Ministry of Health.

**Assistance provided by WHO during the year.** A nurse tutor (psychiatric).

**Probable duration of assistance.** Until the end of 1961.

**Work during the year.** The nurse tutor established contacts with the staff of the Ministry of Health, hospital authorities, teaching institutes, civic bodies and voluntary organizations and with other international and bilateral agencies, so as to provide from the start the basis for an integrated approach to the task. The nurse tutor worked at the Reza Shah Kabir School of Nursing, the Rousbeh Psychiatric Hospital and the Nursing Division of the Department of Public Health.

Fellowships

**Bilharziasis control.** Two one-month fellowships for study in Sudan.

**Epidemiology.** Two twelve-month fellowships for study in India.

**Maternal and child health.** An eight-and-a-half-month fellowship for study in France, Belgium and the Netherlands.

**Medical education.** A four-month and a two-and-a-half-month fellowship for study in the United States of America.

**Mental health.** A nine-month fellowship for study in France and Switzerland.

**Nursing education.** Four twelve-month fellowships — one for study in Canada, one for study in the United Kingdom and two for study in New Zealand.

**Social and clinical paediatrics.** A six-month fellowship for study in France.

**Statistics.** Three six-and-a-half-month fellowships for study in Lebanon and a two-month fellowship for study in the United States of America.

**Tuberculosis.** A two-and-a-half-month fellowship for study in Turkey, Italy and France.

Fellowships

**Public health administration.** A twelve-month fellowship for study in Sweden.

**Snake venom serum production.** A six-week fellowship for study in Brazil.

**Thoracic surgery.** A three-month fellowship for study in Denmark.

**Tuberculosis.** A three-and-a-half-month fellowship for study in France and Tunisia.

**Tropical medicine and hygiene.** A nine-month fellowship for study in the United Kingdom.

Nursing Education, Red Lion and Sun School of Nursing, Rey (June 1956 -

**Aim of the project.** To reorganize the School of Nursing as an independent educational institution to train nurses for the country’s expanding health services.
PROJECT LIST: EASTERN MEDITERRANEAN

<table>
<thead>
<tr>
<th>Project No.</th>
<th>Description</th>
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<tbody>
<tr>
<td></td>
<td>Assistance provided by WHO during the year. (a) A senior nurse educator and five nurse educators; (b) two vehicles.</td>
</tr>
<tr>
<td></td>
<td>Work during the year. At the time of reporting seventy students were in the School and applications had been received from twenty-six candidates for a new class. An active recruitment programme sponsored by the Red Lion and Sun Society was carried out. A presentation of the history of nursing for television was completed as well as a film on the School, which was produced by the School of Fine Arts. Course outlines and plans for better correlation of the content of the course were reviewed and the medical surgical lectures were assessed. Clinical teaching in paediatric nursing was given to a group of students and graduate nurses. In-service education in mental health nursing started for staff of the School, with assistance from project Iran 28. Facilities and resources that could be used to give students practical training in public health nursing were studied. The Paediatric Unit of the Firousabadi Hospital was completed and the School began to use it as a practice area for students. The faculty participated in a conference of national and international nurses called to draw up curricula for nurses and for behyars (sanitarians).</td>
</tr>
</tbody>
</table>

Iran 38

Bilharziasis Control (Nov. 1958 - )

Aim of the project. To survey the Khuzistan development area and to prepare plans for preventing the spread of bilharziasis there. On this survey has been based a plan of operations for: conducting field studies designed to prevent and control bilharziasis effectively and economically in a pilot area; training national staff; and preparing an expanded programme for its control in Iran. Assistance provided by WHO during the year. (a) An epidemiologist and a malacologist for the initial survey from November 1958 to January 1959; an epidemiologist as senior adviser to the project from July 1959; (b) laboratory supplies and transport. Probable duration of assistance. Five years. Work during the year. A survey report was completed on bilharziasis in Khuzistan, with recommendations for a five-year pilot project to be set up in the province with WHO assistance. A plan of operation was signed by the Government in August 1959. A WHO senior adviser was appointed, who is assisting the Government in establishing and operating the pilot project from a centre in Dizful in Khuzistan. A malacologist was recruited by WHO to join the project early in 1960. |

Iran 40

High Institute of Public Health, Teheran (April - June 1959)

Aim of the project. To study the requirements for the establishment and development of a High Institute of Public Health. Assistance provided by WHO and work done during the year. A short-term consultant, who made a study of public health training available for various categories of health personnel and of the requirements for setting up a High Institute of Public Health in Teheran, and presented a report. Probable duration of assistance. Further consultant services in 1961. |

Iran

Participation in Inter-country Projects

See EMRO 18; EMRO 23; EMRO 40; EMRO 42; EMRO 46; EURO 52; Inter-regional 62. |

Iraq 6

Provincial Health Administration (Jan. 1957 - )

Aim of the project. To develop provincial health services. Assistance provided by WHO during the year. A senior medical officer, a sanitary engineer, a laboratory expert and a statistician. Probable duration of assistance. Until the end of 1959. Work during the year. Owing to the complex nature of this project, the shortage of national staff and other difficulties, field work came gradually to a standstill during the year and it was agreed with the Government that this project should be wound up by the end of 1959 and replaced by a project dealing with the basic training of several categories of public health personnel (Iraq 35). The WHO laboratory expert and statistician completed their assignments in December 1958 and April 1959 respectively. The other members of the team were due to be transferred to project Iraq 35 at the end of 1959.
Malaria Eradication (1957 - )

**Aim of the project.** To carry out a five-year plan for eradication of malaria from the whole country as an extension of the control programme with which WHO has assisted since 1952.

**Assistance provided by WHO during the year.** (a) Two malarologists, an entomologist, a sanitarian, an administrative officer, and a technician (to June 1959); (b) a three-month fellowship for study of malaria eradication in the Philippines; (c) some entomological supplies.

**Probable duration of assistance.** Until 1964.

**Work during the year.** The residual spraying campaign was carried out in two rounds. A population of over two-and-a-quarter million in over 10,000 villages were protected directly. Surveillance is now in operation among a population of 1.5 million and will expand to cover 3.6 million in the immediate future.

Bilharziasis Control (Nov. 1955 - )

**Aim of the project.** To evaluate bilharziasis control methods, especially in relation to irrigation systems, snail control, human diagnosis and treatment, environmental sanitation and health education; and to evolve new procedures that will give more satisfactory control. Particular attention is to be paid to preventing the introduction of the vector snail and the human disease into newly irrigated and newly settled areas.

**Assistance provided by WHO during the year.** A public health engineer; a malacologist (December 1958 and January 1959, and again from November 1959); an epidemiologist (February, March and April 1959).

**Probable duration of assistance.** Beyond 1961.

**Work during the year.** Because of a number of changes and difficulties encountered in recruiting suitable international staff, the work done at the project was at rather a low level during the period, and plans for expansion into Latifiya and Musayeb irrigation project areas mostly remained in abeyance. Project work was however maintained at the Mushada dispensary in Tarmiya and at Katha in the greater Musayeb irrigation schemes. Laboratory investigations on the ecology of Bulinus continued, following the programme outlined at the end of 1958. Progress was also made in the construction of a small water treatment pilot plant in Latifiya, designed to meet the special requirements of small communities in Iraq.

Fellowships

**Blood bank.** A eight-month fellowship for study in the United Kingdom.

**Food analysis.** A twelve-month fellowship for study in the Netherlands.

**Medical education.** A three-month fellowship for study in the United States of America, Yugoslavia, the United Kingdom and Sweden.

**Public health administration.** A ten-month fellowship for study in the United Kingdom.

**Radiation medicine.** A twelve-month fellowship for study in the United States of America.

**Radiation protection.** A three-week fellowship for study in the United Kingdom.

**Statistics.** Three six-and-a-half-month fellowships for study in Lebanon.

**Trachoma control.** A six-week fellowship for study in Tunisia, Morocco, Spain and Yugoslavia.

**Tropical medicine and clinical parasitology.** An eight-month fellowship for study in the United Kingdom and the Federal Republic of Germany.

Health education. Two six-month fellowships for study in the United Arab Republic (Province of Egypt).

Assistance to College of Medicine, Baghdad (Dec. 1958 - )

**Aim of the project.** To organize the Department of Public Health and Preventive Medicine and to improve the teaching of undergraduates; to stimulate and develop research projects; to arrange field training for the undergraduates in the teaching programme.

**Assistance provided by WHO during the year.** (a) A professor of public health and preventive medicine, a lecturer in parasitology and parasitic diseases; (b) publications for the college.

**Probable duration of assistance.** Until 1961.
Work during the year. The visiting professor took part in the regular teaching programme from December 1958 until March 1959, and with the Dean of the College he visited the United Arab Republic (Province of Egypt) to discuss medical education with the Regional Office and the Egyptian university authorities. At the end of April he was transferred to another project. The assignment of the lecturer in parasitology and parasitic diseases was extended until 21 January 1959, at the Government's request.

Iraq

Participation in Inter-country Projects

See EMRO 18; EMRO 40; EURO 52; EURO 100.6; Inter-regional 52.

Israel 5

Malaria Eradication (1957 - )

_Aim of the project._ To strengthen the surveillance programme and so to eliminate the few residual foci of malaria transmission.

_Assistance provided by WHO during the year._ (a) A six-week fellowship for study of insect control in the United Kingdom, Denmark, the Federal Republic of Germany, Switzerland, Italy, Finland and Norway; (b) laboratory and entomological supplies and transport.

_Probable duration of assistance._ Until 1960.

Work during the year. A plan of operation was prepared: the Government intends to implement the project in 1960.

Sanitary Engineering Lecturer, Haifa Technion (Feb. 1956 - Sept. 1959)

_Aim of the project._ To improve environmental sanitation in Israel; to train sanitary staff at the Haifa Technion and elsewhere in the country; to include sanitary engineering courses in the regular engineering curriculum at the Haifa Technion.

_Assistance provided by WHO during the year._ A visiting professor of sanitary engineering.

Work during the year. Teaching activities continued in the Civil Engineering Faculty, the Agricultural Engineering Department, the Graduate School and the Extension Department. A graduate course in sanitary chemistry and biology was given for the first time. The visiting professor advised on questions of water supply, air pollution, education and training, sewage disposal, etc., and organized a symposium on the industrial waste problem in Israel, which was sponsored by the sanitary engineering laboratories of the Technion, in co-operation with the Israel Sewage and Industrial Waste Association. Research and field tests were carried out on ground water, waste disposal, corrosion of water supply networks, re-use of waste water, drinking-water quality and air pollution. The Technion Administration has decided to provide quarters in a new building for the sanitary engineering laboratories.

_Evaluation._ The objectives of the project have been fulfilled to a great extent. A definite improvement has been made in environmental sanitation in Israel, especially in water supply. Sanitary engineering courses have been organized and there is every possibility that they will develop further and meet present and future needs. There is still a shortage of teaching staff.

Research work has constituted a substantial part of the project, which has stimulated the interest of other agencies and helped them with problems related to sanitary engineering. This has resulted in still greater recognition of the importance of sanitary engineering and, indirectly, has influenced the development of environmental sanitation in general.

Israel 25

Assistance to Hadassah Medical School, Jerusalem: Anatomy (Sept. 1957 - )

_Aim of the project._ To assist in strengthening the Department of Anatomy at the Hadassah Medical School of the Hebrew University in Jerusalem; to carry out and supervise experimental research.

_Assistance provided by WHO during the year._ A medical officer.

_Probable duration of assistance._ Until 1961.

Work during the year. The routine teaching and other work progressed satisfactorily. The main emphasis was on the stimulation of research work. With the assistance of the WHO medical officer, the laboratories for experimental medicine and cancer research were extended and an electron microscopy unit was established. The medical officer guided junior staff in carrying out research. An international meeting was held in the research centre on the immunological aspects of carcinogenesis.

For further assistance to the Hadassah Medical School, see Israel 29.
**Israel 27**  
**R**  

**Description**  

**Fellowships**  

- **Clinical and public health aspects of chronic diseases.** A three-month fellowship for study in the United States of America.  
- **Epidemiology.** A twelve-month fellowship for study in the United Kingdom.  
- **Health insurance schemes and duties and organization of the medical councils.** A two-month fellowship for study in the United Kingdom, Sweden and Czechoslovakia.  
- **Hospital administration.** Two six-month fellowships for study in the United Kingdom.  
- **Mental health.** A four-month fellowship for study in the United Kingdom, the Netherlands, France and Denmark.  
- **Public health administration.** A twelve-month fellowship for study in the United States of America.  
- **Public health engineering.** A twelve-month fellowship for study in the United States of America.  
- **Public health laboratory methods.** A six-month fellowship for study in the United Kingdom.  
- **Radiation protection.** Two three-week fellowships, one for study in France, the other for study in the United Kingdom.

**Israel 29**  
**R**  

**Assistance to Hadassah Medical School, Jerusalem: Preventive and Social Medicine (Jan. 1959 - )**  

**Aim of the project.** To improve and enlarge the teaching of preventive and social medicine in the medical school, especially in undergraduate medical education; to establish a public health demonstration and training area; to organize field training of undergraduate medical students and in-service training for physicians and other health workers; to develop research projects in preventive and social medicine.

**Assistance provided by WHO during the year.** A professor of public health and a professor of health education.

**Probable duration of assistance.** Until 1961.

**Work during the year.** The Ministry of Health and the Hadassah Medical Organization are co-operating to set up a social medicine project which will provide practical field training for medical students and will serve as a basis for a regional health service. Discussions were held with the various services concerned; a health education unit was started and a social medicine unit was planned for the teaching hospital. The teaching and research programmes at the School were revised and expanded.

**Israel 32**  
**TA**  

**Assistance to Hadassah Medical School, Jerusalem: Preventive and Social Medicine (Jan. 1959 - )**  

**Aim of the project.** To make an analysis of the health accomplishments of the last eight years, and of the local evolution of health problems, so as to plan future health work on a sound basis.

**Assistance provided by WHO during the year.** A short-term consultant to give technical advice on the analysis.

**Probable duration of assistance.** Until mid-January 1960.

**Israel**  

**Participation in Inter-country Projects**  

*See EURO 52; EURO 100.6; EURO 100.7; Inter-regional 62.*

**Jordan 2**  
**TA**  

**Nursing Education**  

**Assistance provided by WHO during the year.** A twelve-month fellowship for undergraduate studies in the United Arab Republic (Province of Egypt).

**Jordan 3**  
**TA**  
**UNICEF**  


**Aim of the project.** To establish a demonstration and training centre in Amman, and to train auxiliary community health visitor midwives; to strengthen health centres throughout the country, and to establish new maternal and child health centres; to provide refresher courses for doctors, nurses and midwives.

**Assistance provided by WHO during the year.** (a) A nurse midwife; (b) two vehicles.

**Work during the year.** During her final month on the project, the nurse midwife helped to finalize the curricula and training programmes to be followed in the maternity hospital, the maternal and child health centre, the domiciliary midwifery service, the children's hospital and other services.
**Evaluation.** The achievements of this project were notable. In accordance with the objectives, the Amman centre and the maternity service were established, counterparts were satisfactorily trained and responsibilities were handed over to the national staff. The maternity hospital has been greatly improved, but the domiciliary midwifery service needs strengthening.

A Maternal and Child Health Section was set up at the Ministry of Health, its Director being also head of the centre and national counterpart — an amalgamation of functions which went a long way to ensuring success. No Directorate of Health Services or Public Health Administration Section, however, exists at the Ministry. Maternal and child health centres have been considerably expanded but they should be integrated into the general health services to avoid the existing isolation. A general health plan is needed. The old centres in West Jordan need to be oriented towards preventive work; also refresher courses for medical officers are needed. Supervision is a prerequisite for future development and this was insisted upon throughout the project.

### Jordan 5

**Tuberculosis Control (Jan. 1956 - )**

**Aim of the project.** To establish a tuberculosis control demonstration and training centre in Amman for diagnosis, treatment, home visiting, collection of epidemiological data, training of nursing students and qualified nurses, and health education of the public.

**Assistance provided by WHO during the year.** (a) A medical officer, a public health nurse, an x-ray technician; (b) teaching and demonstration equipment.

**Probable duration of assistance.** Until the end of 1960.

**Work during the year.** At the end of the period under review 38 585 persons had attended the Centre, of whom 2964 were found to have x-ray pathology, including 1067 active tuberculosis cases. The first home visits made numbered 2796. All active and suspicious cases were given treatment, and another tuberculosis clinic was established in Jerusalem under the guidance of the WHO team. Vigorous training programmes for all categories of health personnel were undertaken. As an extension of the work initiated by the Tuberculosis Centre, a tuberculosis prevalence survey was planned to be started early in 1960 with the assistance of the WHO Regional Tuberculosis Prevalence Survey Team (see EMRO 41) and UNICEF.

### Jordan 6

**Malaria Eradication (June 1958 - )**

**Aim of the project.** To implement a malaria eradication programme.

**Assistance provided by WHO during the year.** (a) A malariologist; (b) two three-month fellowships for study in the United Arab Republic (Province of Egypt); (c) some entomological supplies.

**Work during the year.** The residual spraying operation protected a population of about 100 000. Larviciding operations in the Jordan valley and in selected places in west and east Jordan were also carried out. Surveillance was maintained over a population of about 500 000. In May 1959 UNRWA handed over to the national malaria service responsibility for the antimalaria operations in the Jordan valley.

A new plan of operation has been prepared providing for additional assistance from WHO.

### Jordan 18

**Fellowships**

**Maternal and child health.** A twelve-month fellowship for study in the United States of America.

**Medical studies.** A twelve-month undergraduate fellowship for study in the United Arab Republic (Province of Egypt).

**Radiation protection.** A three-week fellowship for study in the United Kingdom.

**Statistics.** Two six-and-a-half-month fellowships for study in Lebanon.

**X-ray techniques.** A nine-month fellowship for study in the United Kingdom.

### Jordan 19

**Fellowships**

**Medical studies.** A twelve-month undergraduate fellowship for study in the United Arab Republic (Province of Egypt).

**Pharmacy.** A twelve-month undergraduate fellowship for study in the United Arab Republic (Province of Egypt).
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<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Description</th>
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<tbody>
<tr>
<td>Jordan 20</td>
<td></td>
<td>Vital and Health Statistics (Aug. - Sept. 1959)</td>
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<tr>
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<td>Aim of the project. To organize the statistical section of the Ministry of Health, revise statistical forms, establish a national committee on vital and health statistics and organize its work.</td>
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<td>Assistance provided by WHO. (a) A consultant for one month; (b) statistical supplies.</td>
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<td>Work done. Forms used by the Ministry of Health were overhauled as well as the organization of its statistical service and reports system. A national committee on vital and health statistics was set up and held its first meeting.</td>
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<tr>
<td>Jordan</td>
<td></td>
<td>Participation in Inter-country Projects</td>
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<td></td>
<td></td>
<td>See EMRO 5; EMRO 18; EMRO 19; EMRO 40; EMRO 46; EURO 52; EURO 100.6.</td>
</tr>
<tr>
<td>Lebanon 4</td>
<td>TA</td>
<td>Rural Health Unit (Sept. 1957 - )</td>
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<tr>
<td></td>
<td></td>
<td>Aim of the project. To develop rural health services, beginning with a rural health unit, and later establishing a health service and a health department for a district of Lebanon.</td>
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<td>Assistance provided by WHO during the year. (a) A medical officer; (b) laboratory equipment and transport.</td>
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<td>Probable duration of assistance. Until the end of 1961 and probably beyond.</td>
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<td>Work during the year. The WHO medical officer left the project at the end of December 1958. Regional office staff members visited the country in 1959 and it was agreed with the Government that the project site should be changed to the northern part of the country. Plans were made for this move, which was expected to start early in 1960.</td>
</tr>
<tr>
<td>Lebanon 7</td>
<td>MESA UNICEF</td>
<td>Malaria Eradication (1957 - )</td>
</tr>
<tr>
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<td>Aim of the project. To eradicate malaria from the whole country, where 300 000 people are known to be under malaria risk.</td>
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<td></td>
<td>Assistance provided by WHO during the year. (a) A short-term consultant (malarialogist); (b) supplies and equipment.</td>
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<td>Probable duration of assistance. Until 1960.</td>
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<td>Work during the year. A revised plan of operation has been prepared. Surveillance and residual spraying were carried out. Approximately 135 000 inhabitants in 463 villages were protected by spraying; out of a total of 13 108 blood slides examined, none was found with malaria parasites.</td>
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<tr>
<td>Lebanon 12</td>
<td>R</td>
<td>Assistance to the French University of Beirut (First phase: Nov. 1958 - Jan. 1959)</td>
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<tr>
<td></td>
<td></td>
<td>Aim of the project. To assess the teaching of hygiene and preventive medicine at the French University of Beirut, and to develop new activities in these subjects and eventually in other branches of medical education.</td>
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<td></td>
<td>Assistance provided by WHO and work done during the year. A visiting professor, who made a study of the teaching in the Faculty of Medicine of the University and submitted a report.</td>
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<tr>
<td>Lebanon 16</td>
<td>TA</td>
<td>Tuberculosis Control (Sept. 1955 - Feb. 1959)</td>
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<td></td>
<td></td>
<td>Aim of the project. (a) To reorganize the tuberculosis dispensary in Beirut into a centre for demonstration of and training in tuberculosis control methods; (b) to train medical and paramedical personnel in public health methods of tuberculosis control; (c) to establish a mobile epidemiological unit.</td>
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<td>Assistance provided by WHO during the year. A medical officer.</td>
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<td>Work during the year. The centre was opened on 27 December 1958 and, by the end of February 1959, 3400 persons had been examined. The mobile unit examined 3470 persons during the same period. All routine work for case-finding, diagnosis, prevention, treatment and domiciliary follow-up was begun. The direction of the tuberculosis centre was turned over to four tuberculosis specialists, one full-time and three part-time, and a trained staff of Lebanese technicians and social assistants.</td>
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<td>Evaluation. The tuberculosis centre, with its modern equipment, is considered to be one of the most up to date in the country. Shortage of staff, particularly statistical staff, has made a proper epidemiological survey difficult.</td>
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<td>Project No.</td>
<td>Description</td>
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<tr>
<td>Lebanon 26</td>
<td>It was found necessary to prepare the way gradually for the BCG vaccination campaign and to undertake active health education for this purpose. The demonstration centre is clearly the logical basis for future expansion and it could also render useful service in training personnel.</td>
<td></td>
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</tbody>
</table>
| Lebanon 27  | **Fellowships**  
  *Cancer control and treatment.* A three-month fellowship for study in France, Sweden and Switzerland.  
  *Health education.* Three two-month fellowships for study in the United Arab Republic (Province of Egypt).  
  *Laboratory methods for dosage of hormones.* A four-month fellowship for study in France.  
  *Medical education.* Two fellowships — one of one month and one of one and a half months — for study in the United States of America.  
  *Mental health.* A twelve-month fellowship for study in the United Kingdom.  
  *Pathological anatomy and histopathology.* A twelve-month fellowship for study in France.  
  *Public health administration.* A twelve-month fellowship for study in France.  
  *Radiation protection.* A three-week fellowship for study in France.  
  *Surgery.* A two and a half month fellowship for study in Sweden, Denmark and Austria. |
| Lebanon     | **Participation in Inter-country Projects**  
  See EMRO 40; EMRO 42; EMRO 46; EURO 52; EURO 56; EURO 100.7; Inter-regional 62. |
| Libya 2     | **Maternal and Child Health Demonstration and Training Centre, Tripolitania (April 1954 - )**  
  *Aim of the project.* To establish a demonstration and training centre which will train community midwives, demonstrate modern methods of mother and child care; and to organize maternal and child centres as an integral part of the general health services.  
  *Assistance provided by WHO during the year.* A public health nurse and a midwife.  
  *Probable duration of assistance.* Until the end of 1961.  
  *Work during the year.* The work of the Centre and the training programme continued. The second group of community health visitors graduated in June and the third group began training in September. The placement of the graduates is being considered by the Government. |
| Libya 3     | **Nursing Education, Tripoli (Sept. 1955 - )**  
  *Aim of the project.* To develop a nursing education programme adapted to local needs and resources, in order to provide professional and assistant nurses for the country's expanding health services.  
  *Assistance provided by WHO during the year.* (a) A senior nurse educator and two nurse educators; (b) teaching and demonstration supplies.  
  *Probable duration of assistance.* Beyond 1965.  
  *Work during the year.* The first group of twelve assistant nurses completed their two-year course in June 1959, and started their work in the Tripoli General Hospital nursing services; the staff of the nursing school have helped with their supervision. A badge for the auxiliaries to wear after graduation was designed. Twenty auxiliary nurses were recruited for the second assistant nurses course. The student nurse in the graduate course began her third year. A programme of education for the public about nursing was carried out throughout the year. The commemoration ceremony on Florence Nightingale Day was broadcast, and a film on nursing was made by the United States International Co-oper-
tion Administration. The nursing profession was discussed on several occasions with the Libyan women's organizations and the Director of the Teachers' Training College, and the importance of their support for the profession was stressed.

The senior nurse educator was one of the external examiners at the Libya 2 project for the trainees completing the maternal and child health course. She also attended the yearly High Health Council Meeting, and delegates from the Council visited the project. The WHO nurses retained most of the responsibility for the nursing education project, with two counterparts employed by the Government.

Libya 7

**Sanitary Officers' and Sanitarians' Institute, Benghazi (Dec. 1955 - )**

**Aim of the project.** To train medical assistants (sanitary officers) and sanitarians for work in the rural health centres under the supervision of professional staff; to provide in-service training facilities for the auxiliary health personnel at present employed; as a general and long-range objective, to expand and improve the public health services, particularly in the rural areas.

**Assistance provided by WHO during the year.** Two medical officers and a sanitarian.

**Probable duration of assistance.** Until 1961.

**Work during the year.** The training programme for the health assistants and sanitarians progressed satisfactorily. The Minister of Health seconded a medical officer to work part-time until the arrival of a WHO medical officer. A second medical officer joined the project in October. In addition to the formal lectures, practical training was given in environmental sanitation (for both groups of trainees), communicable diseases, health education and statistics (for the health assistants only). The classes and examinations of health assistants were completed in the first half of June. All twenty-four students passed their examinations satisfactorily. Classes for the third year health assistants began in September 1959. Eighteen sanitarians completed theoretical and field training in sanitation between July and September. Final examinations and graduation were held at the end of September, and a new group of fifteen sanitarians was selected from the three provinces of Libya; four sanitarians already employed by the Benghazi Health Department joined the class.

Libya 9

**Malaria Pre-eradication Survey (June 1958 - Sept. 1959)**

**Aim of the project.** To delimit the malarious areas of the country and to develop a plan of operation for a malaria eradication programme to start in 1960.

**Assistance provided by WHO during the year.** (a) A malariologist; (b) four three-month fellowships for study in the United Arab Republic (Province of Egypt).

**Work during the year.** The pre-eradication survey was completed. Only about 40,000 inhabitants in Fezzan province are considered to be exposed to malaria risk. An eradication programme will be carried out from 1960 with assistance from the United States International Co-operation Administration.

**Evaluation.** The pre-eradication survey defined rapidly and economically the exact nature of the problem to be tackled in 1960. The low prevalence of malaria has to be related to the remarkable accomplishments of a control project assisted by ICA which operated mainly in Tripolitania from 1954 to 1957. Close co-operation between ICA and WHO continues. Thorough epidemiological investigations yielded the requisite data for the eventual development of a comprehensive plan of operation for the eradication programme itself.

Libya 12

**Maternal and Child Health Demonstration and Training Centre, Benghazi (Sept. 1956 - )**

**Aim of the project.** To establish a centre for demonstrating modern methods of maternal and child care and training community midwives to serve in rural and urban maternal and child health centres throughout Cyrenaica.

**Assistance provided by WHO during the year.** A social paediatrician, a public health nurse and a public health nurse midwife.

**Probable duration of assistance.** Until the end of 1961.

**Work during the year.** The work of the centre and the training programme continued. The first group of community midwives graduated in June, and their placement in health centres is being discussed by Federal and Provincial Governments. A course for local dayas (auxiliary midwives) was completed. A new group of community midwife trainees has been recruited.

The functions of the 'social paediatrician were expanded to include advisory services in maternal and child health to the Federal Government.
<table>
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<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Co-operating Agencies</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Libya 14</td>
<td>R</td>
<td></td>
<td><strong>Fellowships</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Health education.</em> A fourteen-month fellowship for study in the United Arab Republic (Province of Egypt).</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Medical studies.</em> Fourteen twelve-month undergraduate fellowships, thirteen for study in the United Arab Republic (Province of Egypt), one for study in Italy.</td>
</tr>
<tr>
<td>Libya 15</td>
<td>TA</td>
<td></td>
<td><strong>Fellowships</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Medical studies.</em> Two twelve-month undergraduate fellowships for study in the United Arab Republic (Province of Egypt).</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>X-ray techniques.</em> A twelve-month fellowship for study in the United Arab Republic (Province of Egypt).</td>
</tr>
<tr>
<td>Libya</td>
<td></td>
<td></td>
<td><strong>Participation in Inter-country Projects</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>See EMRO 19; EMRO 40; EMRO 41.</td>
</tr>
<tr>
<td>Pakistan 16</td>
<td>TA</td>
<td></td>
<td><strong>Venereal Disease Centre, Chittagong</strong> (July 1956 - July 1959)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Aim of the project.</em> (a) To demonstrate modern methods of venereal disease control; (b) to train local physicians, serologists and nurses; (c) to extend venereal disease services to the inhabitants of Chittagong and to seafarers passing through its port.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Assistance provided by WHO during the year.</em> A serologist and a public health nurse.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Work during the year.</em> The WHO nurse completed her assignment in March and the serologist in July 1959, thus bringing WHO assistance to an end. The Pakistani serologist took charge of the laboratory on 1 June. Clinical work continued to be heavy; the number of venereal disease cases was very small compared with the number of skin disease patients, including leprosy patients. The plans made for carrying out a yaws survey among the tribes living in the hills near Chittagong could not be implemented.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Evaluation.</em> A venereal disease control demonstration and training centre was satisfactorily established at Chittagong. There have been changes in the national staff, but the training has progressed satisfactorily and the Pakistani counterparts have wholly taken over from the WHO personnel. Some features of the project, for example, certain serological surveys, have not been entirely successful, but attendance at the clinics and the volume of laboratory work increased rapidly.</td>
</tr>
<tr>
<td>Pakistan 21</td>
<td>TA</td>
<td></td>
<td><strong>Nursing Adviser to Central Government</strong> (July 1953 - )</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Aim of the project.</em> To develop and improve nursing education and nursing services in the country.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Assistance provided by WHO during the year.</em> A senior nurse adviser.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Probable duration of assistance.</em> Until the end of 1959.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Work during the year.</em> Statistical data on nursing and midwifery were compiled. The revised curriculum of basic nursing education for the Karachi schools of nursing was approved by the Pakistan Nursing Council. Attention was given to proposals for staffing nursing and midwifery services, strengthening education and improving conditions of service for nurses. The nursing adviser attended the maternal and child health seminar held in Lahore in March.</td>
</tr>
<tr>
<td>Pakistan 22</td>
<td>TA</td>
<td></td>
<td><strong>Sanitary Engineering, West Pakistan</strong> (Feb. 1957 - )</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Aim of the project.</em> To improve environmental conditions in West Pakistan, by providing basic sanitary facilities, including potable water supplies and the collection and disposal of waste and excreta; to design, construct and operate sanitary engineering works in connexion with large programmes of social welfare, satellite town construction and rural improvements.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Assistance provided by WHO during the year.</em> (a) A sanitary engineer; (b) supplies and equipment.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Probable duration of assistance.</em> Until the end of 1960.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Work during the year.</em> See page 87.</td>
</tr>
</tbody>
</table>
## Project No.

### Source of Funds

### Co-operating Agencies

#### Pakistan 23
- **R**
- **UNICEF**

**Description**

**Children's Hospital, Karachi (Oct. 1956 - )**

**Aim of the project.** To set up a children's hospital in Karachi, which will give full paediatric, medical, surgical and specialist services, and train medical students, doctors, student and graduate nurses and community health visitor trainees in paediatric and child health.

**Assistance provided by WHO during the year.** A social paediatrician and a paediatric nurse.

**Probable duration of assistance.** Until the end of 1961.

**Work during the year.** The social paediatrician left in February 1959 and was not replaced until November 1959, which retarded medical training. The paediatric nurse assisted in training community health visitors and some nurses in paediatric care.

#### Pakistan 25
- **R**

**School of Physiotherapy, Karachi (Jan. 1956 - )**

**Aim of the project.** To establish a school of physiotherapy based on the former Physiotherapy Department at the Jinnah Hospital; to give a full course in physiotherapy to men and women students.

**Assistance provided by WHO during the year.** (a) A physiotherapist; (b) equipment for physical therapy.

**Probable duration of assistance.** Until the end of 1960.

**Work during the year.** The new WHO physiotherapist arrived in Karachi in January 1959. With her national counterpart she continued the training courses and developed the school, which was transferred to newly built premises. Two groups of students were under training, six in the second course, and seven in the third course.

#### Pakistan 27
- **R**

**Fellowships**

**Laboratory techniques.** A four-month fellowship for study in Denmark and Tunisia.

**Maternal and child health and paediatrics.** A twelve-month fellowship for study in the United Kingdom.

**Medical education.** A three-month fellowship for study in the United States of America.

**Medicine.** A twelve-month fellowship for study in Australia.

**Orthopaedic surgery.** A twelve-month fellowship for study in Australia.

**Paediatrics and child health.** A twelve-month fellowship for study in the United Kingdom and Ireland.

**Sanitary engineering.** Two twelve-month fellowships for study in the United States of America.

**Statistics.** Two six-and-a-half-month fellowships for study in Lebanon.

**Trachoma control.** A six-week fellowship for study in Tunisia, Morocco, Spain and Yugoslavia.

**X-ray techniques.** A four-month fellowship for study in Denmark and Tunisia.

#### Pakistan 28
- **TA**

**Fellowships**

**Anaesthesiology.** Two twelve-month fellowships, one for study in the United Kingdom, and one for study in Denmark.

#### Pakistan 30
- **R**

**Nursing Education (Jan. 1958 - )**

**Aim of the project.** To establish a nursing department in the East Pakistan Secretariat of Health and to upgrade to professional status three junior schools for assistant nurses.

**Assistance provided by WHO during the year.** A nurse educator during the first quarter of 1959, and a nurse educator from September 1959.

**Probable duration of assistance.** Beyond 1964.

**Work during the year.** During the first part of the year temporary assistance was given to the Chittagong Hospital in organizing its nursing service. The nurse educator began in October to visit some of the proposed areas for the project, Chittagong, Sylhet, Mymensingh and Reyshaki.

#### Pakistan 32
- **R**

**Tuberculosis Control (Prevalence Survey) (Nov. 1959 - )**

**Aim of the project.** (a) To obtain information on the epidemiological pattern of tuberculosis in the population as a whole by a prevalence survey among groups selected at random; (b) to plan, for the whole country, a comprehensive tuberculosis control programme based on the results of the survey.
### Pakistan

<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Co-operating Agencies</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>MESA</td>
<td></td>
<td><strong>Malaria Pre-eradication Survey (Oct. 1959 - )</strong></td>
</tr>
</tbody>
</table>

**Aim of the project.** To assess the nature and extent of malaria control work already done in the country; to study the distribution of malaria and the vectors and to compile all the data necessary for a plan of operations for a malaria eradication programme which is to begin early in 1960.

**Assistance provided by WHO during the year.** (a) Two survey teams, one for West Pakistan and the other for East Pakistan, each consisting of a malarialogist (team leader), an entomologist, a sanitarian and a technician; (b) two short-term consultant co-ordinators; (c) a three-month fellowship for study in the United States of America and South America, three three-month fellowships for study in the United Arab Republic (Province of Egypt), a four-month fellowship for study in Jamaica and Mexico and a three-month fellowship for study in the Philippines.

**Probable duration of assistance.** The pre-eradication survey until about June 1960; a full-scale eradication project thereafter.

### Saudi Arabia

<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Co-operating Agencies</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>MESA</td>
<td>TA</td>
<td><strong>Malaria Control (March 1952 - June 1959); Malaria Pre-eradication Survey (July 1959 - )</strong></td>
</tr>
</tbody>
</table>

**Aim of the project.** To prepare a comprehensive plan of operations for a malaria eradication programme.

**Assistance provided by WHO during the year.** (a) An entomologist and a sanitarian; (b) a four-month fellowship for study in Jamaica and Mexico and six three-month fellowships for study in the United Arab Republic (Province of Egypt); (c) supplies.

**Probable duration of assistance.** Until 1960.

**Work during the year.** The objectives of the malaria demonstration project (under Technical Assistance) that started in March 1952 were attained and this project terminated at the end of June 1959. The new project started in July 1959 (under MESA).

A programme for a country-wide pre-eradication survey was approved by the Government, and the survey was started.

<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Co-operating Agencies</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>TA</td>
<td></td>
<td><strong>Environmental Sanitation (Second phase: Oct. 1958 - )</strong></td>
</tr>
</tbody>
</table>

**Aim of the project.** To set up an environmental sanitation service in the Ministry of Health, Riad, to co-ordinate the work of all branches of the national administration that deal with environmental sanitation.

**Assistance provided by WHO during the year.** (a) A sanitary engineer; (b) teaching and demonstration supplies.

**Probable duration of assistance.** Until the end of 1961.

**Work during the year.** Environmental sanitation surveys were carried out in different parts of the country, with special attention to water supply. The WHO sanitary engineer advised on the improvement of environmental facilities for the pilgrims in the western part of the country. A higher executive board for environmental sanitation was established. Steps have been taken to create an Environmental Sanitation Department in the Ministry of Health.

<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Co-operating Agencies</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>R</td>
<td></td>
<td><strong>Health Assistants' and Sanitarians' Institute, Riad (Feb. 1959 - )</strong></td>
</tr>
</tbody>
</table>

**Aim of the project.** To train health assistants and sanitarians for work under the supervision of professional staff; and to provide in-service training facilities for auxiliary health personnel now employed.

**Assistance provided by WHO during the year.** (a) A public health officer and a sanitarian; (b) teaching and demonstration equipment.

**Probable duration of assistance.** Until 1961.

**Work during the year.** The WHO public health officer and the sanitarian selected the premises for the school, and prepared the curricula and lists of equipment and supplies.
Forty students (nineteen sanitarians and twenty-one health assistants) were enrolled and, before the first semester, were given a practical, supervised introduction to health work during a three-month orientation period in Jeddah, where they were attached to the health services during the Mecca pilgrimage season and to the antimalaria service. A complete team of national counterparts has been appointed.

Saudi Arabia 17

Fellowships

**Ophthalmology.** A twelve-month fellowship for study in the United Arab Republic (Province of Egypt).

**Statistics.** A six and a half-month fellowship for study in Lebanon.

**Surgery.** A twelve-month fellowship for study in the United Arab Republic (Province of Egypt).

**Tuberculosis.** A twelve-month fellowship for study in the United Arab Republic (Province of Egypt), Switzerland and the United Kingdom.

**Undergraduate medical studies.** Six twelve-month fellowships, five for study in the United Arab Republic (Province of Egypt), and one for study in Lebanon.

Somalia 2

Malaria Pilot Project (July 1955 - )

**Aim of the project.** To extend malaria control to all endemic areas of the country.

**Assistance provided by WHO during the year.** (a) An entomologist; (b) two three-month fellowships for study in the United Arab Republic (Province of Egypt) and a two-month fellowship for study in Iran; (c) supplies.

**Probable duration of assistance.** Until the end of 1960.

**Work during the year.** Surveillance covered a population of 60,000 in the Genale area where spraying with residual insecticides had been carried out since 1956. The entomologist investigated the bionomics of the local vector *Anopheles gambiae*; and made susceptibility tests which showed that *A. gambiae* is still susceptible to insecticides. A pre-eradication survey of the whole country is due to start early in 1960.

Somalia 8

Training of Health Personnel (Jan. 1959 - )

**Aim of the project.** To reorganize, strengthen and reorient all the existing arrangements for training auxiliary health personnel in Somalia; to strengthen the regional health services and to promote their extension throughout the country, with particular attention to the health and welfare of mothers and children; to integrate health services more fully into other work for raising the standard of living and securing community participation.

**Assistance provided by WHO during the year.** A public health adviser, a sanitarian, and a public health nurse.

**Probable duration of assistance.** Beyond 1961.

**Work during the year.** The adviser's first work was to inspect buildings, offices and the site of the field training areas and to arrange for remodelling and repairs. The Government allocated an office, a store, a garage and provided an administrative officer, two drivers and three custodians. The furnishing and equipping of the training centre was almost completed.

The curricula for the training of health officers, public health nurse midwives and sanitarians were prepared. Plans were made for the organization of the urban health centre and of the rural health centre. The Minister of Health appointed a special committee for the selection of candidates. Training started on 15 October with fifteen health officer students, fifteen sanitarians and twelve midwives.

Somalia 9

Fellowships

**Public health administration.** A twelve-month fellowship for study in Canada.

**Tuberculosis.** A three-week fellowship for study in Turkey.

**Undergraduate medical studies.** Three twelve-month fellowships for study in Italy.
<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Description</th>
</tr>
</thead>
</table>
| Somalia 10  | TA             | **Fellowships**<br>
  *Undergraduate medical studies.* A twelve-month fellowship for study in Italy. |
| Somalia     |                | **Participation in Inter-country Projects**<br>
  See EMRO 18; EMRO 19; AFRO 32. |
| Sudan 3     | R UNICEF       | **Tuberculosis Control (BCG)** (Second phase: Oct. 1956 - )<br>
  *Aim of the project.* To carry out a mass campaign in the southern and central provinces, based on the results of the tuberculin survey made in the first phase of the project.<br>
  *Assistance provided by WHO during the year.* A medical officer and a BCG nurse.<br>
  *Probable duration of assistance.* Until the end of April 1960.<br>
  *Work during the year.* The mass campaign phase, in which four national teams are working, has been in operation in three provinces: Upper Nile, Equatoria and Bahr el Ghazal. At the end of the year under review 476,604 persons had been tested and 157,960 vaccinated. Local personnel (dressers) were trained for permanent BCG centres to be attached to provincial hospitals. |
| Sudan 6     | TA UNICEF      | **Malaria Eradication Pilot Project** (Nov. 1956 - )<br>
  *Aim of the project.* To carry out a malaria pilot project in the Blue Nile Province, south of the Gezira irrigated area, to find and solve the difficulties that may arise in a future eradication programme.<br>
  *Assistance provided by WHO during the year.* (a) A malariologist, an entomologist and a sanitarian; (b) a three-month fellowship for study in Jamaica and Mexico and five three-month fellowships for study in the United Arab Republic (Province of Egypt); (c) supplies.<br>
  *Probable duration of assistance.* Until 1960.<br>
  *Work done during the year.* Residual spraying covered about 470,000 people in 1398 villages; 75,000 were under surveillance. Special attention was paid to nomadic groups and seasonal labourers in cotton plantations. The pre-eradication survey is planned to start in mid-1960. No resistance to insecticides in the local vector, *Anopheles gambiae*, has been detected so far. |
| Sudan 7     | R TA           | **Nursing Education, Khartoum** (Oct. 1955 - )<br>
  *Aim of the project.* To establish a school of nursing (basic professional) which will prepare selected young women for leading nursing positions in the country's health programme.<br>
  *Assistance provided by WHO during the year.* (a) A senior nurse educator, five nurse educators and an administrative assistant; (b) teaching and demonstration equipment.<br>
  *Probable duration of assistance.* Beyond 1963.<br>
  *Work during the year.* See page 88. |
| Sudan 9     | TA             | **Tuberculosis Control, Wadi Medani** (Nov. 1956 - )<br>
  *Aim of the project.* (a) To establish a model demonstration and training centre in Wadi Medani; (b) to collect epidemiological information by a prevalence survey; (c) to train national personnel for tuberculosis control services; (d) to plan a generalized tuberculosis control programme.<br>
  *Assistance provided by WHO during the year.* (a) A senior adviser, an x-ray technician, a laboratory technician and a public health nurse; (b) x-ray and laboratory supplies and equipment.<br>
  *Probable duration of assistance.* Until the end of 1960.<br>
  *Work during the year.* The Tuberculosis Centre in Wadi Medani has demonstrated modern public health methods of tuberculosis control. In two years of operation more than 20,000 persons have been registered. Training programmes for all categories of personnel, including medical assistants, have been instituted. Close liaison with the tuberculosis hospital and other health institutions has been established. The tuberculosis laboratory is the best of its kind in the country. Home visiting methods are satisfactory but their extent is limited by a variety of social and administrative factors.<br>  A tuberculosis prevalence survey was started in May 1959 in the Blue Nile province using the standard methods recommended by WHO. The main obstacles to greater progress of the work have been shortage of qualified national staff and difficulties of terrain and climate. |
### Sudan 11

**Source of Funds**: TA

**Co-operating Agencies**: Sudan

**Description**

**Health Education**

*Assistance provided by WHO during the year.* Two fellowships for study in the United Kingdom, one for ten months, the other for twelve.

### Sudan 16

**Source of Funds**: R

**Co-operating Agencies**: Sudan

**Description**

**Venereal Disease Control (Oct. 1959 - )**

*Aim of the project.* To develop the national venereal disease control programme.

*Assistance provided by WHO and work done during the year.* A short-term consultant, who carried out a survey of venereal and treponematosis diseases in the southern provinces.

*Probable duration of assistance.* Until mid-December 1959.

### Sudan 23

**Source of Funds**: R

**Co-operating Agencies**: Sudan

**Description**

**Blood Bank (March 1958 - )**

*Aim of the project.* To establish a blood transfusion and blood bank service and to set up a demonstration unit and train doctors, nurses and auxiliary workers in the operation of the service.

*Assistance provided by WHO during the year.* (a) A short-term consultant; (b) supplies and equipment.

*Probable duration of assistance.* Until the end of 1960.

*Work during the year.* A WHO consultant visited Sudan in April 1959 and advised the Government, mainly on the building and budget aspects of the project.

### Sudan 24

**Source of Funds**: R

**Co-operating Agencies**: Sudan

**Description**

**Fellowships**

*Dental surgery.* A twelve-month fellowship for study in the United Kingdom.

*Dried lymph vaccine production.* A six-week fellowship for study in the United Kingdom.

*Environmental sanitation and drug control.* A three-month fellowship for study in the United Kingdom.

*Psychiatry.* A twelve-month fellowship for study in the United Kingdom.

*Public health administration.* Three fellowships for study in the United Kingdom, two for ten months and one for twelve months.

*Sanitary science.* A twelve-month fellowship for study in Lebanon.

*Statistics.* Two six and a half month fellowships for study in Lebanon.

*Therapeutic radiology.* A twelve-month fellowship for study in the United Kingdom.

*Undergraduate dental studies.* Two twelve-month fellowships for study in the United Arab Republic (Province of Egypt).

*Undergraduate studies in sanitary engineering.* A twelve-month fellowship for study in the United Arab Republic (Province of Egypt).

### Sudan 25

**Source of Funds**: TA

**Co-operating Agencies**: Sudan

**Description**

**Fellowships**

*Public health.* A twelve-month fellowship for study in Lebanon.

*Nursing service administration.* A six-month fellowship for study in the United Arab Republic (Province of Egypt).

*Undergraduate nursing studies.* Six twelve-month fellowships, two for study in Lebanon, and four for study in the United Arab Republic (Province of Egypt).

### Sudan 26

**Source of Funds**: R

**Co-operating Agencies**: Sudan

**Description**

**Onchocerciasis Control (Nov. 1959 - )**

*Aim of the project.* To draw up a programme for the control and prevention of onchocerciasis and to train personnel.

*Assistance provided by WHO during the year.* (a) A short-term consultant (ophthalmologist); (b) supplies and equipment.

*Probable duration of assistance.* At least until the end of 1961.

*Work during the year.* The consultant went to the southern provinces to study the ocular and other lesions of onchocerciasis, and determine the prevalence and severity of the endemicity of the disease and its economic and social implications.
<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Description</th>
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<tbody>
<tr>
<td>Sudan</td>
<td></td>
<td>Participation in Inter-country Projects</td>
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<tr>
<td></td>
<td></td>
<td>See EMRO 5; EMRO 18; EMRO 19; EMRO 23; EMRO 40; EMRO 46; AFRO 32; AFRO 54; Inter-regional 52.</td>
</tr>
</tbody>
</table>

**Tunisia 3**

<table>
<thead>
<tr>
<th>TA UNICEF</th>
<th>Communicable Eye Disease Control (Nov. 1953 - )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Aim of the project.</strong> To carry out (a) a mass campaign against seasonal conjunctivitis; (b) systematic and collective treatment of trachoma in schools; and (c) a programme of research.</td>
</tr>
<tr>
<td></td>
<td><strong>Assistance provided by WHO during the year.</strong> A consultant for one month.</td>
</tr>
<tr>
<td></td>
<td><strong>Probable duration of assistance.</strong> Until the end of 1961.</td>
</tr>
<tr>
<td></td>
<td><strong>Work during the year.</strong> The mass campaign against seasonal conjunctivitis was continued satisfactorily by national personnel. The number covered by the end of 1958 was estimated at 965,000, i.e., more than a quarter of the Tunisian population. The campaign for treatment of trachoma in schools was extended to the whole school population of Tunisia: 380,869 children were examined and a large percentage of them treated. Plans were made for a comparative study of two different schedules of antibiotic treatment for trachomatous schoolchildren. See also Tunisia 22.</td>
</tr>
</tbody>
</table>

**Tunisia 6**

<table>
<thead>
<tr>
<th>TA UNICEF</th>
<th>Maternal and Child Health (Second phase: May 1959 - )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Aim of the project.</strong> To establish a maternal and child health demonstration and training centre in Tunis; to expand the maternal and child health programme as an integral part of the general public health programme; to train professional and auxiliary personnel.</td>
</tr>
<tr>
<td></td>
<td><strong>Assistance provided by WHO during the year.</strong> A public health nurse.</td>
</tr>
<tr>
<td></td>
<td><strong>Probable duration of assistance.</strong> Until the end of 1964.</td>
</tr>
<tr>
<td></td>
<td><strong>Work during the year.</strong> An initial survey was made of conditions in the project area and of health services. Assistance was given with preparations for the maternal and child health demonstration and training centre.</td>
</tr>
</tbody>
</table>

**Tunisia 9**

<table>
<thead>
<tr>
<th>R UNICEF</th>
<th>Tuberculosis Chemotherapy Pilot Project (Dec. 1957 - )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Aim of the project.</strong> To compare the effects of isoniazid, as a single drug, when used in domiciliary and in hospital treatment, and to ascertain its efficacy as a chemoprophylactic for contacts of tuberculous cases; to determine the most practical methods of controlling tuberculosis in a community by chemoprophylaxis and chemotherapy.</td>
</tr>
<tr>
<td></td>
<td><strong>Assistance provided by WHO during the year.</strong> A medical officer, a statistician, a public health nurse and a laboratory technician.</td>
</tr>
<tr>
<td></td>
<td><strong>Probable duration of assistance.</strong> Until the end of 1960.</td>
</tr>
<tr>
<td></td>
<td><strong>Work during the year.</strong> At the time of reporting, over 22,630 persons had been examined, of whom over 15,140 had been admitted to drug treatment and over 650 had completed treatment. Two thousand persons were due to be further examined. Follow-up examinations were increased; the distribution of tablets continued, and urine testing for INH and other control measures were begun. Further consignments of cultures were sent to the Tuberculosis Research Institute, Prague. Assistance was given to three other projects: Tunisia 6, Tunisia 24 and EMRO 41. A brief preliminary evaluation has been made of the results of chemotherapy trials.</td>
</tr>
</tbody>
</table>

**Tunisia 13**

<table>
<thead>
<tr>
<th>TA</th>
<th>Fellowships</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Anaesthesiology. A twelve-month fellowship for study in France.</td>
</tr>
<tr>
<td></td>
<td>Blood bank. A one-month fellowship for study in France and Switzerland.</td>
</tr>
<tr>
<td></td>
<td>Microbiology. An eight-month fellowship for study in France.</td>
</tr>
<tr>
<td></td>
<td>Statistics. A six and a half month fellowship for study in Lebanon.</td>
</tr>
<tr>
<td></td>
<td>Toxicology. A four-month fellowship for study in France.</td>
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<tr>
<td></td>
<td>Virology. A six-month fellowship for study in France.</td>
</tr>
</tbody>
</table>

**Tunisia 14**

<table>
<thead>
<tr>
<th>R</th>
<th>Fellowships</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Clinical and social paediatrics. A twelve-month fellowship for study in France.</td>
</tr>
<tr>
<td></td>
<td>Haematology. Five three-month fellowships for study in Lebanon.</td>
</tr>
<tr>
<td></td>
<td>Masso-kinesitherapy. A three-month fellowship for study in France.</td>
</tr>
</tbody>
</table>
Project No.  
Source of Funds  
Co-operating Agencies

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Port and airport hygiene.</em> A one and a half month fellowship for study in France, Spain and Italy.</td>
</tr>
<tr>
<td><em>Psychiatry and Neurology.</em> A twelve-month fellowship for study in France.</td>
</tr>
<tr>
<td><em>Radiology.</em> A twelve-month fellowship for study in France.</td>
</tr>
<tr>
<td><em>Seroology.</em> A three-month fellowship for study in France.</td>
</tr>
<tr>
<td><em>Surgery.</em> Two fellowships for study in France, one for one month, one for two months, and a three-month fellowship for study in Sweden.</td>
</tr>
<tr>
<td><em>Tuberculosis.</em> A three-week fellowship for study in Turkey and a two-month fellowship for study in France.</td>
</tr>
<tr>
<td><em>Undergraduate studies in sanitary engineering.</em> A twelve-month undergraduate fellowship for study in Canada.</td>
</tr>
</tbody>
</table>

**Tunisia 17**  
**MESA**

**Malaria Pre-eradication Survey (Sept. 1957 - )**

*Aim of the project.* To study the distribution of malaria and the vectors and draw up a plan of operation for a malaria eradication programme to be started in 1960.

*Assistance provided by WHO during the year.* A malariologist, an entomologist, a sanitarian and a technician.

*Probable duration of assistance.* Until 1964.

*Work during the year.* Surveys were made in different parts of the country and the malarious areas have now been defined. A plan of operation for a malaria eradication programme has been prepared, to be undertaken possibly in 1960.

**Tunisia 22**  
**R**

**Ophthalmological Centre (Nov. 1957 - )**

*Aim of the project.* To study the etiology of trachoma and related eye diseases in Tunisia, particularly the virological aspects; to provide laboratory facilities for the use of modern techniques and undertake a basic programme of research.

*Assistance provided by WHO during the year.* (a) A virologist and a laboratory technician; (b) laboratory supplies and equipment.

*Probable duration of assistance.* Until December 1961.

*Work during the year.* The laboratory for ophthalmological research (mainly on the etiology of trachoma) was opened and started work. Some interesting results were obtained: three strains of an agent pathogenic in eggs were isolated from trachoma inclusions and work was undertaken on their resistance to antibiotics, sensitivity to temperature and other factors. The national staff was increased and trained; some of them have been awarded fellowships.

The project was visited by many ophthalmologists during the trachoma conference in Tunis in October 1959.

**Tunisia 24**  
**R**  
**UNICEF**

**Tuberculosis Control (Sept. 1959 - )**

*Aim of the project. First phase:* To develop a national pilot area for the study and assessment of practical tuberculosis control methods and for training technical personnel; to collect epidemiological information which will be used in planning a national tuberculosis control project and as a basis for evaluating results. *Second phase:* To extend tuberculosis control services throughout the country.

*Assistance provided by WHO during the year.* A medical officer and an x-ray technician.

*Probable duration of assistance.* Beyond 1961.

*Work during the year.* The technician checked the x-ray units in the Sousse area and the unit to be used by the tuberculosis prevalence survey team (project EMRO 41). The medical officer arrived in October.

**Tunisia**

**Participation in Inter-country Projects**

*See EMRO 18; EMRO 40; EMRO 41.*
**United Arab Republic**

**Egypt 5**

**TA**

**Demonstration and Training Centre, Qalyub**

*Assistance provided by WHO during the year.* Two six-week fellowships for the study of tuberculosis in Denmark and Kenya.

**United Arab Republic**

**Egypt 23**

**MESA**

**Malaria Pre-eradication Survey (Feb. 1959 - )**

*Aim of the project.* To prepare a plan of operation for a malaria eradication programme.

*Assistance provided by WHO during the year.* (a) A malariologist; (b) a four-month fellowship for study in Jamaica and Mexico; (c) supplies.

*Probable duration of assistance.* Until 1965.

*Work during the year.* Malarialometric and entomological surveys were carried out. The Province of Egypt has been divided into twenty-one indicator districts. The resistance of the local vector, *Anopheles pharoensis*, to DDT and dieldrin was studied. A malaria planning committee has held monthly meetings to plan an eradication programme.

**United Arab Republic**

**Egypt 25**

**TA**

**UNICEF**

**Communicable Eye Disease Control Pilot Project (Dec. 1954 - )**

*Aim of the project.* Second phase: To ascertain by field trials a practicable and effective method for the control of trachoma and other communicable eye diseases. Third phase: To introduce a large programme of collective treatment of trachoma and other communicable eye diseases in children attending provincial schools.

*Assistance provided by WHO during the year.* (a) A bacteriologist; (b) laboratory supplies and equipment.

*Probable duration of assistance.* Second phase: Until the end of 1960. Third phase: Several years.

*Work during the year.* Second phase: The field trials continued as planned and a report was published on the results of a reduced treatment schedule for the prophylactic treatment of communicable eye diseases, including trachoma. The result of the other trials will be available by the end of this phase of the project. Third phase: Plans were made and work started in the province of Sharkia during the autumn of 1959, among 140 000 pupils of 472 primary schools.

**United Arab Republic**

**Egypt 27**

**R**

**Assistance to High Institute of Public Health, Alexandria (Jan. 1958 - )**

*Aim of the project.* To develop the High Institute of Public Health so that it may achieve its main objectives of advancing the knowledge and training of professional workers in all fields of public health, promoting research and field work, and solving practical health problems in Egypt.

*Assistance provided by WHO during the year.* (a) A sanitary engineer, an industrial health engineer and a scientist (industrial chemist); (b) two short-term consultants; (c) a twelve-month fellowship to study sanitary engineering in the United States of America; (d) teaching and demonstration supplies and equipment.

*Probable duration of assistance.* Until 1961.

*Work during the year.* The members of the WHO team gave all the lectures in the occupational health department and a large percentage of those in the sanitary engineering department of the Institute. They also supervised and acted as examiners for the theses which the graduating students submit for their Master's degree. Nine students graduated in occupational health (five doctors and four engineers), and ten in sanitary engineering. Six students in occupational health and four in sanitary engineering completed their first year of study and are due to graduate in 1960.

Field surveys were made in connexion with the training of students. In occupational health, paper mills, lead refining and battery plants were surveyed, and a special study was carried out in a rayon textile plant. In sanitary engineering, field work was carried out, in line with the theses of the graduates, in water works, and on vector control and sanitary chemistry.

A regional training course in industrial health (see EMRO 46), at which the WHO team members gave lectures, was held in the Institute. An air pollution team from the National Research Centre in Cairo continued its work under the supervision of a WHO adviser.

The training of teaching personnel and field workers in sanitary engineering and occupational health is being pursued. As regards field personnel, the number of graduates leaving the school shows the interest taken in specializing in these subjects; but there are not yet enough trainees who can take duty as lecturers. There is still no sanitary engineer to head the sanitary engineering department, nor...
any sanitary engineer on the staff. The engineering section of the occupational health department is in the same situation. It is a local requirement that no-one may be appointed lecturer or professor who has not obtained a doctor’s degree. Demonstrators attached to the department should therefore be enabled to take their degrees, especially in occupational health, in which there is no qualified Egyptian. Until this is done, assistance in teaching will be required.

**United Arab Republic**

**Egypt 35**

**Nutrition Institute**

**Assistance provided by WHO during the year.** A six-month fellowship for study in the United Kingdom.

**United Arab Republic**

**Egypt 38**

**Assistance to the Centre for Sanitary Engineering Research of the University of Alexandria (Oct. 1958 - )**

**Aim of the project.** To develop a knowledge of sanitary engineering and its application, especially under local conditions. To assist the Centre’s programme of fundamental and applied research. The Centre will provide training facilities for the Faculty of Engineering, through its undergraduate programmes of municipal and sanitary engineering; and for the High Institute of Public Health, through its post-graduate programmes of public health engineering.

**Assistance provided by WHO during the year.** (a) A short-term consultant; (b) laboratory supplies and equipment.

**Probable duration of assistance.** Until the end of 1961.

**Work during the year.** Plans have been prepared for the growth of the Centre over a period of five years. The Centre was officially inaugurated in July 1959. Some of the staff have been appointed and started work. The WHO consultant has made recommendations on supplies and equipment, fellowships and expert consultants in various subjects.

**United Arab Republic**

**Egypt 39**

**Fellowships**

*Bilharziasis control.* A three-month fellowship for study in South Africa, Southern Rhodesia, the Belgian Congo, Liberia and Sudan.

*Communicable eye diseases control.* Two one-month fellowships for study in Saudi Arabia and a three-month fellowship for study in the United States of America.


*Entomology.* A twelve-month fellowship for study in the Federal Republic of Germany.

*Environmental sanitation.* A twelve-month fellowship for study in the United States of America.

*Hospital administration.* A two-month fellowship for study in Sweden, Finland and Switzerland.

*Maternal and child health.* A twelve-month fellowship for study in the United States of America.

*Medical education.* A three-month fellowship for study in Switzerland, the United Kingdom and the United States of America.

*Occupational health.* A three-month fellowship for study in Italy, Switzerland, the Federal Republic of Germany, the United Kingdom, the Netherlands, Denmark and Sweden.

*Pathology and medical education.* A three-month fellowship for study in Denmark, Sweden, Norway, the United Kingdom, Switzerland and Yugoslavia.

*Public health administration.* A twelve-month fellowship for study in the United States of America and a six-month fellowship for study in the United States of America and Switzerland.

*Public health dentistry.* A twelve-month fellowship for study in the United States of America.

* Radiation protection.* A three-week fellowship for study in the United Kingdom.

*Rural health.* A four and a half month fellowship for study in Yugoslavia and Finland.

*Sports medicine.* A six-month fellowship for study in Finland, the Soviet Union and the Federal Republic of Germany.

*Statistics.* A six and a half month fellowship for study in Lebanon.
PROJECT LIST: EASTERN MEDITERRANEAN

<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Description</th>
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<tbody>
<tr>
<td>United Arab Republic</td>
<td></td>
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<tr>
<td>Egypt 40</td>
<td>TA</td>
<td>Fellowships</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chest surgery. A six-month fellowship for study in Denmark.</td>
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<tr>
<td></td>
<td></td>
<td>Sanitary engineering. A two and a half month fellowship for study in the United States of America.</td>
</tr>
<tr>
<td>Egypt 42</td>
<td>R</td>
<td>Neuropsychiatric Unit (Epilepsy) (Oct. 1958 - )</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Aim of the project. To establish in the Province of Egypt a neuro-psychiatric unit for epilepsy which will provide diagnostic services for preventive and curative purposes, and to train staff in this specialty.</td>
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<td></td>
<td></td>
<td>Assistance provided by WHO during the year. (a) A mental health adviser; (b) spares for the electro-encephalograph.</td>
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<td>Probable duration of assistance. Until the end of 1959.</td>
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<tr>
<td></td>
<td></td>
<td>Work during the year. A centre for electro-encephalography and convulsive disorders was established at the Abbassia Mental Hospital in Cairo. Various categories of personnel were trained for the centre. An out-patient clinic was opened at the centre in August. The WHO adviser helped to organize an electro-encephalography laboratory at the Nervous Diseases Section of the Faculty of Medicine, Ein Shams University. He also gave a number of lectures; their text was issued in mimeograph form by the Director of the mental health services.</td>
</tr>
<tr>
<td>Egypt</td>
<td></td>
<td>Participation in Inter-country Projects</td>
</tr>
<tr>
<td></td>
<td></td>
<td>See EMRO 5; EMRO 7; EMRO 18; EMRO 19; EMRO 23; EMRO 40; EMRO 46; EURO 100.6; Inter-regional 50; Inter-regional 52.</td>
</tr>
<tr>
<td>Syria 2</td>
<td>MESA TA UNICEF</td>
<td>Malaria Eradication (March 1956 - )</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Aim of the project. To eradicate malaria from the whole country, where one-and-a-half million people out of a population of 4.4 million live under malaria risk.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assistance provided by WHO during the year. (a) A malariologist, an entomologist, a sanitarian and an administrative officer; (b) a three-month fellowship for study in the Province of Egypt; (c) some entomological supplies.</td>
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<td>Probable duration of assistance. Until 1963.</td>
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<tr>
<td></td>
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<td>Work during the year. 1959 was the third year of the eradication programme. Residual spraying has covered over a million people. Surveillance covered a population of 226 177 in the administrative district of Damascus; it will be extended to Homs and Aleppo in the immediate future. Malarriometric surveys were made in different parts of the country. The rate of infection in the community is becoming very low.</td>
</tr>
<tr>
<td>Syria 15</td>
<td>R</td>
<td>Vital and Health Statistics (Feb. 1958 - )</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Aim of the project. To establish an efficient health statistics system, and to improve the registration and compilation of vital statistics.</td>
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<td></td>
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<td>Assistance provided by WHO during the year. A statistician.</td>
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<td>Work during the year. The Ministers of Health and of the Interior have agreed, on the suggestion of the WHO statistician, that vital events registered by the Ministry of the Interior will be reported monthly to local health institutes. Registers of medical and paramedical personnel were set up in the statistical office of the Ministry of Health. The reporting of individual diagnoses by the Damascus General Hospital has begun. The reports are coded and tabulated in the statistical office. The office has new premises, and staff were trained. Lectures on statistics were given to classes of medical and paramedical students at Damascus University.</td>
</tr>
<tr>
<td>Syria 16</td>
<td>TA</td>
<td>Rural Health Unit (Jan. 1958 - )</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Aim of the project. To provide, in one area, combined preventive and curative health services, so administered that they can be integrated into the sub-district, district and central administrations; to establish a rural health demonstration and training centre for various categories of health personnel; and to provide facilities for testing administrative and technical procedures.</td>
</tr>
</tbody>
</table>
Assistance provided by WHO during the year. (a) A medical officer and a public health nurse; (b) two vehicles.


Work during the year. Good progress was made in the project area. A health centre at Sakba was put into full operation; it carries out both clinical and public health work. A sub-centre was set up at Geremana. A birth registration programme and an infant mortality survey were begun. A tuberculosis survey was carried out and a survey of enteritis and a smallpox vaccination programme were started. Malaria surveillance continued.

Attention was given to the training of national personnel: a course for eighteen dayas (auxiliary midwives) was completed, and all passed their examinations successfully; refresher courses were given to health visitors, nurse aides and laboratory technicians. Plans were made for the training of additional groups, such as vaccinators and rural midwives' aides.

United Arab Republic
Syria 28

R

Fellowships

Blood bank. A twelve-month fellowship for study in France.

Food analysis. A twelve-month fellowship for study in Switzerland.

Public health laboratory methods. A twelve-month fellowship for study in France.

Radiation protection. A twelve-month fellowship for study in France.

Social paediatrics. A three-month fellowship for study in France.

Statistics. Two six and a half month fellowships for study in Lebanon.

Undergraduate nursing studies. A twelve-month fellowship for study in the Province of Egypt.

United Arab Republic
Syria 30

R

Public Health and Endemic Diseases Laboratory (First phase: Oct. - Dec. 1959)

Aim of the project. To extend the services of the government health and endemic diseases laboratory.

Assistance provided by WHO during the year. (a) A short-term consultant; (b) supplies.

Probable duration of assistance. Until the end of 1961.

Work during the year. The consultant studied the work at the public health laboratory and visited several institutions in Damascus. He also visited Aleppo.

United Arab Republic
Syria 34

R

Rural Environmental Sanitation (Dec. 1958 - )

Aim of the project. To organize a national environmental sanitation programme, especially in rural areas, and to build up an adequate sanitary engineering service.

Assistance provided by WHO during the year. (a) A sanitary engineer and a short-term consultant in entomology; (b) two vehicles.

Probable duration of assistance. Until the end of 1961.

Work during the year. The sanitary engineer studied the problem of environmental sanitation and gave advice to local authorities. Various difficulties of office accommodation, transportation and particularly lack of personnel have hampered the programme. The short-term consultant studied the control of insects important for health.

United Arab Republic
Syria

Participation in Inter-country Projects

See EMRO 5; EMRO 19; EMRO 23; EMRO 40; EURO 52.

Yemen 8

TA

Health Centre, Sana’a (July 1956 - )

Aim of the project. (a) To establish a health centre and training school in Sana’a; (b) to provide practical training for auxiliary health personnel; (c) to demonstrate modern practice in the prevention and cure of diseases, in the control of communicable diseases and their causes and to assist in the promotion of health; (d) to organize public health services.

Assistance provided by WHO during the year. (a) Two medical officers, two nurses, a sanitation and a laboratory technician; (b) nursing supplies and equipment.

Probable duration of assistance. Until 1961.
<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Co-operating Agencies</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yemen 11 R</td>
<td></td>
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<td><em>Work during the year.</em> The clinical and nursing work progressed satisfactorily at the Centre and the daily attendance gradually increased. Maternal and child health afternoon meetings were held regularly and some home deliveries were carried out. The premises are too small to include the laboratory x-ray department and training school for which equipment and supplies have been provided, and the enlargement of premises or the renting of another building is under consideration. A training programme for assistant nurses was started and the students responded well. The sanitation programme consisted mainly in the inspection of food and general cleanliness by the sanitary officers under the supervision of the WHO sanitarian. The building of a slaughter-house was discussed with the authorities. A training course for sanitarians began on 1 November with fifteen students. All WHO personnel have health education during their work and the WHO senior adviser has given radio talks on health matters.</td>
</tr>
<tr>
<td>Yemen</td>
<td></td>
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<td><strong>Fellowships</strong></td>
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<td><em>Undergraduate medical studies.</em> Three twelve-month fellowships for study in the United Arab Republic (Province of Egypt).</td>
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<td><strong>Participation in Inter-country Projects</strong></td>
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<td><em>See EMRO 40.</em></td>
</tr>
</tbody>
</table>
WESTERN PACIFIC

Project No.
Source of Funds
Co-operating Agencies

WPRO 22
UNICEF

Yaws Control, Fiji (Nov. 1954 - ), Western Samoa (June 1955 - ), British Solomon Islands Protectorate (May 1956 - ), Gilbert and Ellice Islands (Jan. 1957 - ), Condominium of the New Hebrides (June 1958 - )

Aim of the project. To reduce the prevalence of yaws by mass examination and treatment with penicillin and, ultimately, to eliminate the disease as a public health problem; to train local personnel in the diagnosis, therapy and epidemiology of yaws.

Assistance provided by WHO during the year. (a) A medical officer, a serologist, and a male nurse/administrative officer; (b) supplies and equipment.

Probable duration of assistance. Until the end of 1961.

Work during the year. The WHO team helped with the projects in the New Hebrides, Western Samoa and the British Solomon Islands Protectorate. In Western Samoa, the rural health personnel completed the third resurvey of the whole population. Only twelve cases of infectious yaws were found — a prevalence of 0.001 per cent.

In the New Hebrides, the initial mass treatment survey of the population was completed, except in the island of Tanna, where part of the population was unwilling to co-operate. In the 53,647 persons examined and treated, the prevalence of active yaws was 12.5 per cent. and of infectious yaws 6.02 per cent. The first resurvey of the population was begun and should be completed by the end of March 1960. The prevalence of active yaws appears to have fallen to below 1 per cent. except in some small foci.

The resurvey of the population of the British Solomon Islands Protectorate was begun and is expected to be completed in the first half of 1960.

WPRO 30
R

Inspection of BCG Production Laboratories (25 March - 25 April 1959)

A short-term consultant (expert in BCG vaccine production) visited WHO-approved laboratories in Taiwan, Viet Nam and the Philippines. Similar visits were made in 1953 and in 1956.

WPRO 35
R

Tuberculosis Refresher Course for Assistant Medical Officers, Fiji (12 Jan. - 6 Feb. 1959)

Aim of the project. To give training in tuberculosis control, particularly in prevention, diagnosis, treatment and domiciliary care.

Assistance provided by WHO. (a) A short-term consultant; (b) thirteen fellowships for assistant medical officers from the British Solomon Islands Protectorate, Cook Islands, Fiji, Gilbert and Ellice Islands Colony, New Hebrides, Niue, Papua and New Guinea, Tonga, United States Trust Territory of the Pacific Islands, and Western Samoa.

Work done. The course was organized by the Government of Fiji and WHO. Instruction was given by a WHO consultant and the regional tuberculosis adviser, assisted by many local specialists. The course included lectures, discussions, field trips, demonstrations and films. Particular attention was paid to practical points of use to the participants in their everyday work.

WPRO 38
TA
(South Pacific Commission)

Training in Health Education (July 1957 - July 1959)

Aim of the project. To provide training in health education for health and education workers of native origin from the territories of the South Pacific by (1) a course to enable them (a) to study the basic principles underlying health education and their application in the territories; (b) to exchange ideas on health education activities and programmes now in progress; and (c) to study plans for further development; (2) continuous guidance to the trainees in their own territories.

Work done. Practical results of the joint South Pacific Commission/WHO Health Education Training Course held in Noumea in 1957 are reported from Netherlands New Guinea, where health education has been introduced in the curricula of several schools and trainees who attended the course employ the principles learned at Noumea. The Government of Guam has sponsored a four-week health education training course for thirty-six Micronesian health and education workers.

Since the WHO health educator left in July 1958, the work has been continued by the South Pacific Commission, which will organize a new project based on training and education rather than on consultations.
Co-ordination of Malaria Programmes (Oct. 1958 - )

**Aim of the project.** To assist the Antimalaria Co-ordination Board, composed of representatives from Burma, Cambodia, the Federation of Malaya, Laos, Thailand and Viet Nam, and to provide technical advice and help in studying the needs of the participating countries.

**Assistance provided by WHO during the year.** (a) A malariologist (Secretary to the Antimalaria Co-ordination Board, stationed in Saigon); (b) supplies and equipment.

**Probable duration of assistance.** Until 1962.

**Work during the year.** The Secretary to the Antimalaria Co-ordination Board paid official visits to the appropriate authorities in the countries concerned and field visits to remote border areas. He collected data on malaria eradication in border areas and gave technical advice to stimulate co-operation and co-ordination between neighbouring countries.

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Conference on Maternity Care, Manila (9 - 20 March 1959)

**Aim of the project.** To exchange information on problems of maternity care in the Region, in order to stimulate the improvement of maternity care services.

**Assistance provided by WHO.** (a) Three short-term consultants; (b) cost of attendance of thirty-two participants from Australia, Cambodia, China (Taiwan), Federation of Malaya, Fiji, French Polynesia, Hong Kong, Japan, Republic of Korea, Netherlands New Guinea, New Zealand, Philippines, Sarawak, Singapore, Papua and New Guinea, and Viet Nam; (c) supplies and equipment.

**Work done.** The Conference was attended by thirty-two government participants (obstetricians, paediatricians, maternal and child health officers, nurses and midwives), a representative from UNICEF and one from the United States International Co-operation Administration, and seven WHO staff members, including one from headquarters and one from the Regional Office for the Americas. Some of the countries from which participants came were visited before the Conference.

The chief subjects discussed were: the basic elements of maternity care services in relation to current practices and local needs; ways in which maternity care may be progressively improved; training and use of personnel; and the place of maternity care in the general health programme. Information on maternity care in the several countries and territories was obtained from a questionnaire which participants were asked to complete before the Conference, and an analysis of the replies was included in the conference working papers. The main subjects were discussed in plenary meetings and in smaller group meetings. Two half-days were devoted to field visits, and two to discussion of subjects selected by the participants.

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Public Health Administration (DPH Fellowships)

**Aim of the project.** To provide fellowships for candidates from various countries of the Region to study for the Diploma in Public Health at the University of Malaya, Singapore.

**Assistance provided by WHO during the year.** Three nine-month fellowships to candidates from the Federation of Malaya, Japan and Netherlands New Guinea.

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Seminar on Veterinary Public Health, Tokyo (20 April - 1 May 1959)

**Aim of the project.** To identify the chief problems in veterinary public health in the Region and to lay down the principles to be applied in drawing up and executing a programme for their solution; to promote co-ordination of the work of the government agencies concerned and to determine how best to use assistance from bilateral and international agencies.

**Assistance provided by WHO.** (a) A short-term consultant; (b) cost of attendance of thirty-three participants from Australia, China (Taiwan), Federation of Malaya, Fiji, Hong Kong, Japan, Republic of Korea, New Zealand, Philippines and Singapore; (c) medical literature.

**Work done.** The chief subjects discussed were the relation of human to animal health and disease; some zoonoses of special concern to the Region; control of food products of animal origin of importance in the transmission of disease; veterinary public health organization and practice, including collaboration between medical, veterinary, sanitary and allied disciplines; and training of personnel. Twenty-three working papers were presented as a basis for discussions. Nine field visits were arranged to fish markets, abattoirs and food processing establishments. The Japanese Government provided three experts and FAO three consultants. A staff member from headquarters attended.
Symposium on BCG Production of the South-East Asia and Western Pacific Regions, Manila (16 - 20 Nov. 1959)

Aim of the project. To achieve better liaison and greater uniformity among the BCG production laboratories of the South-East Asia and Western Pacific Regions by a meeting at which their directors could exchange information and discuss technical problems.

Assistance provided by WHO. (a) Cost of attendance of five participants from the Western Pacific Region (Australia, China (Taiwan), Japan, Philippines and Viet Nam) and of two from the South-East Asia Region (India and Thailand); (b) supplies and equipment.

Work done. The main topics for discussion were the strain of BCG used for vaccine production; the preparation of BCG vaccine; and the methodology of BCG vaccine control. A one-day visit was made to the Alabang BCG Vaccine Laboratory, where the Director and his staff gave a demonstration of the preparation of BCG vaccine. The discussions were conducted in an informal manner which enabled the participants freely to exchange information and experience. A draft report on the symposium was accepted at the final meeting.

Seminar on Education and Training of Sanitation Personnel, Tokyo, Japan (31 Oct. - 5 Nov. 1959)

Aim of the project. To discuss the training of all types of sanitation personnel in the countries of the Region — present status, and present and future requirements — and to suggest improvements.

Assistance provided by WHO. (a) Two short-term consultants; (b) cost of attendance of thirty-one participants from American Samoa, Australia, Brunei, Cambodia, China (Taiwan), Federation of Malaya, Fiji, French Polynesia, Hong Kong, Japan, Republic of Korea, Netherlands New Guinea, New Zealand, North Borneo, Papua and New Guinea, Philippines, Singapore and Viet Nam; (c) supplies and equipment.

Work done. Thirty-nine governmental participants, eleven observers, and nine WHO technical staff members, advisers and consultants attended the seminar. Participants included public health doctors, public health engineers, public works engineers, sanitary engineers, public health veterinarians, biologists, pharmacists, sanitarians and sanitary inspectors.

The position as regards the training of sanitation workers in the Member countries was reviewed, and present and future requirements were assessed. Information was exchanged on problems encountered and guiding principles were formulated for improving the training of sanitation workers and for coordinating their training and use in the Region. Suggestions were made for steps to be taken, and for studies appropriate to the conditions and resources of the Region. The seminar expressed the view that the provision of piped water supplies was the outstanding sanitation need of the Region; that there were serious shortages of qualified public health engineers and health inspectors throughout the Region; that water pollution control and water conservation boards were needed in Member countries; and that research and developmental work in environmental sanitation should be promoted throughout the Region. It was recommended that Member countries adopt minimum qualifications (to be set out in the seminar's report) for the various categories of environmental sanitation personnel, and that an Asian federation of national waterworks and sewerage associations should be formed.

First Asian Seminar on Mental Health and Family Life, Baguio, Philippines (6 - 20 Dec. 1958)

Aim of the project. To identify common practices and problems of family life and how family life is changing in various countries of Asia today; to exchange views and information on problems involved and on methods of solving them.

Assistance provided by WHO. (a) Five seminar staff members; (b) travel and stipends for ten participants from Burma, China (Taiwan), India, Indonesia, the Republic of Korea, Sarawak and Thailand. (The Asia Foundation provided fellowships for participants from Federation of Malaya, Hong Kong, Japan, Republic of Korea, Pakistan and Thailand. FAO seconded a staff member and the World Federation for Mental Health, two staff members.)

Work done. Most of the participants were of senior position and professional rank. The topics studied were discussed in working groups, to secure the fullest participation by all members. There were also formal lectures and multi-discipline discussions. The seminar did not concentrate on any one problem, but listed the effects of changing conditions and suggested kinds of social work that would be necessary to guard against or deal with any ill effects of the changes.
PROJECT LIST: WESTERN PACIFIC

**Project No.**

**Source of Funds**

**Co-operating Agencies**

**Description**

One practical result of the seminar was the formation of the Asian Federation of Mental Health. China, Hong Kong, India, Japan, the Philippines and Singapore, where there are already mental health societies, are the original members of the Federation. Ceylon, the Republic of Korea and Thailand propose to form mental health societies so that they may also become members.

**WPRO 62**

**R**

Sewerage Planning and Design Training, Taiwan

Four six-month fellowships were awarded to candidates from the Philippines and Japan for study in Taiwan.

**WPRO 63**

**R**

Dental Health Seminar, Adelaide (10 - 20 Feb. 1959)

*Aim of the project.* (a) To review what has been done during the last five years in dental health, especially in preventive dentistry; (b) to identify and discuss current dental health problems and what national health administrations and the dental health profession can do to solve them; (c) to discuss what can be done to standardize the reporting of dental health conditions.

*Assistance provided by WHO.* (a) A seminar director and two consultants; (b) cost of attendance of forty-four participants from the Western Pacific Region (Australia, China (Taiwan), Federation of Malaya, Fiji, Hong Kong, Japan, Republic of Korea, Netherlands New Guinea, New Zealand, Philippines, Sarawak, Singapore, Papua and New Guinea, United States Trust Territory of the Pacific Islands, Viet Nam, and Western Samoa), the Eastern Mediterranean Region (Pakistan) and the South-East Asia Region (Ceylon, India, Indonesia and Thailand).

*Work done.* See page 95.

**WPRO 71**

**R**

Smallpox Eradication

A four-month fellowship to a candidate from the Republic of Korea for study of management and production of dried smallpox vaccine in the United Kingdom, the Netherlands and the Federal Republic of Germany.

**WPRO 72**

**R**

(ICA)

Training Courses on Malaria Eradication Techniques, Institute of Malariology, Tala, Rizal, Philippines (Jan. 1959 - )

*Aim of the project.* To train various categories of personnel for countries in the Western Pacific and South-East Asia Regions

*Assistance provided by WHO during the year.* (a) A sanitarian; (b) a short-term consultant.

*Probable duration of assistance.* Until the end of 1961.

*Work during the year.* Under the auspices of the Government of the Philippines, and in co-operation with the United States International Co-operation Administration, training courses on malaria eradication techniques were started at the Institute of Malariology, Tala. An expert on the organization of international training courses in malaria eradication was assigned to assist the project for two months. It is proposed to hold four courses a year, each lasting twelve weeks (five weeks of institutional training and seven of field training). They will be held alternately for senior and junior personnel, with a maximum of twenty-five students per course. Two courses have already been completed and a course for senior personnel started early in October.

**WPRO 78**

**R**

UNICEF

Inter-regional Yaws Control Co-ordination Meeting, Kuala Lumpur (13 - 18 April 1959)

*Aim of the project.* To consider the experience gained in the yaws control projects in countries of the Western Pacific and South-East Asia Regions and elsewhere; to compare the approaches and techniques employed in the various projects; to discuss common problems and possible ways of solving them; to discuss the need for, and the most effective way of securing, co-ordination of yaws control work in neighbouring countries, with a view to the systematic eradication of the disease from the whole area.

*Assistance provided by WHO.* (a) Per diem of two secretaries; (b) transport of supplies and equipment.
UNICEF paid for the attendance of participants from Burma, Cambodia, Federation of Malaya, Indonesia, Laos, Philippines and Thailand.

Work done. Papers dealing with the yaws problem, the control programme and its results to date in the several countries were presented and discussed. The meeting then considered some general subjects: (a) the epidemiology of yaws in relation to eradication campaigns; (b) the epidemiology of receding yaws; (c) yaws eradication methods; (d) experience in yaws campaigns with the dosage of PAM recommended by WHO; (e) the objectives of yaws campaigns; (f) yaws research; (g) inter-country co-ordination in yaws control. The final report on the meeting was prepared for distribution.

All members took an active part in the discussions and the personal contacts between the participants resulted in at least one agreement to meet to consider common problems of yaws eradication in border areas.

American Samoa
Participation in Inter-country Projects
See WPRO 58.

Australia 1
Fellowships
Communicable diseases. An eight and a half month fellowship to study leptospirosis, viral and rickettsial diseases in the United States of America, the United Kingdom, Denmark and Italy.
Health statistics. A six-month fellowship for study in the United States of America and the United Kingdom.
Public health administration. A two and a half month fellowship for study in Hawaii, the United States of America, Canada and the United Kingdom.

Australia
Participation in Inter-country Projects
See WPRO 43; WPRO 53; WPRO 56; WPRO 58; WPRO 63; SEARO 22; Inter-regional 23.

British Solomon Islands Protectorate 3
Nursing Education (Nov. 1959 - )
Aim of the project. To carry out (a) a basic programme of general nursing for nurses and medical assistants; and (b) a programme of midwifery and maternal and child health combined with the nursing programme for women nurses.
Assistance provided by WHO during the year. (a) A nurse educator; (b) supplies, equipment and medical literature.
Probable duration of assistance. Until the end of 1961.

British Solomon Islands Protectorate
Participation in Inter-country Projects
See WPRO 22; WPRO 35.

Brunei
Participation in Inter-country Projects
See WPRO 58.

Cambodia 1
Malaria Control (Oct. 1950 - )
Aim of the project. To organize antimalaria services; to demonstrate methods of malaria control; to train personnel.
Assistance provided by WHO during the year. (a) A malarialogist, an entomologist and two sanitarians; (b) supplies and equipment.
Probable duration of assistance. Until eradication is achieved.
Work during the year. It was agreed that 1959 should be considered as a transition period and that a comprehensive plan of operations for malaria eradication should be prepared, starting in January 1960. The outstanding problem is still to interrupt transmission in areas with semi-nomadic population where secondary vectors are found. Mass drug administration was continued in the Snoul area but failed to interrupt transmission. It was decided to spray the “problem areas” twice a year and to keep them under close epidemiological supervision.
Nursing Education, Phnom-Penh (Dec. 1951 - )

Aim of the project. To set up a school of nursing in Phnom-Penh; to organize nursing and midwifery training.

Assistance provided by WHO during the year. (a) A senior nurse educator and three nurse educators — two in general nursing and one in midwifery; (b) a twelve-month fellowship to study obstetrical nursing and organization and administration of schools of midwifery in Belgium; (c) medical literature.

Probable duration of assistance. Until the end of 1961.

Work during the year. Twenty-five new monitors, assigned to the School of Nursing as counterpart personnel, are now receiving on-the-job training in methods and content of teaching and in clinical teaching. A clinical teaching programme was introduced in eight teaching wards in January. Clinical practice of psychiatric nursing was also introduced. Improved facilities in the maternity hospital and the establishment of prenatal and post-natal clinics in which students can have practical experience have strengthened the training for midwives. A Cambodian midwife returned from fellowship study and was appointed Assistant Director of the School of Nursing (midwifery). A number of nursing and midwifery candidates have been selected for advanced study with assistance from the Colombo Plan, the United States International Co-operation Administration and WHO.

Maternal and Child Health, Phnom-Penh (Jan. 1952 - )

Aim of the project. To teach modern methods of maternal and child care adapted to the country's resources and culture; to improve the teaching of obstetrics and child care in the Phnom-Penh schools of nursing and midwifery; to improve the teaching of paediatrics, obstetrics and gynaecology at the Royal School of Medicine; to demonstrate methods of combining curative, preventive and educational health services; to extend maternal and child health (including school health) services and make them part of the country's health services.

Assistance provided by WHO during the year. A nurse educator (public health).

Probable duration of assistance. Until 1960.

Work during the year. WHO assistance has been exclusively concerned with the school health programme. In Phnom-Penh, five more schools were included in the project, making a total of thirteen. Health supervision and health teaching were carried out in all these schools; in-service training of school dispensary nurses continued in eight. Health teaching was also continued at the Ecole normale in Phnom-Penh and at the National Elementary Teachers' Training Centre in Kandal province. The WHO nurse and staff of the United States Overseas Mission participated in two seminars organized by the Department of Education for provincial teachers.

Royal School of Medicine, Phnom-Penh (July 1953 - )

Aim of the project. To improve the standard of teaching at the Royal School of Medicine to a professional level; to expand facilities for training hospital assistants.

Assistance provided by WHO during the year. (a) Three lecturers, one in ophthalmology, one in medical physics and one in physiology; (b) collective study grant for ten students enrolled in the medical degree class.

Probable duration of assistance. Until 1965.

Work during the year. WHO provided teaching in ophthalmology during the entire academic year, for part of the year in medical physics and radiology, and for one month in physiology (assistance in this subject was suspended owing to the sudden serious illness of the lecturer). In the 1958-1959 academic year there were eighteen new students in the medical degree section; and twelve in the second year of study. In the "officier de santé" section there were twenty-nine students in the first year and thirty-three in the second year. Eight doctors taking specialized training abroad will join the teaching staff of the school on their return.

Treponematoses Control (Sept. 1959 - )

Aim of the project. (a) To train professional and auxiliary medical personnel in the epidemiology, diagnosis and therapy of yaws, and in techniques of yaws control; (b) to reduce the incidence of yaws by mass treatment with penicillin and eventually to eliminate the disease; (c) to organize, within the
limits of the resources of the area, an effective rural health service which will also continue the yaws control work.

**Assistance provided by WHO during the year.** (a) A medical officer; (b) supplies and equipment.

**Probable duration of assistance.** Until the end of 1961.

**Work during the year.** Four yaws teams were formed and a training programme was begun.

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**Cambodia 9**

**Rural Health Centre, Takhmau (Jan. 1957 - )**

**Aim of the project.** To plan and implement a comprehensive and well-balanced programme at the provincial level; to build up model public health services in the province of Kandal; to use the facilities of the Takhmau centre for field training of all categories of medical and health personnel.

**Assistance provided by WHO during the year.** (a) A public health officer, a public health nurse, and a nurse midwife (March-August 1959); (b) medical literature.

**Probable duration of assistance.** Until 1965.

**Work during the year.** The project leader and public health nurse continued teaching health subjects (first-aid and personal hygiene) to trainees in the UNESCO Fundamental Education project at Tonlé Bati. The WHO medical officer also taught preventive medicine at the Royal School of Medicine. The building has been completed, the equipment provided by the United States International Co-operation Administration installed, a provisional schedule of work established, and counterpart personnel provided by the Government; and the centre started work from the project site in March 1959. The chief medical officer of the province has been designated counterpart of the project leader. Maternal and child health consultations were started in March 1959, when the nurse midwife arrived.

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**China 1**

**Venereal Disease Control, Taiwan (First phase: Aug. 1953 - Aug. 1959)**

**Aim of the project.** To train local personnel in case-finding, contact investigation, health education and modern methods of diagnosis and treatment; to improve laboratory methods; to establish an island-wide venereal disease control programme.

**Assistance provided by WHO.** (a) A venereologist, a serologist, a public health nurse and a health educator; (b) fifteen fellowships; (c) medical literature.


**Work done.** A comprehensive venereal disease control programme was established for the whole of Taiwan, including the Penghu Islands, with the venereal disease control centre as the central unit of the Provincial Health Administration responsible for planning, supervision and implementation through the health units. Four hundred and thirty-one health units, including the twenty-two health centres of Taiwan, all the associated health stations and several of the provincial, county and municipal hospitals, participated in the programme, so that the venereal disease control work was fully integrated into that of the established health service of the Provincial Health Administration from the start.

The training of the health personnel of these health units in the medical and public health aspects of venereal disease control was carried out by the team of the venereal disease control centre, using the venereal disease control demonstration clinic and the reference serological laboratory, which were established for this purpose and for supervision and control. Refresher courses and in-service training were continuous for all staff.

Twenty-two serological laboratories were established at strategic points to provide an adequate laboratory service for the programme. The reference serological laboratory undertook the training of technicians and maintained a satisfactory standard of performance by regular supervision of these laboratories and by carrying out periodic evaluations of serological test performance.

The reference serological laboratory also took part in evaluation studies of serological test performance with the WHO Serological Reference Centre (the Venereal Disease Research Laboratory of the United States Public Health Service at Chamblee, Georgia) with very satisfactory results.

Health education was carried out continuously to stimulate the co-operation of the general public. Special attention was paid to pregnant women and to groups particularly exposed to infection. Close
co-operation was maintained with the maternal and child health programme. The medical authorities of the armed forces undertook effective venereal disease control work and co-operated in the exchange of epidemiological and technical information. Epidemiological surveys were carried out among different occupational and socio-economic groups.

Evaluation. The overall accomplishments have been satisfactory. The project has promoted the effective control of venereal diseases, as shown by the decrease in the serologic positivity rate among pregnant women from 7.3 per cent. in 1954 to 4.1 per cent. in 1958. Venereal disease control work has been started on a large scale throughout the island and has been integrated into the routine work of the established health agencies. Between 410 000 and 500 000 people were examined annually from 1953 to 1959.

Modern methods of diagnosis and treatment have been demonstrated and accepted. Public health measures, such as case-finding, case-holding and contact investigation, have been introduced. The continuous training has improved the technical knowledge of the medical profession and of the auxiliary personnel. Penicillin has been accepted as the optimal treatment for all stages of syphilis. Reporting methods designed to obtain more accurate information have been introduced. Modern serological laboratories and venereal disease clinics have been established as a permanent part of the provincial health service and are operating satisfactorily.

China 3

Maternal and Child Health, Taiwan (Aug. 1952 - Aug. 1959)

Aim of the project. To provide an efficient maternal and child health service throughout the island; to train nursing and medical personnel in all branches of public health relating to mothers and children; to improve health education.

Assistance provided by WHO. (a) A medical officer, a public health nurse and a public health nurse midwife; (b) nine fellowships; (c) medical literature.

Work done. A maternal and child health demonstration and training programme was developed in Taichung City Health Centre and a limited area nearby. This area was gradually expanded until by August 1954 an estimated population of 9860 was being covered. In April 1958, the training centre was transferred to the new Maternal and Child Health Institute building and a new demonstration area was selected, the old area being handed back to the health stations to whose jurisdiction it belonged.

The work of the centre included antenatal clinics, post-natal clinics, domiciliary delivery service, child health conferences (with immunizations), childcraft classes, mothers' classes, home visiting, and lin (village) meetings. Nutrition teaching and practical demonstrations were included in the mothers’ classes and lin meetings. As part of the training programme two field visits were made each month to a fishing village and to an aborigine area. In-service training courses were organized for doctors, staff nurses and midwives from health stations; training was also given to nurse supervisors, private practising midwives, and medical nursing and midwifery students. Regular team supervisory visits were made after the trainees returned to their stations. Visits were also made by nurse supervisors to help newly trained personnel establish their programmes or give assistance in stations where little or no progress was being made.

Although the original plan to set up an administrative division of maternal and child health did not materialize, an Institute of Maternal and Child Health was established under the Provincial Health Administration in July 1959.

Evaluation. The methods of maternal and child care demonstrated in the limited area showed slow but steadily growing results. In Taichung City deliveries by qualified midwives rose from 46 per cent. in 1955 to 58 per cent. in 1958. Attendances at antenatal and well-baby clinics have not increased as rapidly as hoped, although in most areas there has been steady improvement. After team supervisory visits to 220 health stations progress in maternal and child health work was assessed as very good in 6.8 per cent.; reasonable in 41 per cent.; slight in 35 per cent. and not appreciably changed in 17.2 per cent.

Private practising midwives are co-operating with health stations and are giving more antenatal and post-natal care than before. Shortage of trained staff remains a problem and in some health stations the lack of a doctor is a serious handicap.

Plans were started for pilot projects in integrated health services to be carried out in three counties. They would cover both the hospitals and the health stations and should enable the facilities for maternal and child care to be improved and good referral systems to be established. For these to be effective, however, nursing staff in the stations needs to be increased.

The establishment of the Maternal and Child Health Institute with a full staff now makes it possible to plan future work with more accuracy. Related activities, such as venereal disease and trachoma control, diphtheria and pertussis immunization programmes, are now integrated in the work of the Institute.
Nursing Education, Taiwan (May 1952 - )

Aim of the project. To improve the standard of nursing education and the quality of nursing services by establishing a school of nursing at the University Hospital in Taipei.

Assistance provided by WHO during the year. (a) A senior nurse educator until February 1959, three nurse educators, in general nursing education, mental health and paediatrics; (b) a twenty-four-month fellowship in paediatric nursing for study in the United States of America; (c) medical literature.

Probable duration of assistance. Until 1962.

Work during the year. The Collegiate School of Nursing, which has sixty-one students in three classes, has made notable progress, particularly in the matter of comprehensive nursing care. The newly qualified instructors are assuming more responsibility for planning, teaching and evaluation of the students' programme and progress; but the shortage of well-prepared teaching and supervisory staff is still a major problem. Assistance in nursing service administration and supervision is recognized as an urgent need and special attention is to be given to this point in the next phase of the project.

Malaria Eradication, Taiwan (First phase: May 1952 - June 1958; second phase: July 1958 - )

Aim of the project. To complete the eradication of malaria from Taiwan, in continuation of the control project that began in 1952.

Assistance provided by WHO during the year. (a) A two-and-a-half-month fellowship for observation visits to Thailand, Ceylon, India and the Philippines; (b) supplies and equipment.

Probable duration of assistance. Until 1962.

Work during the year. An extensive programme of surveillance was begun in July 1958. The results so far are very encouraging. Malaria is being progressively brought under control in the active foci and the number of P. falciparum infections is steadily decreasing. The examination of blood smears in the years 1956-1959 showed the following percentages of positive cases: 1959, 0.08 %; 1958, 0.09 %; 1957, 0.14 %; and 1956, 0.29 %.

Trachoma Mass Campaign, Taiwan (Oct. 1954 - )

Aim of the project. To control trachoma in over two million schoolchildren by a mass campaign, and to organize services in schools and health stations.

Assistance provided by WHO during the year. Two short-term consultants (one from October to December 1958; one from September 1959).

Probable duration of assistance. Until the end of 1960.

Work done. A WHO consultant visited Taiwan from October to December 1958 to investigate the results of the routine treatment, the effects of the "blanket" treatment of family contacts, and the trials of four different methods of treatment. The information he collected showed that the results of the campaign were in general satisfactory; but there was a high rate of new infections and some reinfections and relapses. On his recommendation, an ophthalmologist was assigned to the project in September 1959 to assist in carrying out trials and assessing their results. Work is now concentrated on: the training of personnel, especially in the criteria of diagnosis and of cure; the study of the epidemiology of trachoma and of related viral and bacterial infection of the conjunctiva; and the conduct and evaluation of therapeutic trials. A new series of therapeutic trials has been statistically designed; and a long-term programme of research and evaluation, to be run in parallel but as a separate project, is under consideration. The mass campaign continues in the meantime with the current methods and schedules of treatment.

Environmental Sanitation, Taiwan (Oct. 1954 - )

Aim of the project. To survey the organization and functions of governmental agencies concerned with environmental sanitation; to assess the chief problems and determine their relative urgency; to carry out a pilot project of modern and economic sanitation procedures; to train personnel.

Assistance provided by WHO during the year. (a) A sanitary engineer; (b) a short-term consultant; (c) a twelve-month fellowship for study in the United States of America and a second-year award; (d) equipment and supplies including medical literature.
<table>
<thead>
<tr>
<th>Project No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>China 17</td>
<td><strong>Tuberculosis Control, Taiwan</strong> (April 1951 - )</td>
</tr>
<tr>
<td>R</td>
<td><em>Aim of the project.</em> To expand the tuberculosis control service and to incorporate in it the BCG work already in operation; to explore new methods of control of ambulatory cases by chemotherapy.</td>
</tr>
<tr>
<td>UNICEF</td>
<td><em>Assistance provided by WHO during the year.</em> (a) A medical officer and x-ray engineering consultant (until December 1958); (b) a three-and-a-half-month fellowship and an eleven-month fellowship in tuberculosis statistics, both for study in Japan; (c) supplies and equipment.</td>
</tr>
<tr>
<td></td>
<td><em>Probable duration of assistance.</em> Until 1961.</td>
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<tr>
<td>China 20</td>
<td><strong>Mental Health, Taiwan</strong> (Oct. 1955 - )</td>
</tr>
<tr>
<td>R</td>
<td><em>Aim of the project.</em> To advise on a mental health programme with special attention to child guidance and community mental hospitals.</td>
</tr>
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<td></td>
<td><em>Assistance provided by WHO during the year.</em> Two two-year fellowships in psychiatric and mental health nursing for study in the United Kingdom and another two-year fellowship in psychiatric nursing for study in the United States of America.</td>
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<tr>
<td></td>
<td><em>Probable duration of assistance.</em> Until 1961.</td>
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<tr>
<td>China 27</td>
<td><strong>Institute of Health, Taiwan</strong> (Aug. 1958 - )</td>
</tr>
<tr>
<td>R</td>
<td><em>Aim of the project.</em> To strengthen the training, particularly that in epidemiology and public health practice, and to train the staff of the Institute to elevate the standard of teaching.</td>
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<tr>
<td></td>
<td><em>Assistance provided by WHO during the year.</em> A twelve-month fellowship in public health administration for study in the United Kingdom.</td>
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<td><em>Probable duration of assistance.</em> Until the end of 1961.</td>
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<tr>
<td>China 28</td>
<td><strong>Fellowships</strong></td>
</tr>
<tr>
<td>R</td>
<td><em>Maternal and child health.</em> A twelve-month fellowship to study public health administration, particularly maternal and child health, in the United States of America.</td>
</tr>
</tbody>
</table>

**China Participation in Inter-country Projects**

See WPRO 30; WPRO 43; WPRO 53; WPRO 56; WPRO 58; WPRO 60; WPRO 62; WPRO 63; SEARO 22; EURO 52; Inter-regional 23; Inter-regional 78.

**Cook Islands Participation in Inter-country Projects**

See WPRO 35.

**Fiji 2**

| R | Central Medical School, Suva (Feb. 1955 - ) |
| (China Medical Board) | *Aim of the project.* To train assistant medical practitioners for government service in Fiji and adjacent territories, and to strengthen the staff of the Central Medical School. |
| | *Assistance provided by WHO during the year.* (a) Two lecturers — one in biology and the other in physiology; (b) supplies and equipment. |
The China Medical Board is assisting the School by fellowships, and some books for one of the fellows.

**Probable duration of assistance.** Until the end of 1961.

**Work during the year.** Instruction in biology and physiology is progressing satisfactorily. Results in preliminary courses are not up to expectation and call for a general review of the situation. Extra-curricular work includes attendance at clinical meetings and a seminar on social and preventive medicine, and the organization of a study conference for science teachers in local secondary schools. A junior lecturer of anatomy completed a year's study at the University of Otago, with a fellowship from the China Medical Board, and the China Medical Board gave a grant for the text and reference books he would need for teaching anatomy.

**Fiji**

**Participation in Inter-country Projects**

*See WPRO 22; WPRO 35; WPRO 43; WPRO 53; WPRO 58; WPRO 63.*

**French Polynesia**

**Participation in Inter-country Projects**

*See WPRO 43; WPRO 58.*

**Gilbert and Ellice Islands Colony**

**Participation in Inter-country Projects**

*See WPRO 22; WPRO 35.*

**Hong Kong 13 R**

**Fellowships**

- **Dental health.** A twenty-eight-month fellowship to study dental nursing in the Federation of Malaya.
- **Malaria control.** A three-month fellowship for study in the Philippines.

**Hong Kong**

**Participation in Inter-country Projects**

*See WPRO 43; WPRO 53; WPRO 58; WPRO 60; WPRO 63; Inter-regional 23.*

**Japan 1 R**

**Rehabilitation of Handicapped Children (Nov. 1952 - )**

**Aim of the project.** To consolidate and expand services for the protection of children against crippling and deformities, and for the diagnosis, treatment and rehabilitation of crippled children; to train local professional and auxiliary personnel.

**Assistance provided by WHO during the year.** A six-month fellowship in the rehabilitation of physically handicapped children, for study in the United States of America, the United Kingdom, Denmark, Indonesia and Hong Kong.

**Japan 4 R**

**National Institute of Mental Health, Tokyo (June 1953 - )**

**Aim of the project.** To survey needs and facilities and draw up a mental health programme; to carry out research; to train local professional and auxiliary personnel.

**Assistance provided by WHO during the year.** (a) A six-month fellowship for study in the United States of America; (b) medical literature.

**Probable duration of assistance.** Until 1961.

**Japan 10 TA**

**Assistance to the Institute of Public Health, Tokyo (March 1955 - Feb. 1959)**

**Aim of the project.** To strengthen post-graduate training of health personnel in the departments of the Institute, particularly the Departments of Epidemiology, Medical-Social Services, and Environmental Sanitation.

**Assistance provided by WHO during the year.** A six-month fellowship in epidemiology for study in the United States of America.
### Nursing Education, Tokyo (Aug. 1955 - Dec. 1958)

**Aim of the project.** To strengthen basic nursing, midwifery and public health nursing education; to develop a centre for post-graduate training at the Institute of Public Health, Tokyo and to train qualified teachers for the centre.

**Assistance provided by WHO.** (a) A nurse educator; (b) seven fellowships; (c) medical literature.

**Work done.** The WHO nurse worked as an adviser of the nursing staff of the Institute of Public Health, contributing as requested to planning and teaching. Work outside the Institute was planned by the Nursing Counsellor of the Ministry of Health, who was one of the counterparts. Staff conferences were held weekly with the counterparts during the first two years and as required in the third year. Members of the staff attended courses given by the WHO nurse to the students and suitable ideas suggested in those courses were adopted in the plans for later years. The one-year course for instructors at the Institute of Public Health and the health guidance course have been well established. The contents, methods and schedule are planned to suit the graduates' responsibilities and the probable conditions in their own schools, and are carefully evaluated each year. Chief nurses of prefectures attend regional meetings, and so learn of the suggested methods of planning for schools of nursing. Statements on methods of planning classroom work and clinical experience for the three types of programmes (basic nursing, midwifery and public health nursing education) have been studied by educational directors of all the schools in Japan.

**Evaluation.** The planning of the project was sound and the counterparts provided had been well equipped by training and experience. Co-ordination between the Institute of Public Health and the nursing office at the Ministry has been strengthened by their common work. Interest in the problems of basic nursing education has grown, new methods of planning have been adopted in some schools and there is promise of a concerted effort to integrate preventive and rehabilitative nursing into the basic nursing and midwifery courses. The results as a whole, especially as regards the educational centre at the Institute and the training of teachers for it, are considered very satisfactory.

### Hospital Administration (July 1956 -)

**Aim of the project.** To make a survey of institutional care and to improve hospital management.

**Assistance provided by WHO during the year.** A six-month fellowship to study hospital administration in the United States of America, the Philippines and Taiwan.

**Probable duration of assistance.** Until 1960.

### Fellowships

**Drug control.** A six-month fellowship to study biological standardization (selection, breeding and care of, and the arrangements for supplying, laboratory animal strains) and another six-month fellowship to study addiction-producing drugs in the United States of America.

**Health education.** A twelve-month fellowship to study public health administration with emphasis on health education in the United States of America.

**Maternal and child health.** A six-month fellowship to study maternal and child health administration in the United Kingdom, the Netherlands, the Federal Republic of Germany, Denmark and Sweden.

**Surgery and medicine.** A six-month fellowship to study control of cardiovascular diseases in the United States of America, the United Kingdom, Scandinavian countries, Czechoslovakia and the Union of Soviet Socialist Republics.

**Venereal disease control.** A six-month fellowship for study in Hong Kong, the United Kingdom, the Netherlands, the Federal Republic of Germany, the Philippines and Taiwan.

### Environmental sanitation.** A twelve-month fellowship to study public health engineering in the United Kingdom.

**Surgery and medicine.** A six-month fellowship to study cancer control (biochemical research in cancer) in the United Kingdom, France and the Federal Republic of Germany.

**Vital and health statistics.** A six-month fellowship for study in the United Kingdom, the Netherlands, the Federal Republic of Germany, and Sweden.

Aim of the project. To determine the prevalence and extent of malaria and study its epidemiology, with a view to eradicating it from Japan.

Assistance provided by WHO during the year. A four-month fellowship to attend the international training course in malaria eradication in Kingston, Jamaica.

Participation in Inter-country Projects

See WPRO 43; WPRO 50; WPRO 53; WPRO 56; WPRO 58; WPRO 60; WPRO 62; WPRO 63; SEARO 22; EURO 52; Inter-regional 23; Inter-regional 62.

Korea

Fellowships

Dental health. A twelve-month fellowship to study public health administration, specializing in dental health and administration, in Australia.

Leprosy. A two-and-a-half-month fellowship to observe leprosy control work in the Philippines, Singapore, the Federation of Malaya, and Hong Kong.

Maternal and child health. A twelve-month fellowship to study public health administration in Singapore, followed by observation visits to the Federation of Malaya, Thailand, Hong Kong and the Philippines to study maternal and child health.

Malaria Pre-eradication Survey (June 1959-)

Aim of the project. To survey the malaria situation in the country with a view to a plan for eradication.

Assistance provided by WHO during the year. (a) A malariologist, an entomologist and two laboratory technicians; (b) medical literature.

Probable duration of assistance. Until March 1960.

Work during the year. Much the most common anopheline in Korea is A. sinensis, but A. sineroides, A. koreicus koreicus and A. lesteri have also been identified. Houses and fields are being sprayed throughout the whole of the country, and although the work is uncoordinated it is apparently effective. Of the 3644 blood smears examined up to mid-October all were negative. Korea seems to have achieved a situation close to eradication, but requires a system for the detection and elimination of residual foci.


Aim of the project. (a) To carry out a study of clonorchiasis and paragonimiasis to obtain a rough estimate of their prevalence, their importance as health and social problems, and the local conditions connected with their transmission; (b) to organize a control pilot project.

Assistance provided by WHO during the year. Two short-term consultants.

Work done. A short-term consultant made a survey of clonorchiasis and paragonimiasis, by using purified skin test antigen on nearly 10,000 persons in all provinces. Positive reactors were observed in every locality. This wide prevalence shows that the two infections are major public health problems. From these data, it is estimated that 4 500 000 people are infected with Clonorchis sinensis and up to 1 500 000 with Paragonimus westermani. Before any comprehensive control programme can be undertaken, it will be necessary to make preliminary studies on: distribution; epidemiology; bionomics of the parasite and intermediate hosts; methods for control and their evaluation.

Participation in Inter-country Projects

See WPRO 43; WPRO 53; WPRO 58; WPRO 60; WPRO 63; WPRO 71; EURO 52; Inter-regional 23.
<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laos 2</td>
<td>TA (ICA)</td>
<td>Treponematoses Control, Thakhet, Savannakhet, Saravane and Paksé (Jan. 1953 - June 1959)</td>
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<tr>
<td></td>
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<td><strong>Aim of the project.</strong> To survey the yaws situation; to train local personnel in diagnosis and treatment; to carry out a mass campaign (house-to-house case-finding and treatment of all accessible clinical cases and contacts, and health education) so as to reduce the incidence of yaws to a level at which the public health programme can maintain control.</td>
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<tr>
<td></td>
<td></td>
<td><strong>Assistance provided by WHO during the year.</strong> A medical officer and a serologist (laboratory).</td>
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<td><strong>Probable duration of assistance.</strong> International assistance to the yaws control project came to an end with the withdrawal of the WHO medical officer at the end of June 1959. The laboratory side of the work will be continued until 1965 under the title “Central Public Health Laboratory”, with the assistance of a WHO laboratory medical officer.</td>
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<td><strong>Work done.</strong> Since the start of the project in 1953, 465,323 persons (or 94 per cent. of the population of the area) have been examined; an average prevalence of 3.6 per cent. of active yaws was found at the initial treatment survey. At the first resurvey the prevalence of yaws was found to have fallen from 7.3 per cent. to 1.6 per cent. After a second resurvey of a sample of sixty-four villages of high endemicity, it was estimated that the average prevalence of the disease had fallen to 0.2 per cent. At a third resurvey of a sample of the villages, no new cases were found. The Government plans to continue one field team for two more years to resurvey the known residual foci and to help the rural health personnel with the surveillance for yaws, and is also considering setting up a mobile rural health service.</td>
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<tr>
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<td><strong>Evaluation.</strong> The campaign has succeeded in bringing yaws under control to such an extent that the field team which the Government plans to retain for two more years to resurvey the known residual foci and to help the rural health personnel with surveillance for yaws should achieve eradication. A further evaluation of the project by WHO is planned for 1961. The national personnel were trained in the techniques and methods of a mass campaign against yaws, in health education of the public, and in the diagnosis and treatment of common minor ailments. They in turn trained the rural health personnel of the area of operation and in many remote areas provided medical care for the first time. Staff transferred from yaws control work to malaria control or the mobile rural health service will be able to make good use of their training and their experience of field work in rural areas.</td>
</tr>
</tbody>
</table>

| Laos 6     | R              | Maternal and Child Health, Vientiane (Sept. 1959 - ) |
|            |                | **Aim of the project.** (a) To ascertain the principal maternal and child health needs of the country; (b) to improve and expand health care services for mothers and children; (c) to establish appropriate training programmes for personnel; (d) to build up effective maternal and child health services as an integral part of the general health programme. |
|            |                | **Assistance provided by WHO during the year.** (a) A medical officer; (b) supplies and equipment, and medical literature. |
|            |                | **Work during the year.** Training was given to a maternal and child health team, consisting of an "officier de santé", a State registered midwife, a midwife aid, a State registered nurse, two nurse aids and three pupil nurses. Plans were made to establish a school health programme, and to introduce basic public health training into the curriculum of the School of Nursing and into the fourth (last) year of training of "officiers de santé". |

| Laos       |                | Participation in Inter-country Projects |
|            |                | See WPRO 78; Inter-regional 23. |

| Malaya 1   | TA             | Nursing Education, Kuala Lumpur, Penang and Ipoh (Perak) (June 1950 - Dec. 1958) |
|            |                | **Aim of the project.** To improve the standard of basic and graduate nursing education and the quality of nursing services; to prepare nurses for administrative and teaching posts; to adapt the nursing education programme to local resources and needs; to develop a well-organized programme for midwives. |
|            |                | **Assistance provided by WHO.** A senior nurse in post-basic education, three midwifery tutors, a public health nurse, three general nurses and a paediatric nurse. |
|            |                | **Work done.** See page 95. |
Project No. | Source of Funds | Description
--- | --- | ---
Malaya 3 | R UNICEF | Yaws Control (Nov. 1953 - )
 |  | A two-week fellowship for study in Indonesia and a nine-week fellowship for study in Indonesia, Thailand and the Philippines.

Malaya 9 | R UNICEF | Rural Health Training Centre, Jitra, Kedah (Nov. 1954 - Dec. 1959)
 |  | **Aim of the project.** To establish a training centre at Jitra for assistant health nurses, rural midwives, dispensers and sanitary overseers.
 |  | Staff trained at Jitra will be assigned to ninety main health centres which the Government is building. Those centres and their sub-centres, in addition to their routine work, will have special responsibilities for the welfare of mothers and children, such as domiciliary midwifery, infant care and dental hygiene.
 |  | **Assistance provided by WHO during the year.** (a) A medical officer, and a public health nurse until December 1958; (b) a six-week fellowship to observe organization and administration of rural health services and training of rural health staff in Taiwan and the Philippines.
 |  | **Work during the year.** Early in 1959 the medical officer visited all the states of the Federation to review the organization and work of the rural health centres, and to discuss the programme with state chief medical and health officers, state health matrons, and other government health officials. The medical officer was assigned to Kuala Lumpur in July 1959 to advise the Federal authorities on the organization of the rural health services programme.
 |  | **Evaluation.** Numerous difficulties, some due to the country's change in political status, frequently affected the course of the project. Nevertheless, national staff have now taken over full responsibility for operations and the Ministry of Health is to follow up the auxiliary rural health workers after their training at the Centre. One effect of this project has been the co-ordination of the various field health units, so as to establish a comprehensive rural service on which future developments may be based.

Malaya 12 | TA | Nutrition (July - Nov. 1956; April 1958 - )
 |  | **Aim of the project.** To study protein deficiency in childhood and its relation to cultural and social habits; to collect information on the incidence of protein deficiency, its distribution by race and area, its public health importance and methods that might be used for eliminating it.
 |  | **Assistance provided by WHO during the year.** (a) A social anthropologist; (b) a consultant (clinical nutrition).
 |  | **Probable duration of assistance.** Until the end of 1959.
 |  | **Work during the year.** Socio-anthropological investigations were continued into general health problems of the Malay people, particularly protein malnutrition in children. Intensive studies were carried out in two selected communities — one in Malacca and the other in Perak. The information obtained included data on the general social and economic background of the people, the number of children born to each woman in the village and their subsequent history. Data were obtained about beliefs and practices regarding sickness and treatment, on infant and child feeding, and on maternal care; and budget and dietary surveys were carried out to determine the percentage of income spent by each family on food.

Malaya 15 | TA | Hospital Records, Penang (Nov. 1956 - )
 |  | **Aim of the project.** To review and reorganize the hospital records systems in the Federation; to establish and implement a suitable training programme for local personnel.
 |  | **Assistance provided by WHO during the year.** (a) A medical records officer; (b) technical literature.
 |  | **Probable duration of assistance.** Until 1960.
 |  | **Work during the year.** The first phase of the project, i.e., improvement of the medical records system at the Penang General Hospital so that it may be used for training, was completed, and a training course for medical records officers was held in May and June. A six-month correspondence course was started and is to be followed by a week's refresher course. The medical records officer began surveys of hospitals and will submit proposals for improvement. No local counterpart has yet been appointed.

Malaya 19 | TA | Fellowships
 |  | **Radiology.** A two-year fellowship to study radiography in the United Kingdom.
 |  | **Rehabilitation.** Two three-year fellowships to study physiotherapy in Australia.
<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Description</th>
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</table>
| Malaya      | MESA            | Malaria Eradication Pilot Project
|             |                 | A three-month fellowship to attend the international training course in Tala, Philippines; and medical literature. |
| Malaya      |                 | Participation in Inter-country Projects |
|             |                 | See WPRO 43; WPRO 50; WPRO 53; WPRO 58; WPRO 60; WPRO 63; WPRO 78; Inter-regional 23. |
| Netherlands | New Guinea 2    | Malaria Control |
|             | R UNICEF        | A three-month fellowship to study and observe malariology and filariasis control in India, Ceylon, the Federation of Malaya, and Cambodia. |
| Netherlands | New Guinea 7    | Fellowships |
|             | R               | Nutrition. A six-month fellowship for study in Guatemala. |
|             |                 | Public health nursing. A twelve-month fellowship to study public health nursing, particularly administration and supervision, in the United States of America. |
| Netherlands | New Guinea 10   | Urban Environmental Sanitation (2 Feb. - 5 March 1959) |
|             | TA              | Aim of the project. To advise on the improvement of the water supply and sewerage systems in Biak. |
|             |                 | Assistance provided by WHO. A short-term consultant, who also did some preparatory work for a rural environmental sanitation project due to begin in 1960. |
| Netherlands | New Guinea      | Participation in Inter-country Projects |
|             |                 | See WPRO 43; WPRO 50; WPRO 58; WPRO 63; Inter-regional 23; Inter-regional 78. |
| New Hebrides |                | Participation in Inter-country Projects |
|             |                 | See WPRO 22; WPRO 35. |
| New Zealand | New Zealand 1   | Fellowships |
|             | R               | Environmental sanitation. A four-month fellowship for study in Australia, Philippines, Taiwan, Japan, and the United States of America. |
|             |                 | Mental health. A two-month fellowship to study new legislation on mental health in the United Kingdom. |
|             |                 | Nursing. A six-month fellowship to study administration of nursing services and nursing schools in the United States of America, Canada and the United Kingdom. |
|             |                 | Rehabilitation. A four-month fellowship to observe physiotherapy services and administration in the United Kingdom, Norway, Sweden, Denmark, the Netherlands, the Federal Republic of Germany, France and Switzerland. |
| New Zealand |                 | Participation in Inter-country Projects |
|             |                 | See WPRO 43; WPRO 53; WPRO 58; WPRO 63. |
| Niue        | Niue 1          | Fellowships |
|             | R               | Public health administration. A twelve-month fellowship for study in the United Kingdom. |
| Niue        |                 | Participation in Inter-country Projects |
|             |                 | See WPRO 35. |
Malaria Control, Keningau (July 1955 - )

Aim of the project. To study the malaria situation; to train local personnel; and to carry out a control programme.

Assistance provided by WHO during the year. A malariologist, an entomologist and a sanitarian.

Probable duration of assistance. Until the end of 1962.

Work during the year. Spraying operations continued, two sprayings a year being carried out with dieldrin or DDT according to the vector involved. Antimalarial drugs have been administered as a supplement to the spraying operations, and have had favourable effects. Although the results achieved so far are satisfactory, more information is needed on the possibility of stopping transmission in some areas.

Participation in Inter-country Projects

See WPRO 58; Inter-regional 23.

Environmental sanitation. A four-month fellowship for observation visits to Ghana, North Borneo and Australia.

Tuberculosis control. A six-month fellowship for study in the United Kingdom, Denmark and Kenya.

Participation in Inter-country Projects

See WPRO 35; WPRO 43; WPRO 58; WPRO 63.


Aim of the project. To organize at all levels a mental health programme which includes advice on mental health questions to non-governmental agencies.

Assistance provided by WHO during the year. (a) A medical officer; (b) four-month fellowships for six medical officers and two nurses, to study the clinical and nursing aspects of psychiatry and the general administration of psychiatric services in Australia.

Probable duration of assistance. Until 1961.

Work during the year. The medical officer continued to give advice at the National Mental Hospital and to private and voluntary mental health clinics. The National Mental Hospital introduced new services, including an admission and diagnostic centre and a rehabilitation village. The hospital service established at the old North General Hospital building has been well received; the patients stay in the clinic in the daytime only and follow-up is arranged by a domiciliary service. This extension clinic has relieved the mental hospital of an appreciable number of cases and has proved an economical and successful way of handling less disturbed mental patients. Consideration is being given to its affiliation with neighbouring local health services, hospitals and welfare agencies so as to widen its activities and provide an effective referral service. It may also be used to train public health and hospital workers, and medical students and nurses in psychiatric work.

Bilharziasis Control Pilot Project, Leyte (June 1952 - )

Aim of the project. To work out measures for controlling bilharziasis, and to test them by application in a community; to train personnel to give technical guidance and to carry out the control measures; to plan a national bilharziasis control programme for the endemic areas.

Assistance provided by WHO during the year. (a) An epidemiologist-parasitologist and a sanitary engineer; (b) a short-term consultant (medical zoologist); (c) a twelve-month fellowship to study for the diploma course in public health in Lebanon; (d) equipment and supplies, including medical literature.

FAO provided a short-term consultant in land use.

Probable duration of assistance. Until the end of 1961.

Work during the year. A follow-up of control measures, which included improved agricultural practices, showed that when primitive practices were resumed, snail hosts were reintroduced and multiplied. A review of previous years' work indicated that the following methods, used singly or in combination, were effective against the snail vector: the removal of vegetation; drainage or removal of water; ponding or confinement of excess water; earth filling or grading; introduction of brackish water; better agricultural practices.
<table>
<thead>
<tr>
<th>Project No.</th>
<th>Source of Funds</th>
<th>Co-operating Agencies</th>
<th>Description</th>
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</table>
| Philippines 12 | TA | Johns Hopkins University, Rockefeller Foundation | Institute of Hygiene, University of the Philippines, Manila (July 1953 - )

**Aim of the project.** To strengthen the faculty of the Institute of Hygiene by exchanging members of the teaching staffs between the Institute and the Johns Hopkins University School of Hygiene and Public Health.

**Assistance provided by WHO during the year.** (a) An associate professor in mental health; (b) a short-term consultant in nutrition.

**Probable duration of assistance.** Until 1960.

**Work during the year.** The short-term consultant in nutrition spent two months with the Institute. As well as giving lectures, he advised on starting research which, though it is an important part of the Institute’s work, had not yet been undertaken systematically in the faculty. The associate professor of mental health was at the Institute for an academic year, providing instruction and guidance on future developments.


**Aim of the project.** To study the midwifery services and training facilities; to develop a well-organized training programme for midwives; to train village midwives (hilots); to study maternity nursing needs and resources; to formulate a midwifery practice act.

**Assistance provided by WHO.** (a) A nurse educator (midwifery); (b) three fellowships.

**Work done.** The preparation of public health nurse midwives for teaching and supervisory posts began with a four-week course for nurse midwife supervisors and instructors. The first four groups were taught by the WHO nurse educator with the assistance of the counterpart and a nurse midwife instructor. Preparation for teaching hilots was included in the course and a domiciliary obstetrical service was started in order to provide experience in home delivery care. Upon return to their provincial stations the supervisors organized classes for the hilots, following the criteria set. Plans were made for in-service training of all rural public health nurses and midwives. A guide for maternity nursing was prepared and distributed to public health nursing personnel in the rural health centres and to the libraries of government schools of nursing and private schools of midwifery.

The scope of the project has been expanded to include assistance to the government schools of nursing in improving public health nursing (with particular emphasis on maternal and child health) and help in starting a pilot demonstration of public health nursing supervision in ten provinces.

**Evaluation.** The Midwifery Advisory Committee, planned in consultation with the WHO advisers and counterparts, has helped to achieve the objectives of the programme. Well-prepared counterparts were available from the beginning. The training programme has made steady progress. The Division of Personnel Training and Health Education and Information has drawn up plans for a much enlarged programme of in-service training, which started in 1959. The recent establishment of the Maternal and Child Health Division in the Department of Health is focusing attention on the special needs of mothers and children and achieving closer co-ordination between the different aspects of the programmes for training and service.

| Philippines 43 | R | (ICA) | Environmental Sanitation (June 1955 - )

**Aim of the project.** To co-ordinate and strengthen environmental sanitation work.

**Assistance provided by WHO during the year.** (a) A sanitary engineer; (b) two six-month fellowships to observe environmental sanitation in rural and urban areas in Japan, the United States of America, Mexico, Hawaii, Taiwan, Hong Kong, Thailand, Ceylon, the Federation of Malaya, and Singapore; (c) equipment and supplies, including medical and technical literature.

**Probable duration of assistance.** Until 1961.

**Work during the year.** The Department of Health was reorganized so as to decentralize public health work. Regional public health engineers and some provincial public health engineers were appointed. The long-range plan for environmental sanitation was continued as far as possible. A pilot composting plant for the City of Manila was designed and its construction was begun. A number of smaller communities have asked the Department of Health to assist in planning composting operations.

| Philippines 50 | TA | Virology Centre, Manila (Jan. 1959 - )

**Aim of the project.** To establish, under the Public Health Research Laboratory of the Department of Health, a virology centre which will consolidate the work of the present virology units, provide diagnostic laboratory services, particularly for the Disease Intelligence Centre, and carry out research to identify and classify the etiological factors of the virus diseases in the Philippines.
Assistance provided by WHO during the year. A six-month fellowship in virology, for study in the United States of America and Japan, awarded to a medical officer who will serve as counterpart to the virologist to be provided by WHO in 1960.

Probable duration of assistance. Until the end of 1961.

Philippines 51

Environmental Sanitation Training Course (June 1958 - )

Aim of the project. To organize an advanced training course and to demonstrate environmental sanitation activities in a selected area.

Assistance provided by WHO during the year. (a) A sanitarian; (b) equipment and supplies, including technical literature.

Probable duration of assistance. Until 1961.

Work during the year. Progress has been hampered by lack of funds and of accommodation; however the first training course was completed. It lasted ten weeks and was attended by twenty-three inspectors. The second training course began early in July. Plans were made to extend this type of training to other regional training centres throughout the country.

Philippines 53

Malaria Eradication (First phase: Aug. - Dec. 1956; second phase: June - Nov. 1957; third phase: 8 July 1958 - )

Aim of the project. To eradicate malaria through spraying of all malarious areas and treatment of malaria cases.

Assistance provided by WHO during the year. (a) An administrative officer; (b) a consultant for six weeks to advise on surveillance.

Probable duration of assistance. Until 1962.

Work during the year. Field operations continued according to plan until the end of 1958. It was agreed to continue until the end of September 1959 the surveillance system, which had been recommended by the WHO malaria advisory team that went to the Philippines in 1957, and which was put into operation in July 1958. Continuity of the antimalaria operations was thus ensured while plans for future operation were prepared.

The results so far are not absolutely conclusive. It has been confirmed that in Mindanao Anopheles minimus flavirostris has developed resistance to dieldrin. Spraying will be resumed in some areas where it had been discontinued and measures to increase the efficiency of surveillance have been outlined in the new plan of operations.

Philippines 54

Fellowships

Clinical medicine. A one-month fellowship for study of the organization and operation of neurosurgical services in the Union of Soviet Socialist Republics.

Nursing. A six-month fellowship to study public health nursing and midwifery in the United States of America and the United Kingdom.

Occupational health. A twelve-month fellowship to study public health administration, particularly industrial health, in the United States of America.

Tuberculosis control. A six-month fellowship for observation visits to Taiwan, Japan, the United States of America, the United Kingdom, Denmark, the Netherlands, Switzerland and India.

Philippines

Participation in Inter-country Projects

See WPRO 30; WPRO 43; WPRO 53; WPRO 56; WPRO 58; WPRO 62; WPRO 63; WPRO 72; WPRO 78; SEARO 22; Inter-regional 23; Inter-regional 50; Inter-regional 79.

Sarawak 5

Malaria Pilot Project (July 1952 - )

Aim of the project. To study the efficacy, for malaria control in Sarawak, of indoor spraying with residual insecticides in an experimental area; to train professional, auxiliary and ancillary personnel for malaria control throughout the country.

Assistance provided by WHO during the year. (a) Two malariologists and an entomologist; (b) medical literature.
Probable duration of assistance. Until the end of 1962.

Work during the year. The spraying programme continued according to plan and extensive surveys were made to define more exactly the area of endemicity. Extension of the pilot surveillance system has shown that in some areas transmission has not been completely stopped.

Sarawak

Participation in Inter-country Projects

See WPRO 43; WPRO 60; WPRO 63; Inter-regional 23.

Singapore 4

Institute of Health (Jan. 1956 - )

Aim of the project. (a) To provide maternal and child health services, school dental services and health education for the population (about 125 000) living near the Institute; (b) to train at the Institute (i) undergraduate medical and post-graduate public health students of the University of Malaya (including students from other countries of the Region), and (ii) health visitors, health inspectors and other auxiliary personnel.

Assistance provided by WHO during the year. (a) A senior nurse educator (public health) since February 1959; (b) medical literature.

Probable duration of assistance. Until the end of 1961.

Work during the year. Two of the graduates of the first course in public health and district nursing were appointed to take charge of these courses. The second course began with twelve students, in April.

Singapore 8

Nursing Education (June 1952 - )

Aim of the project. To improve the standards of nursing education and nursing service in Singapore by developing (a) the clinical teaching units and the educational programme in the Singapore General Hospital; (b) clinical fields and educational programmes in psychiatric nursing and mental health; (c) in-service education, refresher courses and special courses for local registered nurses, and (d) the training of local nurses for administrative and teaching posts.

Assistance provided by WHO during the year. (a) A senior nurse consultant, two nurse educators (clinical), and a nurse educator (psychiatric); (b) medical literature.

Probable duration of assistance. Until the end of 1960.

Work during the year. One qualified national tutor returned from study abroad and two psychiatric nurses, who had been awarded government fellowships, continued studying for their tutors' diploma. The in-service education and clinical teaching programme in the general hospital and paediatric unit have shown that such programmes are of value in improving nursing education and services. The Nursing Education Committee and its sub-committee studied the training of assistant nurses and the courses in special subjects. A study group on nursing service administration met regularly to discuss administrative principles and procedures. The acute shortage of nurses who can fill teaching posts and other positions of leadership is seriously affecting the development of education programmes.

Singapore 14

Domiciliary Midwifery Service (Jan. 1959 - )

Aim of the project. To extend the supervision of midwifery practice to the whole island; to give refresher courses for qualified midwives; to integrate institutional midwifery at Kandang Kerbau Maternity Hospital with the domiciliary services in urban and rural areas; to give midwifery trainees more domiciliary experience, particularly in rural areas.

Assistance provided by WHO during the year. A senior nurse educator (midwifery).

Probable duration of assistance. Until the end of 1961.

Work during the year. The midwifery services needed in the rural areas were assessed and a plan of action was prepared. A national counterpart was appointed as supervisor of midwives in the rural areas. Legislation was passed which extends midwifery training to include domiciliary experience in rural areas and makes regular refresher courses obligatory for practising midwives.

Singapore

Participation in Inter-country Projects

See WPRO 43; WPRO 53; WPRO 58; WPRO 63.
THE WORK OF WHO, 1959

Project No.  Description
Source of Funds  Co-operating Agencies
Tonga 1  Environmental Sanitation (March 1958 - )
TA
Aim of the project. To strengthen environmental sanitation services at all government levels; to study problems of rural and urban environmental sanitation and the social, economic and cultural factors that affect the improvement of environmental sanitation; to plan, execute and evaluate a pilot project to demonstrate modern methods in environmental sanitation; to train environmental sanitation personnel and instruct other public health workers in sanitation.
Assistance provided by WHO during the year. (a) A social anthropologist and a sanitary engineer; (b) supplies, equipment and technical literature.
Probable duration of assistance. Until the end of 1961.
Work during the year. Technical studies were made of the problems involved in the introduction of improved environmental sanitation, especially into rural areas; also social anthropological studies of the factors that govern the acceptance of innovations, and the co-operation of communities in improving their environmental sanitation. It is expected that these studies will lead to pilot environmental sanitation programmes in a number of villages.

Tonga 3  Fellowships
R
Public health administration. A twelve-month fellowship for study in the United Kingdom.

R
Aim of the project. To study the development of the relations between mother and child in Tonga with particular reference to feeding and the child's different responses to the mother, relatives and strangers. The study should lead to better understanding of maternal and child health problems in the area.
Assistance provided by WHO during the year. A consultant for six months.
Work done. Seven babies were observed in detail for the whole period of the study. More general observations were made on a large number of babies and children at their homes or at the maternal and child health clinic. An analysis was made of data on the feeding, weaning, weight and illness records of eighty-four babies who regularly attended the clinic. Discussions were held with a large number of Tongans on the raising of babies and children and special attention was given to a number of problems encountered by the medical and health personnel in their work with mothers and babies. Information was also obtained on beliefs and practices connected with childbirth, diet, weaning and ill health.

Tonga  Participation in Inter-country Projects
See WPRO 35.

United States Trust  Participation in Inter-country Projects
Territory of the Pacific Islands
See WPRO 35; WPRO 63.

Viet Nam 3  Maternal and Child Health (Dec. 1954 - )
TA
UNICEF (ICA)
Aim of the project. (a) To provide a maternal and child health service as part of the general public health and medical care services by improving and expanding existing facilities; (b) to determine the categories and qualifications of staff required for that service and to provide for their recruitment, training or refresher training; (c) to train staff from neighbouring countries with maternal and child health problems similar to those in Viet Nam; (d) to carry out research and collect and analyse statistical and demographic data for study of these problems.
Assistance provided by WHO during the year. A medical officer, two public health nurse educators, a public health nurse and a public health nurse midwife.
Probable duration of assistance. Until the end of 1961.
Work during the year. Alterations to improve facilities at the Tu-Du Maternity Hospital were completed and two demonstration wards were opened. The services were reorganized to provide better teaching facilities. At the Children's Hospital, Saigon, where 180 beds are now in use, an extension to the out-patient department was completed, which gives more waiting accommodation and facilities for a child health clinic and dental clinic. A home visiting service which follows up children discharged from hospital made a very satisfactory start. The in-service training programme for hospital nurses and
midwives continued in both institutions. At the Children's Hospital, a practical and clinical training course for students from affiliated schools of nursing and midwifery was started in March. A start was made on the second phase of the project, which includes strengthening the paediatric and obstetric training and services at Hué, and organizing maternal and child health services in municipal dispensaries in Saigon. There has been close co-operation with the UNESCO fundamental education project in Tan-An and with the United States International Co-operation Administration on plans for future work in maternal and child health and in nursing.

Tuberculosis Control (Jan. 1958 - )

Aim of the project. To set up the nucleus of a national tuberculosis control service, with emphasis on preventive and public health work; to complete a tuberculosis dispensary 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.

Assistance provided by WHO during the year. (a) A medical officer and a public health nurse; (b) an x-ray engineer consultant for two weeks.

Probable duration of assistance. Until the end of 1962.

Work during the year. Progress with the structural alterations to the new dispensary and the installation of equipment was slow, but the dispensary was completed and opened. More national staff were made available and training courses were begun. In addition to training staff, the dispensary will serve part of Saigon-Cholon. Fewer people were vaccinated with BCG and there was difficulty in getting the people to accept the public health approach to tuberculosis control.

Environmental Sanitation (Nov. 1956 - )

Aim of the project. To strengthen national and local environmental sanitation services; to train professional and sub-professional personnel; to carry out pilot schemes of environmental sanitation.

Assistance provided by WHO during the year. (a) A sanitary engineer; (b) supplies, equipment and technical literature.

Probable duration of assistance. Until the end of 1961.

Work during the year. The national environmental sanitation service has been considerably strengthened by the creation of an environmental sanitation service in the Ministry of Health. The present staff of this service comprises the first two Vietnamese sanitary engineers trained abroad under ICA fellowships and two of the sanitation workers trained in Viet Nam. The service advised local authorities, helped with training courses for sanitation workers and special courses such as those on water examination, and supervised sanitation workers stationed in rural areas. Four training courses for sanitation workers were completed, from which eighty-eight Vietnamese have graduated.

Malaria Eradication (First phase: March 1959 - )

Assistance provided by WHO during the year. (a) A malariologist and an entomologist; (b) equipment and supplies, including medical literature.

Probable duration of assistance. Until 1963.

Work during the year. The main task was to work out a plan of operations for malaria eradication, which it is hoped to put into effect in January 1960. A three-month training course for technicians started in August.

Participation in Inter-country Projects

See WPRO 30; WPRO 43; WPRO 56; WPRO 58; WPRO 63; Inter-regional 23; Inter-regional 78.

Western Samoa

Participation in Inter-country Projects

See WPRO 22; WPRO 35; WPRO 63.
### INTER-REGIONAL

<table>
<thead>
<tr>
<th>Project No.</th>
<th>Co-operating Agencies</th>
<th>Description</th>
</tr>
</thead>
</table>
| Inter-regional 23 | MESA | **Third Asian Malaria Conference, New Delhi (16 - 21 March 1959)**

_Aim of the project._ To discuss malaria eradication, especially problems of planning, organization, legislation, training, supervision, reporting, chemotherapy, surveillance and insecticide resistance.

_Assistance provided by WHO._ Cost of attendance of twenty-nine participants from the South-East Asia Region (Afghanistan, Burma, Ceylon, India, Indonesia, Nepal and Thailand) and the Western Pacific Region (Australia, Cambodia, China (Taiwan), the Federation of Malaya, Hong Kong, Japan, the Republic of Korea, Laos, Netherlands New Guinea, North Borneo, the Philippines, Sarawak and Viet Nam.

_Work done._ The Conference was attended by 120 participants from the South-East Asia and Western Pacific Regions. They included six Ministers of Health and two administrative officials representing the Ministers from the South-East Asia Region, three Ministers of Health and four high administrative officials from the Western Pacific Region, fifty national malariologists, thirty-seven WHO malaria workers, fifteen observers from ICA, an observer from UNICEF and two observers from the Rockefeller Foundation. The organizational and administrative requirements of malaria eradication were discussed during the first part of the Conference and technical matters during the second part. The recommendations made have been widely circulated. See also page 3.

| Inter-regional 35 | R | Training Course on Public Health Laboratory Techniques for Virus and Rickettsial Diseases, Coonoor, India (8 - 19 Dec. 1958)

This project was described in the Annual Report for 1958.

| Inter-regional 49 | R | Advisory Teams for Malaria Eradication (1956 - )

_Assistance provided by WHO and work done during the year._ The _Anopheles gambiae_ Research and Advisory Team (composed of an entomologist and three technical assistants) studied the behaviour, distribution and resistance to insecticides of different _A. gambiae_ strains in Ghana during the first few months of the year. An Advisory Team for Malaria Eradication (consisting of a malariologist, an entomologist and two technicians) undertook a pre-eradication survey in the Transvaal from October to December.

For other work of WHO advisory teams for malaria eradication, see SEARO 7 and Greece 28.

| Inter-regional 50 | R | Assistance to Malaria Courses (1957 - 1958)

_Aim of the project._ To provide training for various categories of personnel required for malaria eradication programmes.

_Assistance provided by WHO and work done during the year._ A training centre has been organized in the Philippines Malaria Institute in Tala in co-operation with ICA. WHO provided a malariologist to act as liaison officer and co-ordinator of courses. Malaria eradication staff of the Western Pacific Regional Office assisted in the teaching. Two short-term consultant tutors have also been provided to assist in training courses at the Malaria Eradication Training Centre in Cairo, and four for the similar courses in Turkey.

| Inter-regional 52 | R | Bilharziasis Advisory Team (Oct. 1958 - )

_Aim of the project._ To find out how serious the bilharziasis problem is in various countries and to survey the epidemiological aspects; to investigate the relationship between water resource development and the transmission of the disease; to make recommendations on control measures and their co-ordination, especially as regards the engineering aspects of control.

_Assistance provided by WHO._ An advisory team composed of a parasitologist/epidemiologist and a sanitary engineer (irrigation).
Probable duration of assistance. Until the end of 1960.

Work done. From October to December 1958 the team made surveys in Iraq, the United Arab Republic (Province of Egypt), Kenya, Southern Rhodesia and the Belgian Congo and Ruanda-Urundi. Visits were made to the main irrigation areas of the Ruzizi Valley, Lake Kivu, Lake Tanganyika and to Stanleyville and Leopoldville.

The team stressed the magnitude of the problem of bilharziasis in Africa. It noted that the development of agricultural and water resources in the countries visited (it is planned to bring twenty million acres of arid land under perennial irrigation within the next fifteen years) may mean an increase of the disease on an epidemic scale unless control measures are made part of the plans for such development.

In May 1959 the team reviewed the control measures taken in Gezira by the Government of Sudan. Between August and November the team visited the Malagasy Republic, Mauritius, Togo and Ghana, where assistance was given to the bilharziasis control project (Ghana 5) and the environmental sanitation project (Ghana 10). Stream management and watershed problems—particularly from the engineering point of view—were studied.

Reports containing the team's recommendations on safeguards to be adopted in the countries surveyed have been issued.

Seminar on the Public Health Aspects of Radioactive Waste Disposal, Centre d'Etudes nucléaires, Saclay (23 - 25 Nov. 1959)

Aim of the project. To provide instruction in the public health aspects of radioactive waste disposal, for personnel in public health departments.

Assistance provided by WHO. (a) Ten specialists to address the seminar and lead discussions, from Canada, France, the United Kingdom and the United States of America (a further lecturer was provided by the International Atomic Energy Agency); (b) cost of attendance of twenty-one participants from the African Region (the Union of South Africa), the South-East Asia Region (Thailand), the European Region (Belgium, Czechoslovakia, Denmark, France, the Federal Republic of Germany, Italy, the Netherlands, Norway, Poland, Sweden, Switzerland, the Union of Soviet Socialist Republics, the United Kingdom, and Yugoslavia), the Eastern Mediterranean Region (Iran, Israel, Lebanon and Pakistan), and the Western Pacific Region (Japan).

(In addition, eight other participants from Denmark, France, Israel, Italy, the United Kingdom and the United States of America attended the seminar independently. Four WHO staff members and a representative of the European Nuclear Energy Agency also attended.)

Work done. Eleven papers were presented on the technical and public health aspects of radioactive waste disposal. Each address was followed by informal discussions.

Among the subjects discussed were the handling and methods of disposing of radioactive waste in hospitals and laboratories, and general public health safeguards; the biological concentration of radionuclides in sea or fresh water organisms, with emphasis on the particular residual power of strontium 90; the incomplete state of oceanographic knowledge and the difficulties of safe waste disposal in the sea; the public health hazard created by a reactor accident—contamination of food, milk and water supplies and the inhalation of iodine 131 being specially dangerous; the problem of contamination of the atmosphere in the event of reactor accidents and also under normal conditions; the maximum permissible levels of radiation exposure and the importance of environmental control.

The responsibilities of public health officers for ensuring proper disposal and the need for a unified international public health code in this field were stressed.

The participants visited installations at Saclay, including a “hot laboratory” and an effluents service.

The participants completed a questionnaire on the progress achieved and the problems encountered in their countries.

Malaria Eradication: Technical Consultants (1959 - )

Aim of the project. To provide expert advice on the preparation of programmes of malaria eradication and to assist governments in the assessment of such programmes.

Assistance provided by WHO during the year. Two short-term consultants, one for four and a half months, the other for six months from September 1959.

Work during the year. A malariologist helped with the preparation of the Third Asian Malaria Conference and subsequently visited and advised on the development of the malaria eradication programmes in Taiwan, Cambodia and Viet Nam.

The second consultant advised on programmes with medicated salt in Cambodia, Ghana and Netherlands New Guinea.
Inter-regional 79  
MESA

Training of Malaria Eradication Personnel (1957 - )

Aim of the project. To train in malaria eradication techniques malarialogists, entomologists, sanitarians and laboratory technicians for service in internationally assisted malaria eradication campaigns.

Work during the year. Twelve malarialogists, three entomologists, two sanitarians, and nine malaria engineers were trained in Jamaica; one malarialogist was trained at Tala, in the Philippines; and seven administrative officers were trained in Geneva.

Inter-regional 82  
MESA

Malaria Eradication: Spraying Equipment Evaluation Programme (1959 - )

Aim of the project. To draw up an approved list of insecticide spraying equipment for malaria eradication programmes, to determine the practical requirements for replacement and maintenance so that field teams may be provided with the best and most economical equipment.

Assistance provided by WHO during the year. An engineer consultant and a sanitarian; test sprayers, replacements, and other equipment.

Probable duration of assistance. Four cycles of tests are planned, lasting until mid-1961.

Work during the year. Towards the end of 1959 four current makes of compression sprayers — including the one most widely used at present — were tested in Northern Nigeria. After preliminary tests, several units of each make were put into the field for three months with regular spraying squads and their performance was checked weekly. At the end of this operation, the sprayers were to be re-tested, account taken of replacements required, and a general evaluation made of each make.

Inter-regional 87  
MESA  
(Ross Institute of Tropical Medicine)  
(London School of Hygiene and Tropical Medicine)

Training Course on Determination of Anopheline Longevity, London (13 - 25 April 1959)

Aim of the project. To present a number of leading entomologists with the results of research on the determination of the longevity of malaria vectors by the assessment of the number of gonotrophic cycles of the female anophelines. This technique, developed mainly in the Union of Soviet Socialist Republics, has been of considerable practical value in malaria eradication work in the Soviet Union.

Assistance provided by WHO. Cost of attendance of a lecturer from the Institute of Malaria, Medical Parasitology and Helminthology in Moscow, and of seventeen entomologists from all WHO Regions.
MEMBERS AND ASSOCIATE MEMBERS OF THE WORLD HEALTH ORGANIZATION  
(at 31 December 1959)

At the end of 1959 the World Health Organization had 87 Member States and 3 Associate Members. They are listed below, with the date on which each became a party to the Constitution or the date of admission to associate membership.

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Annex 2

MEMBERSHIP OF THE EXECUTIVE BOARD IN 1959

1. Twenty-third session (20 January to 3 February 1959)

Designated by

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Designated by Unexpired term of office

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<tr>
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1 Replaced by his alternate, Dr Cao-Xuan-Cam, at the twenty-third session
2 Replaced by his alternate, Professor M. Etemadian, at the twenty-third session
3 Rapporteur at the twenty-fourth session
4 Alternate to Dr A. H. Radji
5 Replaced by his alternate, Dr C. Gordillo-Zuleta, at the twenty-fourth session
Annex 3

EXPERT ADVISORY PANELS AND COMMITTEES

1. EXPERT ADVISORY PANELS

To supply the Organization with technical advice by correspondence and to provide the membership of its expert committees (and of the Committee on International Quarantine), panels of experts have been established for each of the following subjects. The panel on cardiovascular diseases was set up during the year, and the panel on yellow fever was abolished, its membership being absorbed into the panel on virus diseases.

Addiction-producing drugs  
Antibiotics  
Biological standardization  
Brucellosis  
Cardiovascular diseases  
Cancer  
Cholera  
Chronic degenerative diseases  
Dental health  
Environmental sanitation  
Food additives  
Health education of the public  
Health laboratory services  
Health statistics  
Insecticides  
International pharmacopoeia and pharmaceutical preparations  
International quarantine  
Leprosy  
Malaria  
Maternal and child health  
Medical research  
Mental health  
Nursing  
Nutrition  
Occupational health  
Organization of medical care  
Parasitic diseases  
Plague  
Professional and technical education of medical and auxiliary personnel  
Public health administration  
Rabies  
Radiation  
Rehabilitation  
Trachoma  
Tuberculosis  
Venereal infections and treponematoses (including serology and laboratory aspects)  
Virus diseases  
Zoonoses

2. EXPERT COMMITTEES

The membership of the expert committees which met in 1959 was as follows:

**Expert Committee on Addiction-producing Drugs**

*Geneva, 19-24 October 1959*

Dr N. B. Eddy, Chief, Section on Analgesics, Laboratory of Chemistry, National Institute of Arthritis and Metabolic Diseases, National Institutes of Health, Bethesda, Md., United States of America

Dr L. Goldberg, Professor of Research on Alcohol and Analgesics, Karolinska Institut, Stockholm, Sweden

Dr H. Isbell, Director, Addiction Research Center, National Institute of Mental Health, United States Public Health Service Hospital, Lexington, Ky., United States of America

Dr G. Joachimoglu, Professor Emeritus of Pharmacology; formerly Chairman, Superior Health Council, Ministry of Social Welfare, Athens, Greece

Dr J. La Barre, Professor of Pharmacology, Université libre de Bruxelles, Brussels, Belgium


Dr V. V. Vassilieva, Professor of Pharmacology, Second Medical Institute, Moscow, Union of Soviet Socialist Republics

Dr V. Zapata Ortiz, Professor of Pharmacology, National University of San Marcos, Lima, Peru

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1 This annex also includes, for convenience, the Committee on International Quarantine (section 3).

2 The Twelfth World Health Assembly, in resolution WHA12.17, decided "that the Advisory Committee on Medical Research shall provisionally be considered as an expert advisory panel". For participants in 1959 session, see section 4 below.
Expert Committee on Biological Standardization

Geneva, 31 August - 5 September 1959

Dr H. H. Cohen, Head, Sera and Vaccine Production Laboratories, National Institute of Public Health, Utrecht, Netherlands

Dr D. G. Evans, Director, Department of Biological Standards, National Institute for Medical Research, London, England

Dr N. H. Fisek, Dean, School of Hygiene, Ankara, Turkey

Dr P. Krag, Chief, Department of Biological Standardization, Statens Serum-institut, Copenhagen, Denmark

Dr D. C. Lahiri, Professor of Bacteriology and Pathology, Calcutta School of Tropical Medicine, Calcutta, India

Dr R. Murray, Director, Division of Biologics Standards, National Institutes of Health, Bethesda, Md., United States of America

Dr A. S. Outschoorn, Head, Division of Pharmacology, Medical Research Institute, Colombo, Ceylon

Dr V. L. Troitsky, Gamaleya Institute of Epidemiology and Microbiology, Moscow, Union of Soviet Socialist Republics

Expert Committee on Cancer (Histopathology of soft tissue tumours)

Geneva, 22-27 June 1959

Dr B. J. P. Becker, Professor of Morbid Anatomy and Histopathology, University of the Witwatersrand, Johannesburg, Union of South Africa

Dr J. Campos R. de C., Chief, Department of Pathology, National Institute of Neoplastic Diseases, Lima, Peru

Dr J. Clemmesen, Director of the Department of Pathology and Cancer Registry, Finsen Institute, Copenhagen, Denmark

Dr N. O. E. Ringertz, Professor of Pathology, Karolinska Institutet, Sabbatsberg Hospital, Stockholm, Sweden

Professor C. Sirtori, Director, Department of Pathology, National Cancer Institute, Milan, Italy

Dr A. J. Strukov, Professor of Pathology, First Medical Institute, Moscow, Union of Soviet Socialist Republics

Dr D. J. Winslow, Chief, Soft Tissue Branch (and Head of the WHO International Centre for Soft Tissue Tumours), Armed Forces Institute of Pathology, Washington, D.C., United States of America

Expert Committee on Insecticides (Insecticide resistance and vector control)

Geneva, 14-19 September 1959

Dr S. Asahina, Division of Medical Entomology, National Institute of Health, Tokyo, Japan

Dr J. R. Busvime, London School of Hygiene and Tropical Medicine, London, England

Dr J. Hamon, Chief, Entomological Laboratory, Muraz Centre, Bobo Dioulasso, Republic of the Upper Volta

Dr C. Moftidi, Director, Institute of Malariology and Parasitology, Teheran, Iran

Dr V. A. Nabokov, Head, Infectious Diseases Prophylaxis Section, Institute of Malaria, Medical Parasitology and Helminthology, Ministry of Health, Moscow, Union of Soviet Socialist Republics

Dr R. Pal, Assistant Director, Malaria Institute of India, Delhi, India

Dr H. F. Schoof, Chief, Biology Section, Technical Development Laboratories, Communicable Disease Center, United States Public Health Service, Savannah, Ga., United States of America

Expert Committee on Leprosy

Geneva, 3-8 August 1959

Dr J. A. Kinnear Brown, Specialist Leprologist, Ministry of Health and Medical Headquarters, Entebbe, Uganda

Dr O. Diniz, Director, National Leprosy Service, Ministry of Health, Rio de Janeiro, Brazil

Médecin-Colonel C. R. P. Laviorn (former Director of the Institut Marchoux, Bamako, Soudan), Marseilles, France

Dr H. W. Wade, Pathologist Emeritus, The Leonard Wood Memorial, Cution Sanitarium, Palawan, Philippines

Dr R. V. Wardekar, Secretary, Gandhi Memorial Leprosy Foundation, Wardha, Bombay, India

Expert Committee on Mental Health (Epidemiology of mental disorders)

Geneva, 8-13 June 1959

Dr S. Btesh, Director-General, Ministry of Health, Jerusalem, Israel

Dr E. Essen-Møller, Professor of Psychiatry, University of Lund, Sweden

Dr A. H. Leighton, Professor of Psychiatry, Department of Social Psychiatry, Cornell University Medical College, New York, N.Y., United States of America

Dr Tsung-yi Lin, Professor of Psychiatry, Chairman of the Department of Neurology and Psychiatry, National Taiwan University, Taiphe, Taiwan, China

Dr Ö. Ödegaard, Professor of Psychiatry, Gaustad Hospital, Vinderen, Oslo, Norway

Dr P. D. Sivadon, Médecin des Hôpitaux psychiatriques de la Seine, Le Mesnil-Saint-Denis, France

Dr E. Stengel, Professor of Psychiatry, University of Sheffield, England

Dr J. Vyncke, Médecin-Chef de Clinique, Hôpital Prince Régent Charles, Usumbura, Ruanda-Urundi

Expert Committee on Organization of Medical Care (Role of hospitals in ambulatory and domiciliary medical care)

Geneva, 16-21 March 1959

Dr G. Almenara, General Superintendent of Hospitals, National Social Security Fund, Workers’ Hospital, Lima, Peru

Dr D. N. Chakravarti, Secretary of Health and Director of Health Services, Government of West Bengal, Calcutta, India

Dr A. Engel, Director-General, Royal Medical Board, Stockholm, Sweden

Dr S. Halter, Director-General of Hygiene, Ministry of Public Health and Family Welfare, Brussels, Belgium

1 Invited, but unable to attend
Dr W. Martin, Past President, American Medical Association, Norfolk, Va., United States of America

Dr A. M. Naficy, Professor of the Faculty of Medicine, University of Teheran; Secretary-General, Red Lion and Sun Society, Teheran, Iran

Dr F. G. Zakharov, Director, Central Medical Inspectorate, Ministry of Health, Moscow, Union of Soviet Socialist Republics

Expert Committee on Public Health Administration (Local health service)

Geneva, 12-17 October 1959

Dr G. Arbona, Secretary of Health, Department of Health, San Juan, Puerto Rico

Sir Andrew Davidson (retired Chief Medical Officer for Scotland), Stanley, Perthshire, Scotland

Dr J. J. Du Pré Le Roux, Secretary for Health and Chief Health Officer, Department of Health, Pretoria, Union of South Africa

Dr G. Molina, Secretary to the Technical Council, National Health Service, Santiago, Chile

Dr S. Seshagiri Rau, Chief, Health Division, Planning Commission for India, New Delhi, India

Dr Z. Štich, Deputy Minister of Health, Prague, Czechoslovakia

Dr M. Tottie, Royal Medical Board, Stockholm, Sweden

Expert Committee on Rabies

Geneva, 14-19 December 1959

Dr. A. Kemron, Director, Government Veterinary Institute, Tel-Aviv, Israel

Dr H. Koprowski, Director, Wistar Institute, Philadelphia, Pa., United States of America

Dr P. Lépine, Chief, Virus Section, Institut Pasteur, Paris, France

Dr R. Schindler, Bernhard Nocht Institute of Ship Medicine and Tropical Diseases, Hamburg, Federal Republic of Germany

Dr M. Selimov, Mechnikov Institute for Scientific Research on Vaccines and Sera, Moscow, Union of Soviet Socialist Republics

Dr N. Veeraraghavan, Director, Pasteur Institute of Southern India, Coonoor, India

Expert Committee on Radiation (Medical supervision in radiation work)

Geneva, 28 September - 3 October 1959

Dr M. N. Fateeva, Head, Radiological Clinic, Institute of Work Hygiene and Occupational Diseases, Academy of Medical Sciences, Moscow, Union of Soviet Socialist Republics

Dr A. J. Finkel, Director, Health Division, Argonne National Laboratory, Lemont, Ill., United States of America

Dr B. Lindell, Institute of Radiophysics, Karolinska Hospital, Stockholm, Sweden

Dr A. S. McLean, Director, Health and Safety Branch, United Kingdom Atomic Energy Authority, London, England

Dr C. Polvani, Medical Director, Nuclear Study Centre, National Committee for Nuclear Research, Ispra, Italy

Professor J. Reboul, Electroradiological Clinic, Hôpital Saint André, Bordeaux, France

Dr E. M. Renton, Plant Physician, Atomic Energy of Canada Limited, Chalk River, Ont., Canada

Dr J. H. Sterner, Associate Professor of Medicine, University of Rochester, N.Y.; Consultant to United States Atomic Energy Commission, United States of America

Dr Katharine Williams, Principal Medical Officer, Atomic Energy Research Establishment, United Kingdom Atomic Energy Authority, Harwell, England

Expert Committee on Specifications for Pharmaceutical Preparations

Geneva, 9-14 November 1959

Professor A. Calò, Inspector-General (Chemistry), Istituto Superiore di Sanità, Rome, Italy; Member of the Italian Pharmacopoeia Commission

Dr T. Canbäck, Director of Chemical Research, Pharmaceutical Control Laboratory, Stockholm, Sweden; Vice-Chairman of the Swedish Pharmacopoeia Commission; Member of the Scandinavian Pharmacopoeial Council

Mr T. C. Denston, Secretary, British Pharmacopoeia Commission, London, England

Professor J. A. Gautier, Professor of Organic Chemistry, Faculty of Pharmacy, University of Paris, France; Member of the French Pharmacopoeia Commission

Dr T. Itai, Chief, Division of Non-official Drugs, National Institute of Hygiene, Tokyo, Japan; Member of the Japanese Pharmacopoeia Commission

Mr. F. A. Maurina, Director, Analytical Laboratories, Parke, Davis and Co., Detroit, Mich., United States of America; Member of the Committee of Revision of the Pharmacopoeia of the United States of America

Dr L. C. Miller, Director of Revision of the Pharmacopoeia of the United States of America, New York, N.Y., United States of America

Dr J. L. Powers, Chairman of the Committee on National Formulary, American Pharmaceutical Association, Washington, D.C., United States of America; Member of the Committee of Revision of the Pharmacopoeia of the United States of America

Professor P. Senov, Professor of Pharmaceutical Chemistry, First Medical Institute, Moscow, Union of Soviet Socialist Republics; Chairman of the Soviet Union Pharmacopoeia Commission

Sub-Committee on Non-Proprietary Names

Geneva, 5-7 October 1959

Professor H. Baggesgaard Rasmussen, Member of the Danish Pharmacoepia Commission and of the Scandinavian Pharmacopoeial Council, Copenhagen, Denmark

1 Invited, but unable to attend
Mr. T. C. Denston, Secretary, British Pharmacopoeia Commission, London, England
Professor R. Hazard, Honorary Professor of Pharmacology, Faculty of Medicine, University of Paris, France; Member of the French Pharmacopoeia Commission
Professor E. Sellés, Faculty of Pharmacy, University of Madrid, Spain; Member of the Spanish Pharmacopoeia Commission
Professor V. Zakusov,1 Director, Institute of Pharmacology and Chemotherapy, Academy of Medical Sciences, Moscow, Union of Soviet Socialist Republics

Joint Expert Committees

Joint FAO/WHO Expert Committee on Food Additives (Specifications for identity and purity of a selected group of food colours)

Rome, 30 November - 7 December 1959
Dr. M. G. Allmark, Head, Pharmacology and Toxicology Section, Food and Drug Directorate, Department of National Health and Welfare, Ottawa, Canada
Dr. G. R. Clark, Director, Division of Cosmetics, Food and Drug Administration, Department of Health, Education and Welfare, Washington, D.C., United States of America
Professor H. Druckrey, Laboratory of the University Surgical Clinic, Freiburg im Breisgau, Federal Republic of Germany
Professor O. Högl, Chief, Foodstuff Control, Federal Public Health Service; Professor of Food Chemistry, University of Berne, Switzerland
Dr. P. Johnson, Secretary, Food Protection Committee, National Research Council, Washington, D.C., United States of America
Dr. A. Lienhart, French Colouring Material Company, Saint-Clair-du-Rhône, France
Dr. H. Raab, Bayer Dyes Ltd., Krefeld-Ürdingen, Federal Republic of Germany
Professor J. F. Reith, Department of Food Chemistry and Toxicology, University of Utrecht, Netherlands
Dr. A. T. Schramm, Manager, Field Sales, National Aniline Division, Allied Chemical Corporation, New York, United States of America
Dr. H. E. Stagg, Chief Analyst, Dyestuffs Division, Imperial Chemical Industries Ltd., Manchester, England
Professor R. Truhaut, Professor of Toxicology, Faculty of Pharmacy, University of Paris, France

Joint FAO/WHO Expert Committee on Milk Hygiene

Geneva, 13-18 July 1959
Professor S. Anselmi, Istituto Superiore di Sanità, Rome, Italy
Dr. F. W. Barber, Research and Development Division, National Dairy Products Corporation, Oakdale, Long Island, N.Y., United States of America
Dr. T. E. Galesloot, Netherlands Dairy Research Institute, Ede, Netherlands
Dr. K. K. Iya,1 Director, National Dairy Research Institute, Karnal, Punjab, India
Dr. C. K. Johns, Director, Dairy Technology Research Institute, Ottawa, Ont., Canada
Professor P. Kastli, Director, Federal Dairy Industry and Bacteriology Station; Past President, International Dairy Federation, Liebefeld-Berne, Switzerland
Dr. Y. Lebedev, Chief, State Sanitary Inspectorate, Ministry of Health, Moscow, Union of Soviet Socialist Republics
Dr. R. J. MacWalter, Chief Chemist, United Dairies Ltd. Central Laboratory, London, England
Professor G. Thieulin, Director, Veterinary Health Service for Paris and the Department of the Seine, Paris, France

1 Invited, but unable to attend
Joint WHO/UNESCO Expert Committee on Teacher Preparation for Health Education

Geneva, 2-7 November 1959

Dr F. W. Clements, Section of Social Paediatrics, Institute of Child Health, University of Sydney, Australia

Mrs S. Duncan, Director of Public Health Nursing, Ministry of Labour, Social Welfare and Public Health, Panama City, Panama

Mr L. François, Inspector-General of Public Schools, Ministry of Education, Paris, France

Dr Sabry Girgis,1 Assistant Director, Mental Health Administration, Ministry of Public Health, Cairo, Province of Egypt, United Arab Republic

Dr W. A. Karunaratne, Director of Health Services, National Department of Health, Colombo, Ceylon

Professor T. Richner, President, Swiss Teachers’ Union, Zurich, Switzerland

Miss E. Schneider, Specialist in Health, Physical Education, Recreation and Safety; Department of Health, Education and Welfare, Washington, D.C., United States of America

Dr Ludmila Vancurová, Director, Central Institute for Health Education of the Public, Prague, Czechoslovakia

Miss W. Warden, Senior Lecturer in Health Education, Institute of Education, University of London, England

3. COMMITTEE ON INTERNATIONAL QUARANTINE

Geneva, 26-30 October 1959

Dr A. Abdel Aziz, Director-General, Quarantine Administration, Alexandria, Province of Egypt, United Arab Republic

Dr T. E. Boldyrev, Professor of Epidemiology, Central Post-graduate Institute of Medicine; Chief, Division of Epidemiology, Gamaleya Institute of Epidemiology and Microbiology, Moscow, Union of Soviet Socialist Republics

Dr J. Lembrez, Director of Sanitary Control at Frontiers, Marseilles, France

Dr L. H. Murray, Principal Medical Officer, Ministry of Health, London, England (Chairman)

Dr A. P. Sackett, Medical Director, Division of Foreign Quarantine, Department of Health, Education and Welfare, Washington, D.C., United States of America

Dr P. H. Teng, Assistant Director of Medical Services, Hong Kong

Dr O. Vargas-Méndez, Director-General of Health, San José, Costa Rica

4. ADVISORY COMMITTEE ON MEDICAL RESEARCH

The Advisory Committee on Medical Research was established pursuant to resolution WHA12.17. It is intended that it meet regularly twice a year. The first session took place from 7 to 16 October, the participants being:

Professor Daniel Bovet, Nobel Prize for Medicine and Physiology; Director, Department of Therapeutic Chemistry, Istituto Superiore di Sanità, Rome, Italy

Professor Louis Bugnard, Director, Institut national d’Hygiène, Paris, France

Professor Carlos Chagas, Director, Institute of Biophysics, University of Brazil, Rio de Janeiro, Brazil

Professor Josef Charvat, Director, Third Department of Medicine, Charles University, Prague, Czechoslovakia

Professor Hermann Chiari, Director, Institute of Pathological Anatomy, University of Vienna, Austria

Professor Corneille Heymans, Nobel Prize for Medicine and Physiology; Director, Institute of Pharmacology and Therapeutics, National University, Ghent, Belgium

Professor Zinaida Ermolieva, Corresponding Member of the Academy of Medical Sciences; Professor of Medical Microbiology, Central Post-graduate Institute of Medicine, Moscow, Union of Soviet Socialist Republics

Sir Harold Himsworth, K.C.B., F.R.S., Secretary, Medical Research Council, London, England

Professor Antoine Lacassagne, member of the Institut de France, Emeritus Professor at the Collège de France, Paris, France

Dr Robert F. Leob, Emeritus Bard Professor of Medicine, Columbia University, New York, N.Y., United States of America

Dr Wilhelm Löffler, Emeritus Professor of Medicine, University of Zurich, Switzerland

Professor P. G. Sergiev, Vice-President of the Academy of Medical Sciences; Director, Institute of Malaria, Medical Parasitology and Helminthology, Ministry of Health, Moscow, Union of Soviet Socialist Republics

Dr James A. Shannon, Director, National Institutes of Health, Bethesda, Md., United States of America

Dr Arvid J. Wallgren, Emeritus Professor of Paediatrics, Karolinska Institut, Stockholm, Sweden (Chairman)

Members of the Committee unable to attend the first session:

Professor Louis van den Bergh, Director, Institute for Scientific Research in Central Africa, Bukavu, Belgian Congo

Sir Macfarlane Burnet, O.M., F.R.S., Director, Walter and Eliza Hall Institute of Medical Research, Melbourne, Australia

Professor Ignacio Chavez, Director, National Institute of Cardiology, Mexico City, Mexico

Professor Austin Bradford Hill, C.B.E., F.R.S., Director, Department of Medical Statistics and Epidemiology, London School of Hygiene and Tropical Medicine, London, England

1 Invited, but unable to attend

2 Appointed Chairman by the Director-General for a period of four years
Annex 4

ORGANIZATIONAL MEETINGS AND MEETINGS OF EXPERT COMMITTEES
AND ADVISORY GROUPS HELD IN 1959

Scientific Group on Research in Insecticide Resistance and Vector Control
Executive Board, twenty-third session: Standing Committee on Administration and Finance
Consultant Group on Cancer
Executive Board, twenty-third session
Scientific Group on Tuberculosis Research
Scientific Group on Research in Bilharziasis (Molluscicides)
Scientific Group on Leprosy Research
Conference on Health and Welfare of Seafarers (European Region)
European Technical Conference on Food-borne Infections and Intoxications (European Region)
Scientific Group on Trachoma Research
Scientific Group on Vaccine Research
Scientific Group on Research on Birds as Disseminators of Arthropod-borne Viruses
Conference on Maternity Care (Western Pacific Region)
Informal Meeting of Advisers on Nutrition Research
Scientific Group on Research in Cardiovascular Diseases
Expert Committee on Organization of Medical Care (Role of Hospitals in Ambulatory and Domiciliary Medical Care)
Third Asian Malaria Conference (South-East Asia and Western Pacific Regions)
Scientific Group on Cancer Research
Meeting of Consultants on Medical and Public Health Aspects of Radiation (European Region)
European Technical Conference on Medical Rehabilitation
Inter-regional Yaws Control Co-ordination Meeting (South-East Asia and Western Pacific Regions)
WHO/CCTA: Conference on Leprosy in Africa (African Region)
Study Group on Requirements for Biological Substances (General Requirements for Sterility)
Scientific Group on the Research Aspects of the Treatment of Radiation Injury
Informal Discussions on Research in Human Genetics
Twelfth World Health Assembly
Scientific Group on New Methods of Research in Human Genetics
Scientific Group on Antibiotics Research
Executive Board, twenty-fourth session
Expert Committee on Mental Health (Epidemiology of Mental Disorders)
Eighth Borneo Malaria Conference
Conference on Live Poliovirus Vaccines (Region of the Americas)
Expert Committee on Cancer (Histopathology of Soft Tissue Tumours)
Conference on Mental Hygiene Practice (European Region)
Study Group on Appraisal of Fellowships
FAO/WHO: Joint Expert Committee on Milk Hygiene
IAEA/WHO: Joint Study Group on the Use of Radioisotope Teletherapy Units and Supervoltage Radiation in Radiotherapy
Expert Committee on Leprosy
Scientific Group on Ophthalmological Aspects of Onchocerciasis

Geneva, 5-9 January
Geneva, 13-29 January
Geneva, 15 January - 15 February
Geneva, 20 January - 2 February
Geneva, 26 January - 2 February
Geneva, 9-13 February
Geneva, 16-20 February
Marseilles, 16-21 February
Geneva, 16-21 February
London, Paris and Geneva, 3-10 March
Geneva, 9-13 March
Geneva, 9-14 March
Manila, 9-20 March
Geneva, 11-13 March
Geneva, 16-18 March
Geneva, 16-21 March
New Delhi, 16-21 March
Geneva, 23-26 March
Copenhagen, 1-4 April
Copenhagen, 6-11 April
Kuala Lumpur, 13-18 April
Brazzaville, 14-21 April
Geneva, 20-25 April
Geneva, 27-29 April
Ann Arbor, 28-30 April
Geneva, 12-29 May
Geneva, 19-20 May
Geneva, 26-30 May
Geneva, 1-2 June
Geneva, 8-13 June
Keningau, North Borneo, 16-18 June
Washington, D.C., 22-26 June
Geneva, 22-27 June
Helsinki, 24 June - 3 July
Geneva, 6-10 July
Geneva, 13-18 July
Vienna, 3-5 August
Geneva, 3-8 August
Geneva, 24-29 August

1 Details of seminars and training courses organized by WHO in co-operation with governments or with organizations are given in the Project List in Part IV.
Meeting on Field Trials of Typhoid Vaccine
Expert Committee on Biological Standardization
Regional Committee for Europe, ninth session
Expert Committee on Insecticides (Insecticide Resistance and Vector Control)
Regional Committee for the Eastern Mediterranean, ninth session: Sub-Committee A
Regional Committee for the Western Pacific, tenth session
Expert Committee on Venereal Infections and Treponematoses
Regional Committee for Africa, ninth session
Regional Committee for the Americas, eleventh session, and XI meeting of the Directing Council of PAHO
Regional Committee for South-East Asia, twelfth session
Regional Committee for the Eastern Mediterranean, ninth session: Sub-Committee B
Expert Committee on Radiation (Medical Supervision in Radiation Work)
Expert Committee on Tuberculosis
Expert Committee on Specifications for Pharmaceutical Preparations:
Sub-Committee on Non-proprietary Names
Conference on Post-basic Nursing Education Programme for International Students
Advisory Committee on Medical Research
Expert Committee on Public Health Administration (Local Health Service)
Conference on Trachoma (Eastern Mediterranean Region)
Expert Committee on Addiction-producing Drugs
Scientific Group on Research in Bilharziasis (Chemotherapy)
Conference on the Control of Infectious Diseases through Vaccination Programmes (European Region)
Fifth Regional Congress on Nursing (Region of the Americas)
Committee on International Quarantine
WHO/UNESCO: Joint Expert Committee on Teacher Preparation for Health Education
Technical Meeting on Malaria Eradication (African Region)
Expert Committee on Specifications for Pharmaceutical Preparations
Symposium on Pesticides (African Region)
Conference on the Organization and Administration of Nursing Services (European Region)
Conference on Smallpox Eradication (African Region)
Symposium on BCG Production (South-East Asia and Western Pacific Regions)
Study Group on Epidemiology of Cancer of the Lung
Second Regional Conference on Malaria Eradication (Eastern Mediterranean Region)
Scientific Group on Filariasis and on Non-ophthalmological Aspects of Onchocerciasis
Meeting of Consultants on Drinking-Water Standards (European Region)
Scientific Group on Malaria Research
ILO/WHO: Joint European Conference on the Industrial Medical Officer's Contribution to the Psycho-social Environment in Industry (European Region)
Scientific Group on Research on the Evaluation and Testing of Insecticides
Scientific Group on Treponematoses Research
FAO/WHO: Joint Expert Committee on Food Additives (Specifications for Identity and Purity of a Selected Group of Food Colours)
Antimalaria Co-ordination Board, fourth meeting (South-East Asia and Western Pacific Regions)
FAO/WHO: Symposium on Education and Training in Nutrition in Europe (European Region)
UNICEF/WHO: Joint Committee on Health Policy, twelfth session
Scientific Group on Brucella Vaccine Trials in Man
Informal Meeting on the Laboratory Aspects of Field Trials of Typhoid Vaccines
Expert Committee on Rabies
Ninth Borneo Malaria Conference
Informal Meeting of Advisers on Tuberculin Testing of Cattle

London, 27-30 August
Geneva, 31 August - 5 September
Bucharest, 8-11 September
Geneva, 14-19 September
Alexandria, 14-19 September
Taipei, 16-22 September
Geneva, 21-26 September
Nairobi, 21-26 September
Washington, D.C., 21-30 September
Kandy, 23-29 September
Geneva, 28-30 September
Geneva, 28 September - 3 October
Geneva, 28 September - 3 October
Geneva, 5-7 October
Geneva, 5-14 October
Geneva, 7-16 October
Geneva, 12-17 October
Tunis, 15-24 October
Geneva, 19-24 October
Geneva, 19-24 October
Rabat, 23-31 October
Buenos Aires, 25-31 October
Geneva, 26-30 October
Geneva, 2-7 November
Brazzaville, 3-6 November
Geneva, 9-14 November
Brazzaville, 9-14 November
Bad Homburg, 11-20 November
Brazzaville, 16-19 November
Manila, 16-20 November
Geneva, 16-21 November
Addis Ababa, 16-21 November
Geneva, 16-21 November
Copenhagen, 23-26 November
Geneva, 23-27 November
London, 26 November - 5 December
Geneva, 30 November- 4 December
Geneva, 30 November - 5 December
Rome, 30 November - 7 December
Kuala Lumpur, 1-4 December
Bad Homburg, 2-11 December
Geneva, 3-5 December
Geneva, 8-10 December
London, 9-10 December
Geneva, 14-19 December
Semarang, Indonesia, 15-19 December
Geneva, 16-18 December
Annex 5

TENTATIVE SCHEDULE OF WHO ORGANIZATIONAL MEETINGS IN 1960

Executive Board, twenty-fifth session: Standing Committee on Administration and Finance
Executive Board, twenty-fifth session
Thirteenth World Health Assembly
Executive Board, twenty-sixth session
Regional Committee for Africa, tenth session
Regional Committee for the Americas, twelfth session, and Directing Council, PAHO, XII meeting
Regional Committee for South-East Asia, thirteenth session
Regional Committee for Europe, tenth session
Regional Committee for the Eastern Mediterranean, tenth session
Sub-Committee A
Sub-Committee B
Regional Committee for the Western Pacific, eleventh session

Geneva, 12 January -
Geneva, 19 January -
Geneva, 3 May -
Geneva, 23 May 1
Accra, August or September
Havana, August or September
New Delhi, August or September
Copenhagen, August or September
Tunis, August or September
Geneva, August or September
Manila, August or September

Annex 6

NON-GOVERNMENTAL ORGANIZATIONS IN OFFICIAL RELATIONSHIP WITH WHO (at 31 December 1959)

<table>
<thead>
<tr>
<th>Biometric Society</th>
<th>International Leprosy Association</th>
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<tbody>
<tr>
<td>Central Council for Health Education</td>
<td>International Organization against Trachoma</td>
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<tr>
<td>Council for International Organizations of Medical Sciences</td>
<td>International Paediatric Association</td>
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<tr>
<td>Fédération internationale de Médecine sportive</td>
<td>International Pharmaceutical Federation</td>
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<tr>
<td>Inter-American Association of Sanitary Engineering</td>
<td>International Society for Blood Transfusion</td>
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<tr>
<td>International Academy of Legal Medicine and of Social Medicine</td>
<td>International Society for Criminology</td>
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<tr>
<td>International Association of Microbiological Societies</td>
<td>International Society for the Welfare of Cripples</td>
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<tr>
<td>International Association for Prevention of Blindness</td>
<td>International Union of Architects</td>
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<tr>
<td>International Commission on Radiological Protection</td>
<td>International Union against Cancer</td>
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<tr>
<td>International Commission on Radiological Units and Measurements</td>
<td>International Union for Child Welfare</td>
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<tr>
<td>International Committee of Catholic Nurses</td>
<td>International Union for Health Education of the Public</td>
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<tr>
<td>International Committee of the Red Cross</td>
<td>International Union of Local Authorities</td>
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<tr>
<td>International Confederation of Midwives</td>
<td>International Union against Tuberculosis</td>
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<tr>
<td>International Conference of Social Work</td>
<td>International Union against the Venereal Diseases and the Treponematoses</td>
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<tr>
<td>International Council of Nurses</td>
<td>League of Red Cross Societies</td>
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<tr>
<td>International Dental Federation</td>
<td>Medical Women’s International Association</td>
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<tr>
<td>International Diabetes Federation</td>
<td>World Confederation for Physical Therapy</td>
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<tr>
<td>International Federation of Gynecology and Obstetrics</td>
<td>World Federation of the Deaf</td>
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<tr>
<td>International Federation of Housing and Town Planning</td>
<td>World Federation for Mental Health</td>
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<tr>
<td>International Fertility Association</td>
<td>World Federation of Occupational Therapists</td>
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<tr>
<td>International Hospital Federation</td>
<td>World Federation of Societies of Anaesthesiologists</td>
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<tr>
<td>International Hydatidological Association</td>
<td>World Federation of United Nations Associations</td>
</tr>
<tr>
<td>International League of Dermatological Societies</td>
<td>World Medical Association</td>
</tr>
<tr>
<td>International League against Rheumatism</td>
<td>World Union OSE</td>
</tr>
<tr>
<td></td>
<td>World Veterans Federation</td>
</tr>
<tr>
<td></td>
<td>World Veterinary Association</td>
</tr>
</tbody>
</table>

1 If the Thirteenth World Health Assembly decides that the Fourteenth World Health Assembly be held in Switzerland, the twenty-sixth session of the Executive Board will begin on 28 May; however, if the invitation to hold the Fourteenth World Health Assembly in New Delhi is accepted, the Board’s twenty-sixth session will begin on 25 October 1960.
### Annex 7

**REGULAR BUDGET FOR 1959**

<table>
<thead>
<tr>
<th>Appropriation section</th>
<th>Purpose of appropriation</th>
<th>Original amount voted (^a) US $</th>
<th>Transfers concurred in by the Executive Board (^b) US $</th>
<th>Advances from the Working Capital Fund (^c) US $</th>
<th>Supplementary estimates (^d) US $</th>
<th>Revised appropriation US $</th>
</tr>
</thead>
<tbody>
<tr>
<td>PART I: ORGANIZATIONAL MEETINGS</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>1. World Health Assembly</td>
<td></td>
<td>213 320</td>
<td>20 110</td>
<td></td>
<td></td>
<td>233 430</td>
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<tr>
<td>2. Executive Board and its Committees</td>
<td></td>
<td>116 900</td>
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<td></td>
<td>132 670</td>
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<td>3. Regional Committees</td>
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<td>65 250</td>
<td>8 000</td>
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<td></td>
<td>73 250</td>
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<td><strong>Total — Part I</strong></td>
<td></td>
<td>395 470</td>
<td>43 880</td>
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<td>439 350</td>
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<td>PART II: OPERATING PROGRAMME</td>
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<td>4. Central Technical Services</td>
<td></td>
<td>1 914 890</td>
<td>(160 840)</td>
<td>21 200</td>
<td></td>
<td>1 775 250</td>
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<tr>
<td>5. Advisory Services</td>
<td></td>
<td>8 651 391</td>
<td>(7 265)</td>
<td>65 365</td>
<td></td>
<td>8 709 491</td>
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<td>6. Regional Offices</td>
<td></td>
<td>1 849 260</td>
<td>66 807</td>
<td>47 330</td>
<td></td>
<td>1 963 397</td>
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<td>7. Expert Committees</td>
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<td>181 100</td>
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<td></td>
<td></td>
<td>181 100</td>
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<tr>
<td><strong>Total — Part II</strong></td>
<td></td>
<td>12 596 641</td>
<td>(101 298)</td>
<td>133 895</td>
<td></td>
<td>12 629 238</td>
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<td>PART III: ADMINISTRATIVE SERVICES</td>
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<td></td>
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<td>8. Administrative Services</td>
<td></td>
<td>1 195 489</td>
<td>57 418</td>
<td>21 245</td>
<td></td>
<td>1 274 152</td>
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<td><strong>Total — Part III</strong></td>
<td></td>
<td>1 195 489</td>
<td>57 418</td>
<td>21 245</td>
<td></td>
<td>1 274 152</td>
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<td>PART IV: OTHER PURPOSES</td>
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<td>9. Reimbursement of Working Capital Fund</td>
<td></td>
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<td></td>
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<tr>
<td>10. Headquarters Building Fund</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td><strong>Total — Part IV</strong></td>
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<td>100 000</td>
<td></td>
<td></td>
<td></td>
<td>500 000</td>
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<tr>
<td><strong>Sub-total — Parts I, II, III and IV</strong></td>
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<td>14 287 600</td>
<td></td>
<td>155 140</td>
<td></td>
<td>14 942 740</td>
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<td><strong>Add:</strong> Reimbursement of Executive Board Special Fund</td>
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<td></td>
<td></td>
<td>7 226 (^e)</td>
<td></td>
<td>7 226</td>
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<td><strong>Total</strong></td>
<td></td>
<td>14 287 600</td>
<td></td>
<td>155 140</td>
<td></td>
<td>14 949 966</td>
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<tr>
<td>PART V: RESERVE</td>
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<td>11. Undistributed reserve</td>
<td></td>
<td>1 078 060</td>
<td></td>
<td></td>
<td></td>
<td>1 078 060</td>
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<tr>
<td><strong>Total — Part V</strong></td>
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<td>1 078 060</td>
<td></td>
<td></td>
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<td>1 078 060</td>
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<tr>
<td><strong>TOTAL — ALL PARTS</strong></td>
<td></td>
<td>15 365 660</td>
<td></td>
<td>155 140 (^f)</td>
<td></td>
<td>16 028 026</td>
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\(^a\) Resolution WHA11.47  
\(^b\) Resolution EB23.R1  
\(^c\) Under the authority vested in the Director-General by resolution WHA11.12, paragraph 2 (2)  
\(^d\) Resolution WHA12.44  
\(^e\) Appropriated directly from additional casual income (resolution WHA12.44)  
\(^f\) These advances from the Working Capital Fund were reimbursed through supplementary estimates, the amount of $155 140 having been appropriated directly from additional casual income (resolution WHA12.44).
Annex 8

STRUCTURE OF THE HEADQUARTERS SECRETARIAT

THE DIRECTOR-GENERAL — Offices of the Director-General

ASSISTANT DIRECTOR-GENERAL
(Dr P. M. Kaul)

Programme Co-ordination
Programme Evaluation

Malaria Eradication

Communicable Diseases

Organization of Public Health Services

Environmental Sanitation

Education and Training

Health Statistics

Biology and Pharmacology

Editorial and Reference Services

Administrative Management and Personnel

Budget and Finance

- Division of Public Information
- External Relations
- Liaison with the United Nations
- Research Planning and Co-ordination
- Radiation and Isotopes

- Planning
- Programme
- Tuberculosis
- Venereal Diseases and Treponematoses
- Endemo-epidemic Diseases
- Veterinary Public Health
- Leprosy
- International Quarantine

- Public Health Administration
- Nursing
- Social and Occupational Health
- Health Education of the Public
- Maternal and Child Health
- Mental Health
- Nutrition
- Cancer
- Cardiovascular Diseases
- Health Laboratory Services

- Urban Sanitation
- Rural Sanitation
- Vector Control and Pesticides
- Environmental Biology

- Fellowships
- Education in Medicine and Allied Subjects
- Public Health Education and Training

- Consolidation of Health Statistics
- Health Statistical Methodology
- International Classification of Diseases and Development of Health Statistical Services

- Biological Standardization
- Pharmaceuticals
- Addiction-producing Drugs

- Technical Publications
- Health Legislation
- Official Records
- Translation
- Library and Reference Services

- Administrative Management
- Personnel
- Conference and Office Services
- Supply Services
- Joint Medical Service

- Budget
- Finance and Accounts

1 At 31 December 1959
## Annex 9

### NUMBERS AND DISTRIBUTION OF THE STAFF

**1958-1959**

<table>
<thead>
<tr>
<th>Distribution</th>
<th><strong>Staff as at 30 November 1958</strong></th>
<th><strong>Staff as at 30 November 1959</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>Technical Assistance</strong></td>
</tr>
<tr>
<td><strong>Headquarters</strong></td>
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<td></td>
</tr>
<tr>
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<td>Locally recruited</td>
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<td><strong>Total</strong></td>
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<td><strong>Regional Offices</strong></td>
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<td><strong>Africa</strong></td>
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<td></td>
</tr>
<tr>
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<td>Locally recruited</td>
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<td>Locally recruited</td>
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<td><strong>Total</strong></td>
<td>59</td>
<td>11</td>
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<td><strong>South-East Asia</strong></td>
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<td>Locally recruited</td>
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<td>36</td>
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<td>Locally recruited</td>
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<td><strong>Total</strong></td>
<td>88</td>
<td>9</td>
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<td><strong>Eastern Mediterranean</strong></td>
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<td>Internationally recruited</td>
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<td>Locally recruited</td>
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<td><strong>Total</strong></td>
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<td><strong>Total</strong></td>
<td>79</td>
<td>13</td>
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<td><strong>Area and Zone Offices</strong></td>
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<tr>
<td>Internationally recruited</td>
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<td></td>
</tr>
<tr>
<td>Locally recruited</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>37</td>
<td>--</td>
</tr>
</tbody>
</table>

---

1 Excluding consultants

2 Including Liaison Office with the United Nations, New York, and Tuberculosis Research Office
## Field Staff in Countries

<table>
<thead>
<tr>
<th></th>
<th>Staff as at 30 November 1958</th>
<th>Staff as at 30 November 1959</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Technical Assistance</td>
</tr>
<tr>
<td>Internationally recruited</td>
<td>553</td>
<td>339</td>
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<tr>
<td>Locally recruited</td>
<td>10</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>563</td>
<td>399</td>
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</table>

### Other Offices

<table>
<thead>
<tr>
<th></th>
<th>Staff as at 30 November 1958</th>
<th>Staff as at 30 November 1959</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Technical Assistance</td>
</tr>
<tr>
<td>UNICEF Liaison</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Internationally recruited</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Locally recruited</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Tuberculosis Immunization</td>
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<td>3</td>
</tr>
<tr>
<td>Research Centre, Copenhagen</td>
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<td>1</td>
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<tr>
<td>UNRWA</td>
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<td>3</td>
</tr>
<tr>
<td>International Children's Centre, Paris</td>
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<td>1</td>
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<tr>
<td></td>
<td>1697</td>
<td>463</td>
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### Staff on loan, on pay-roll of the Pan American Health Organization, or without pay

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<th>Staff as at 30 November 1958</th>
<th>Staff as at 30 November 1959</th>
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</thead>
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<td>Total</td>
<td>Technical Assistance</td>
</tr>
<tr>
<td>27</td>
<td>27</td>
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### Short-term consultants

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### Grand Total

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</thead>
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### Annex 10

**Composition of the Staff by Nationality**

As at 30 November 1959

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<tr>
<th>Country</th>
<th>Grades</th>
<th>Source of funds</th>
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<td>P5 and above</td>
<td>P1 to P4</td>
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<td>10</td>
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<td>Australia</td>
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<td>Austria</td>
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<td>3</td>
</tr>
<tr>
<td>Belgium</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Bolivia</td>
<td>—</td>
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</tr>
<tr>
<td>Brazil</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>1</td>
<td>—</td>
</tr>
<tr>
<td>Burma</td>
<td>—</td>
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</tr>
<tr>
<td>Canada</td>
<td>5</td>
<td>44</td>
</tr>
<tr>
<td>Ceylon</td>
<td>—</td>
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<td>Chile</td>
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## ANNEX 10

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<th>Country</th>
<th>P5 and above</th>
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<th>TOTAL</th>
<th>Technical Assistance</th>
<th>Malaria Eradication Special Account</th>
<th>Regular budget</th>
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* Associate Member

The above table does not include the following:

- Language staff: 74
- Short-term consultants: 79
- Staff on loan, without pay, or on pay-roll of the Pan American Health Organization: 35
- Staff locally recruited: 746

Total 934
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FELLOWSHIPS AWARDED IN 1959, BY SUBJECT OF STUDY

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Percentage 60
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#### Communicable Disease Services

6. **Communicable Disease and Laboratory**

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**Total — Communicable Disease Services**

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#### Medical Education, Clinical and Basic Medical Sciences

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**Sub-total — Clinical Medicine**

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8. **Basic Medical Sciences and Education**

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**Sub-total — Basic Medical Sciences and Education**

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**Total — Medical Education, Clinical and Basic Medical Sciences**

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**Percentage**

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**GRAND TOTAL**

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THE WORK OF WHO, 1959

ANNUAL REPORT OF THE DIRECTOR-GENERAL

TO THE

WORLD HEALTH ASSEMBLY AND TO THE UNITED NATIONS

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WORLD HEALTH ORGANIZATION
PALAIS DES NATIONS
GENEVA

April 1960
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