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TO THE
WORLD HEALTH ASSEMBLY
AND TO THE
UNITED NATIONS
Covering the Period 1 October 1960 - 31 December 1961

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WORLD HEALTH ORGANIZATION
GENEVA
March 1962
The following abbreviations are used in the *Official Records of the World Health Organization*:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ACABQ</td>
<td>Advisory Committee on Administrative and Budgetary Questions</td>
</tr>
<tr>
<td>ACC</td>
<td>Administrative Committee on Co-ordination</td>
</tr>
<tr>
<td>BTAO</td>
<td>Bureau of Technical Assistance Operations</td>
</tr>
<tr>
<td>CCTA</td>
<td>Commission for Technical Co-operation in Africa South of the Sahara</td>
</tr>
<tr>
<td>CIOMS</td>
<td>Council for International Organizations of Medical Sciences</td>
</tr>
<tr>
<td>ECA</td>
<td>Economic Commission for Africa</td>
</tr>
<tr>
<td>ECAFE</td>
<td>Economic Commission for Asia and the Far East</td>
</tr>
<tr>
<td>ECE</td>
<td>Economic Commission for Europe</td>
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<tr>
<td>ECLA</td>
<td>Economic Commission for Latin America</td>
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<tr>
<td>FAO</td>
<td>Food and Agriculture Organization</td>
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<td>IAEA</td>
<td>International Atomic Energy Agency</td>
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<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
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<tr>
<td>ILO</td>
<td>International Labour Organisation (Office)</td>
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<tr>
<td>IMCO</td>
<td>Inter-Governmental Maritime Consultative Organization</td>
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<tr>
<td>ITU</td>
<td>International Telecommunication Union</td>
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<tr>
<td>MESA</td>
<td>Malaria Eradication Special Account</td>
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<tr>
<td>OIHP</td>
<td>Office International d’Hygiène Publique</td>
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<tr>
<td>PAHO</td>
<td>Pan American Health Organization</td>
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<td>PASB</td>
<td>Pan American Sanitary Bureau</td>
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<td>SMF</td>
<td>Special Malaria Fund of PAHO</td>
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<td>TAB</td>
<td>Technical Assistance Board</td>
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<td>TAC</td>
<td>Technical Assistance Committee</td>
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<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
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<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
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<td>UNRWA</td>
<td>United Nations Relief and Works Agency for Palestine Refugees</td>
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<td>UNSCEAR</td>
<td>United Nations Scientific Committee on the Effects of Atomic Radiation</td>
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<tr>
<td>WFUNA</td>
<td>World Federation of United Nations Associations</td>
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<tr>
<td>WMO</td>
<td>World Meteorological Organization</td>
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The designations employed and the presentation of the material in this report do not imply the expression of any opinion on the part of the Director-General concerning the legal status of any country or territory or of its authorities, or concerning the delimitation of its frontiers.
## CONTENTS

<table>
<thead>
<tr>
<th>Introduction</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>v</td>
</tr>
</tbody>
</table>

### PART I — GENERAL REVIEW

<table>
<thead>
<tr>
<th>Chapter 1. Malaria Eradication</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter 2. Communicable Diseases</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuberculosis — Venereal Diseases and Treponematoses — Veterinary Public Health — Virus Diseases — Parasitic Diseases — Bacterial Diseases — Leprosy</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter 3. Environmental Health</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Water Supply — Air Pollution Control — Community Sanitation — Vector Control, Environmental Biology and Insecticide Resistance</td>
<td>20</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter 4. Public Health Services</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Health Administration and Organization of Medical Care — Health Education — Health Laboratory Services — Maternal and Child Health — Nursing</td>
<td>25</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter 5. Health Protection and Promotion</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer — Cardiovascular Diseases — Dental Health — Mental Health — Nutrition — Social and Occupational Health — Radiation Health, Radiation Medicine and Human Genetics</td>
<td>31</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter 6. Education and Training</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>40</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter 7. Medical Research</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>44</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter 8. Health Statistics</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>46</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter 9. Biology and Pharmacology</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addiction-producing Drugs — Biological Standardization — Pharmaceuticals</td>
<td>48</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter 10. Publications and Reference Services</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter 11. Public Information</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>52</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter 12. Constitutional, Financial and Administrative Developments</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constitutional and Legal — The Financial Position — Administration</td>
<td>54</td>
</tr>
</tbody>
</table>

### PART II — THE REGIONS

<table>
<thead>
<tr>
<th>Chapter 13. African Region</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>61</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter 14. Region of the Americas</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>69</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter 15. South-East Asia Region</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>77</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter 16. European Region</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>83</td>
</tr>
</tbody>
</table>
Chapter 17. Eastern Mediterranean Region ........................................... 88
Chapter 18. Western Pacific Region ................................................... 94

PART III — CO-OPERATION WITH OTHER ORGANIZATIONS

Chapter 19. Co-ordination of Work with other Organizations ................. 103
Chapter 20. Expanded Programme of Technical Assistance for Economic Development .................................................. 106

PART IV — PROJECT LIST

Projects in Operation in 1961 .............................................................. 110
Africa .................................................................................................. 111
The Americas ..................................................................................... 118
South-East Asia .................................................................................. 126
Europe ............................................................................................... 137
Eastern Mediterranean ........................................................................ 148
Western Pacific ................................................................................... 160
Inter-regional ....................................................................................... 167

ANNEXES

1. Members and Associate Members of the World Health Organization .... 173
2. Membership of the Executive Board ................................................. 174
3. Expert Advisory Panels and Committees ........................................... 176
4. Organizational Meetings and Meetings of Expert Committees and Advisory Groups (1 October 1960 - 31 December 1961) ............. 184
5. Tentative Schedule of WHO Organizational Meetings in 1962 ............. 187
6. Non-governmental Organizations in Official Relationship with WHO ... 187
7. Regular Budget for 1961 ................................................................. 188
8. Structure of the Headquarters Secretariat at 31 December 1961 .......... 189
9. Numbers and Distribution of the Staff ............................................. 190
10. Composition of the Staff by Nationality ............................................ 192
11. Fellowships awarded, by Subject of Study and by Region (1 September 1960 - 30 November 1961) .............................................. 193

MAP

1. WHO Regional Offices and the Areas they serve ............................... 60

— IV —
INTRODUCTION

To the great majority of countries in all regions, 1961 meant further progress against the main communicable diseases which still constitute the greatest obstacle to better health for their citizens. In many countries, although unfortunately not in all, the advances made are part of a more general endeavour to strengthen the basic health services and can therefore be considered as definite contributions to the long-range task of raising health standards. Whether and to what extent this goal will be attained depends on the results achieved in the next few years in the three fundamental branches of public health: medical education and training, nutrition and environmental health. Finally, as is evident in all parts of the present report, the intensification of medical research holds out the best hope for the future of the world's health.

As in previous years, the review of work on communicable diseases must begin with a brief account of the progress made in 1961 in the world-wide malaria eradication campaign which for several years is to remain the principal target of WHO's activities. Looking at the programme from a global point of view, it is gratifying to note that during the year seven more countries, with populations amounting to about 150 million, have initiated malaria eradication programmes. Within the regions affected, there is no doubt that the machinery of co-ordination has greatly facilitated the effective organization of eradication efforts. For example, the Antimalaria Co-ordination Board for South-East Africa, which met in Southern Rhodesia, and the Antimalaria Co-ordination Meeting for West Africa, in Togo, proved extremely useful for the planning of the work for both those areas of Africa. In the Eastern Mediterranean co-ordination was carried out through border meetings between the countries concerned.

The countries still lacking adequate health services—and many of the newly independent nations are in this situation—need assistance in gradually building up the necessary operational services and facilities for eradication campaigns. For these countries WHO's main objective has been to help in organizing pre-eradication programmes. For another group of countries in which eradication has made great progress, the problem is how best to organize surveillance operations. Here WHO's main effort has been to perfect the methods to be followed in the final phases of the campaign.

Research into many aspects of malariology has been encouraged and supported by the Organization. For example, to combat the steadily growing resistance of vector species, investigations have been pursued into the use of newer types of insecticides, mainly of the organophosphorus group, which may have to replace the chlorinated hydrocarbons in areas where the vector has become resistant to all the latter. They, however, are still the main weapons in eradication and therefore ways of employing them more economically are being studied. In chemotherapy, field trials were conducted in order to find the most efficient and practical methods of administering medicated salt.

With the many developments taking place, both governments and the Organization have found it increasingly difficult to recruit specialists in malaria. It is therefore natural that considerable emphasis has been laid during the year on the intensification of training programmes.

Because of the increased participation of many countries, progress was made in the world-wide effort sponsored by WHO to eliminate smallpox as a public health hazard. With continued and intensified effort in the years to come we can hope that the dangerous endemic foci of the disease in certain parts of Asia, Africa and Latin America will eventually disappear.

Though mass campaigns against yaws, endemic syphilis, leprosy and trachoma were extended during the year, there were some setbacks in other fields. Indeed, outbreaks of cholera and paracholera,
yellow fever and trypanosomiasis occurred again in countries where they had not apparently been present for some time. There were also unfortunately indications of a serious recrudescence in certain areas in the incidence of syphilis and gonorrhoea. These developments re-emphasize the fact that, if communicable diseases are to be successfully controlled, we must not relax our efforts, particularly in strengthening epidemiological services and training the personnel necessary for their continuing day-to-day control.

In tuberculosis the purpose of a number of pilot area projects, initiated and partly carried out during the year, was to help to formulate the epidemiological and socio-economic objectives of national tuberculosis programmes and define the field operations for achieving them. The final object is to determine the best method by which control measures could be integrated into one single programme within the framework of the general public health services of an individual country.

On a regional level, mention should be made in particular of the important antituberculosis work which was carried out in Africa and in South-East Asia.

In virology there is an urgent need for a regular supply of human and animal tissues free from latent viruses for use as tissue culture cells, and for the provision of standardized reagents so that viruses when isolated can be uniformly identified and classified. During 1961 we have paid particular attention to the solution of these problems.

Despite the use of both inactivated and live vaccines, the incidence of poliomyelitis is still increasing in some countries where for one reason or another effective vaccination campaigns have not yet been initiated. In countries where good vaccination schemes are operating the incidence has dropped dramatically, but even in those countries close surveillance is still necessary to deal with pockets of infection and to determine clearly the relative long-term effects of the different types of vaccine.

There are now about ninety-six viruses that have been shown to cause respiratory illnesses, many of which are severe in young children. The system of reference laboratories for respiratory viruses is now working effectively but needs to be expanded and modified in the light of this new development.

The problem of controlling bilharziasis is growing in importance in areas where irrigation and agriculture are being developed to provide more food and better nutrition for ever-increasing populations. Comprehensive bilharziasis surveys have been carried out in many tropical countries and efforts are under way to test and develop new methods for controlling the disease. Thus during 1961 a survey team visited nine countries in the African Region, while a WHO-assisted control programme was continued in Ghana. The aim of the bilharziasis control projects in Iran and Iraq is to study the transmission of the disease and to test various molluscicides and drugs. The results of the pilot project which began in the United Arab Republic with assistance from UNICEF may shed further light on the disease.

The work of an advisory team in several countries of the Eastern Mediterranean Region resulted in progress being made in the control of diarrhoeal diseases, which are among the main causes of infant mortality in many parts of the world. The study undertaken was particularly related to the role of environmental factors and to the measures to be taken to prevent these diseases.

There was also a significant advance during the year in the control of leprosy. The inter-regional conference convened in Istanbul in October 1961, with participants from the European and Eastern Mediterranean Regions, established essential criteria for uniform definition of arrested cases and drew up treatment and chemoprophylaxis schedules. Furthermore, WHO has given assistance to fourteen countries in Africa to help prevent the spread of the disease and to cure it wherever possible. In nearly all countries of the South-East Asia Region leprosy control programmes are now under way. The main features of these programmes are extensive case-finding surveys and treatment provided by domiciliary and out-patient services.

While progress in the control of trachoma has been slow until now in South-East Asia, some important preliminary work has been done and it is expected that advances will be speeded up in the near future. The mass trachoma programmes carried out in Algeria, Morocco, Spain and Turkey have provided experience which may be of use to other regions.
Several co-ordinated research activities were carried out during the year in veterinary public health and their results published in reports on rabies, brucellosis and leptospirosis. The studies initiated during the year in comparative medicine and in particular on leukaemias in animals and atherosclerosis in swine will, it is hoped, lead to increased knowledge of similar disease processes in man.

* 

Important developments occurred in 1961 in the efforts being undertaken by WHO to protect and promote the health of populations, especially in the industrialized and urbanized areas of the world.

The work at the three reference centres dealing with soft tissue tumours, mammary and lung tumours is continuing to advance the cancer research programme by the standardization of nomenclature of tumours.

Regarding epidemiological research, the pilot study on the effects of air pollution, occupation and smoking habits in lung cancer has progressed well in Dublin and Belfast and is expected to extend to certain cities in the United States and in Europe. The investigation undertaken on the differences in lung cancer occurring in Finland and in Norway is now well under way.

A major problem in international work on cardiovascular diseases has been to establish comparable terminology, criteria and methodology for epidemiological studies of ischaemic heart disease, arterial hypertension and cor pulmonale. An expert committee recommended a practical classification of hypertension and ischaemic heart disease in 1961, and a scientific group indicated where existing knowledge provided a basis for comparable methodology and how this might be further extended. An interesting experiment which might be of use to other areas took place in Europe. A study of differences in practice of coding causes of death in a number of countries has been made. Cardiovascular diseases, diabetes and chronic bronchitis were the main diseases studied and it was found that a proportion of the difference in published mortality rates was due to different coding practices. This is being followed up by further studies and other regions are showing an interest.

In line with the general policy followed in recent years, WHO in co-operation with FAO and UNICEF pursued the task of assisting countries to cope with the serious problem of protein malnutrition, chiefly through the increased use of legumes and fish products in weaning and post-weaning diets. Much attention was also given in 1961 to improving methods of assessing the nutritional value of various dietary proteins. A nutritional problem that many areas are facing is anaemia, particularly iron deficiency anaemia. A co-ordinated research programme on the etiology of this condition was initiated during the year in which research institutes in India, South Africa, Venezuela and the United States of America are co-operating.

Another area of co-operation with FAO covered the pressing problems raised by food additives. Special attention was paid to possible carcinogenic hazards, to the toxicological evaluation of antioxidants and antimicrobials, and to the newer problem of pesticides in food. WHO joined the International Atomic Energy Agency and FAO in a technical meeting on the evaluation of wholesomeness of irradiated foods.

The importance of malnutrition as a public health problem in South-East Asia is reflected in the topic selected for the technical discussions of the Regional Committee in 1961: "The Role of Public Health Departments in the Improvement of Nutrition". An inter-African conference jointly sponsored by CCTA, FAO and WHO underlined the need to avoid malnutrition and in particular protein deficiencies responsible for so many serious disorders affecting children at all ages, but especially in the weaning period.

* 

In the all-important branch of public health, environmental sanitation, WHO put a number of teams of consultants at the service of countries anxious to learn about organizational, engineering,
financial and managerial aspects of the community water supply programme. Developments in the Americas were extremely encouraging. Indeed the newly created Inter-American Development Bank has closely co-ordinated its loans with the work of the Pan American Health Organization. To date credits of more than $33 million have been advanced for water and sewage facilities in Brazil, Colombia, El Salvador, Guatemala, Peru and Uruguay, and additional credits of about $180 million are either being or are about to be allotted. Funds are also being provided by the International Bank for Reconstruction and Development and the International Development Association and by the Export-Import Bank and the Development Loan Fund of the United States of America.

In response to public demand and as a result of the rapid growth of air and water pollution there has been an increase in the services offered to countries determined to improve or protect atmospheric conditions, ensure a safe water supply and conserve their water resources. Close co-operation has been maintained with other agencies concerned, especially with the International Atomic Energy Agency, in connexion with the problem of disposal of radiation waste.

A number of programmes were continued and intensified in order to keep ahead in the race between the control or eradication of disease and the development of resistance in disease vectors to pesticides. Some of these programmes, such as the search for new and effective pesticides, the amelioration of the methods for their application, the investigation into their toxicological properties and the co-ordination of world-wide research work on the extent and mechanism of resistance, constitute undoubtedly one of the most dramatic aspects of WHO's activity.

* *

While perhaps less dramatic, the Organization's continuing concern for the orderly development of education and training is no less essential to the success of the major activities it is undertaking. A recurring theme in practically all chapters of this report is the lack of adequately trained health personnel, which handicaps the world-wide effort to curb disease and promote health.

The emphasis on education and training in developing countries is most prominent among the activities of the African Region. Out of 127 projects for Africa, thirty-four consisted solely of fellowships, seven were devoted to educational meetings, seven were specifically in aid of education and training institutions and twenty-five other projects also provided for the training of the relevant local personnel. Thus training activities have formed a preponderant element in numerous WHO-assisted projects.

Furthermore, the fact-finding surveys on personnel training already carried out in twelve of the countries in Africa will, no doubt, result in the multiplication of plans for the establishment and expansion of education and training institutions. This development of training facilities in the countries themselves will, of necessity, have to be combined with a large fellowships programme for studies abroad. Fellowships will be necessary not only for advanced training and the preparation of teaching staff but also for the basic training of certain categories of personnel for whom the establishment of training institutions in the countries themselves is not at present possible or is unjustifiably expensive.

The Republic of the Congo (Leopoldville) is in a special situation and it is most gratifying that despite great handicaps much is now being achieved in the field of medical education. The number of students in the special upgrading programmes for assistants médicaux in France has practically doubled in the academic year 1961-1962. One hundred and fifteen Congolese who for years have been working as assistants médicaux are now studying to gain full medical qualifications. Most of them are married and have families. It is encouraging to note the remarkably high scholastic results these assistants médicaux have achieved during the first year of their studies.

* *

One of the ultimate goals most countries are striving for is the establishment of permanent well-organized and efficient public health services for their people. The majority of the programmes
WHO is carrying out or supporting directly or indirectly serve that end. However, the process might be speeded up considerably by carefully planned research in public health practice and in the development of efficient administration and organization of health services.

Conscious of this need, WHO convened two scientific groups on these questions and their recommendations were presented to the Advisory Committee on Medical Research at its third session in June 1961. The Advisory Committee recognized the value of research in the field of public health practice and there was general agreement concerning the need to enlist the social sciences in studies of the health of communities with special problems, and in developing health programmes that are both scientifically sound and well accepted. It was also felt that questions relating to the logistics of the delivery of health services warranted serious study and that the information required might often be obtained by staff study groups within the operating agency and through appropriate studies in various countries. It was stressed that no programme of medical investigation sponsored by WHO can be considered complete in the absence of information which ensures the application of knowledge derived from the basic studies.

The advice given by these bodies made it possible for the Organization later in the year to consider a programme of research in public health practice.

* 

All countries should benefit from the developments which took place in 1961 in the field of health statistics. There has been a large extension of the information published in Annual Epidemiological and Vital Statistics. As a result, these reports now provide data not only on trends of mortality and morbidity but also on medical services and health personnel. In addition, the number of countries for which data are given in the reports has been increasing rapidly. All this is part of WHO's continuing effort to obtain more useful and more accurate health statistics.

Steps were taken in preparation for the revision in 1965 of the International Statistical Classification of Diseases, Injuries and Causes of Death. The Sub-Committee on Classification of Diseases of the Expert Committee on Health Statistics met in November 1961 and made recommendations about the direction of the preparatory work to be undertaken during the next four years. A similar meeting to consider regional aspects of the revision has also taken place under the auspices of the Regional Office for the Americas.

* 

Further advances were made in the somewhat complex and difficult task of helping countries evaluate their national health progress. Following the preliminary work performed with WHO guidance in Iran in 1959 and in Paraguay in 1960, the Organization in 1961 helped launch a complete evaluation programme of health services and of the health advances made over the last ten years in countries of Central America and Panama. This programme, which is the most comprehensive of its kind in our history, should be extremely valuable both to the national health authorities and to WHO, since such a study of the various components of the health services, including those related to social and economic conditions, enables their rate of growth and needs to be more precisely established; above all, the direct evaluation provides invaluable base-line data against which future progress can be measured. The experiment may be particularly attractive to the newly independent countries, where rapid but nevertheless orderly advance is of cardinal importance.

Evaluation has now also become a standard part of the reporting system on all WHO projects. It is hoped that this will make it possible in the future to measure more accurately what progress has been made towards the attainment of their objectives. The overall system of evaluation has proved of considerable value not only on the operational level where immediate results are being assessed objectively, and in the regional offices where further analytical appraisal of each project is under-
taken, but also at headquarters, where these reports provide a uniform basis for comparison and a valuable aid to future planning.

*  

A report on the Organization's intensified medical research programme from its inception in 1958 until the present time was made at the request of the Advisory Committee on Medical Research and reviewed by it at its third session in June 1961. This document, which summarizes the work of 175 research projects, provides ample evidence of the wisdom of the Eleventh World Health Assembly when it decided that WHO could profitably intensify its role in research, and shows that the expanded programme is soundly based. We can move forward with confidence in the value of what is proving to be one of WHO's most important and fruitful activities.

This is to a large extent due to the judicious choice of subjects for the research programme. A first consideration has been to select problems for the solution of which international co-operation is essential, and also those where local action, if unaided, appears unable to arrive at the results which must be reached. While research projects are mostly related to the operational programmes of the Organization, it is also thought important to assist the development of medical research generally, especially in countries where this is a comparatively new activity. This implies the training of research workers abroad and the exchange of ideas and experience between countries. Fourteen such workers have received grants enabling them to work with experienced investigators in countries other than their own.

In many research fields international action is proving particularly valuable by the standardization of materials, techniques or definitions in order that the observations of one worker or one group of workers may be better understood and more readily compared by their colleagues elsewhere. Here the setting up of reference centres has been appreciated by workers in an increasing number of areas of research.

In all these activities, WHO acts through existing national organizations, and seeks to encourage their development. At the same time WHO cannot avoid supporting basic research, since need for this will arise from problems encountered in field work.

Tribute must be paid to the invaluable help and guidance given the Organization by the members of the scientific groups on research, of which up till now thirty-eight have met, and by the members of the Advisory Committee on Medical Research. They ensure that the research programme is practical in that it meets the needs of the Organization's programme, and is yet far-seeing and imaginative.

*  

The Fourteenth World Health Assembly was held in New Delhi on the invitation of the Government of India. All participants were highly appreciative of the arrangements made and the generous welcome given by their Indian hosts. Among the more important actions taken by that Assembly may be mentioned its decisions concerning the malaria eradication programme, including the resolution providing that the costs of this programme should be incorporated in the regular budget by stages over a three-year period, starting in 1962.

A particularly welcome development during the period under review was the addition of fifteen Member States and two Associate Members. At the end of the year the Organization had 108 Members and two Associate Members.

Signed

[Signature]

Director-General

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PART I

GENERAL REVIEW
CHAPTER 1

MALARIA ERADICATION

By the end of 1961 campaigns for the eradication of malaria were in full operation in sixty countries and territories,\(^1\) and preparatory programmes or pilot projects were being carried out in a further twenty-five. A detailed list is given at the end of this chapter. During the year the Organization provided advisory services to sixty-nine countries and territories for the planning or carrying out of eradication programmes or other antimalaria work. As in previous years, a detailed progress report on the programmes will be made to the Health Assembly.

A frequent cause of delay in the starting and carrying through of programmes is the lack of trained staff; hence emphasis has again been placed on training. Because of the increasing difficulty of obtaining additional professional staff possessing enough specialized experience of malaria eradication techniques to enable them to work as advisers to field programmes, special courses have again been provided for certain new field staff before their assignment to WHO advisory teams.

To help meet the shortage of staff for national programmes the Organization awarded 106 fellowships between 1 October 1960 and 30 November 1961 for attendance at the various malaria eradication training centres. A centre for French-speaking trainees was opened at Belgrade and plans were made for two centres to be set up in the African Region, one giving instruction in English, the other in French. In addition, WHO staff gave assistance with special courses organized as part of national malaria programmes.

Under the scheme for the exchange of scientific workers, arrangements were made for nineteen senior officials concerned in national malaria eradication activities to visit other programmes and scientific centres.

A series of manuals is being produced with a view to standardizing training and techniques. During the year three manuals were prepared on medicated salt, the processing and examination of blood slides, and the preparation of malaria eradication.

Most of the countries that have reached the later stages of the attack phase or the consolidation phase of their programmes are sending the Organization, on standard forms, detailed quarterly reports on their surveillance operations. The classification of malaria cases according to the origin of infection is an important part of surveillance operations, because it provides essential evidence on which the progress towards eradication can be judged. This classification was standardized by the Organization to provide a uniform basis of comparison.

Regional evaluation and advisory teams continued to assist countries in assessing the efficiency of their programmes. For instance, in the Americas a team carried out inspections in one country with a view to recommending certification of eradication, and another team made studies in programmes with problems of persistent transmission.

Governments have been informed of the recommendations made by the Expert Committee on Malaria, in its eighth report,\(^2\) on the epidemiological criteria necessary for the confirmation of malaria eradication and on the general procedure for the certification and registration of areas where malaria eradication has been achieved. WHO is maintaining an official register of areas where eradication has been certified.

For countries where the general administration and health services have not reached the level required for the operation of a full malaria eradication programme, pre-eradication programmes have been planned. These are designed to raise the standard of the operational facilities and develop the health services sufficiently to ensure their effective participation in the successive stages of the malaria eradication programme.

A tentative operational method for ascertaining the lowest effective dosage and frequency of application of residual insecticides was evolved during the year and dosage trials were started in selected countries in

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\(^1\) "Malaria eradication means the ending of the transmission of malaria and the elimination of the reservoir of infective cases in a campaign limited in time and carried to such a degree of perfection that, when it comes to an end, there is no resumption of transmission"—definition by the Expert Committee on Malaria (\textit{Wld Hlth Org. techn. Rep. Ser.}, 1957, 123, 4, section 3.1), endorsed by the Twelfth World Health Assembly in resolution WHA12.49 (\textit{Off. Rec. Wld Hlth Org.} 95, 44).

every region. The information provided by these trials may enable considerable economies to be made in the application of insecticides.

Resistance of vector anophelines to insecticides is still a problem, especially in areas of resistance both to DDT and dieldrin, such as El Salvador and Iran. At the time of reporting, sixteen important malaria vectors were resistant to one or the other group of chlorinated hydrocarbon insecticides—most of them to the dieldrin group. Susceptibility tests are being carried out as a routine procedure with the material provided by WHO. The records of these tests are consolidated periodically for general information. Reports have been received that dieldrin-resistant *A. gambiae* have been found in central Africa, and a watch is being kept to ascertain if there is any spread to south and east Africa. A strain of DDT-resistant *A. culicifacies* has been reported from some areas in India.

Trials have been carried out with organophosphorus insecticides both for residual spraying and as a larvicide. At a meeting held in Geneva, directors of collaborating insecticide research laboratories recommended that malathion, although not fully active on all mud surfaces, could be used as a substitute for DDT when DDT had become ineffective. They also agreed that Baytex was biologically an effective replacement for DDT on all substrates and of considerable promise, but that it required further toxicological studies before it could be used in malaria eradication programmes without special precautions. At the end of 1961 full field trials with these insecticides were being planned. During the year the insecticide testing team carried out investigations with DDVP, (O,O-dimethyl-2,2-dichlorovinyl phosphate)—a promising organophosphate compound with a pronounced fumigant activity. Work on the evaluation of new insecticides is also reported on in Chapter 3.

The relationship between many aspects of malaria eradication and the control of other insect-borne diseases is illustrated in papers on insecticides and malaria, published in a special number of the Bulletin.

Chemotherapy is the main antimalaria measure in the consolidation phase and exceptionally may even be the sole means of attack in certain areas. Total coverage of the population at each distribution of the drug in tablet form is essential for the interruption of transmission. This has proved to be impracticable, and trials have been undertaken with medicated salt with a view to finding a more efficient, economical and practical method of mass drug administration. However, practical experience with medicated salt in projects in Brazil, British Guiana, Ghana and Nether-lands New Guinea shows that this method too has disadvantages and presents problems, some of which have not yet been solved.

With the large-scale use of chemotherapy for malaria eradication the problem of drug resistance, although not new, claims greater attention than hitherto, especially in view of recent reports of resistance of *Plasmodium falciparum* to 4-aminoquinolines in Colombia. Generally speaking, it seems that the continued use of drugs with different types of action and at adequate dosages would prevent the development of resistance.

A technical meeting on chemotherapy of malaria was organized by WHO in Geneva late in 1960. It was the first meeting of its kind to be devoted entirely to the role of drugs in the global eradication programme. After reviewing the trends in chemotherapy in malaria eradication and recent research work on antimalarial drugs, the meeting discussed the organization of field investigation and trials of antimalarial drugs, the practical problems of mass drug administration, the recommended dosage and treatment schedules, resistance and the possibilities of prolonging the duration of action of the drugs available. The report on the meeting emphasizes the value of antimalarial drugs in all phases of eradication programmes and recommends that full use should be made of the present possibilities of chemotherapy for speeding up the global malaria eradication programme. Emphasis is laid on the need for an antimalarial drug with a prolonged schizontocidal activity and for an anti-relapse drug that would effect radical cure in a shorter period than those at present available. The group noted that the chief cause of delay in the introduction of new antimalarial drugs, and in the improvement of methods of using existing ones, was the lack of facilities for testing the action of drugs against malaria infections in man under controlled conditions. The group felt that little significant progress in the chemotherapy of malaria could be expected unless the possibilities for drug trials against experimental human malaria were greatly extended.

Continued efforts have been made to promote, assist and co-ordinate research in malaria. Visits by WHO staff to research centres have been intensified and have helped to stimulate research in fields where it is needed. In 1961 the Organization made grants to some twenty centres to assist them in basic and applied research into certain problems in the fields of parasitology, immunology, epidemiology, chemotherapy, entomology and insecticides. In addition, operational

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1 Bull. Wld Hlth Org. 1961, 24, No. 4-5.

MALARIA ERADICATION

and field research, mainly by WHO's field teams, has continued to produce much information on entomological and chemotherapeutic problems.

In accordance with a recommendation of the Expert Committee on Malaria in its eighth report, a drafting committee was appointed to bring up to date the WHO monograph *Malaria Terminology* and to include in it all terms required for malaria eradication programmes. The drafting committee, which held its first meeting during the year, decided to follow the lines of the previous terminology and to prepare the new version in two parts—the first an introduction with chapters on parasitology, epidemiology, chemotherapy, operational terms, insecticides and entomology; the second, an alphabetical glossary of some 500 terms. The new terminology should help to standardize and clarify the terms now in use when it is available for distribution.

**Appendix**

COUNTRIES IN WHICH MALARIA ERADICATION PROGRAMMES WERE IN OPERATION AT THE END OF 1961

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<th>African Region</th>
<th>South-East Asia Region</th>
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Region of the Americas

| Argentina               | Australia                    |
| Bolivia                 | Guatemala                    |
| Brazil                  | Honduras                     |
| British Guiana          | Jamaica                      |
| British Honduras        | Mexico                       |
| Colombia                | Nicaragua                    |
| Costa Rica              | Panama                       |
| Cuba                    | Paraguay                     |
| Dominica                | Peru                         |
| Dominican Republic      | St Lucia                     |
| Ecuador                 | Surinam                      |
| El Salvador             | Trinidad and Tobago          |
| French Guiana           | Venezuela                    |
| Grenada                 |                             |

Eastern Mediterranean Region

| Algeria                | Morocco                      |
| Egypt                  | Tunisia                      |
| Ethiopia               | United Arab Emirates         |

Western Pacific Region

| Afghanistan            | China                        |
|                        | North Borneo                 |
|                        | Philippines                  |
|                        | Ryukyu Islands               |
|                        | Sarawak                      |

| Bechuanaland           | Liberia                      |
| Cameroon               | Madagascar                   |
| Dahomey                | Mozambique                   |
| Federation of          | Nigeria                      |
|                      | Senegal                      |
|                      | Togo                         |
| Ghana                 | Uganda                       |
|                       | Haiti                        |

| Afghanistan            | Bangladesh                   |
|                        | Nepal                        |
|                        | Thailand                     |
|                        | Iran                         |
|                        | Lebanon                      |
|                        | Iraq                         |
|                        | Libya                        |
|                        | Pakistan                     |
|                        | Jordan                       |
|                        | Syria                        |

Eastern Mediterranean Region

| Algeria                | Morocco                      |
| Egypt                  | Tunisia                      |
| Ethiopia               | United Arab Emirates         |

Western Pacific Region

| British Solomon Islands| Netherlands New Guinea      |
| Protectorate          | Republic of Korea           |
| Cambodia              | Republic of Viet-Nam        |
| Federation of Malaya  |                             |

1 These lists are not comparable with those given in the Annual Report for 1960 because at the end of that year the malaria programmes were reviewed and a different classification was adopted.
CHAPTER 2

COMMUNICABLE DISEASES

By preventive and curative methods that are now available, it is possible to reduce many communicable diseases to minor problems of public health but, for their effective control, adequate funds, efficient administration and, above all, long-sustained effort, are required. In many countries, diphtheria and pertussis have not been effectively dealt with and in others difficulties have been encountered in the prevention of enteric diseases and staphylococcus infections. Constant vigilance and better services are needed to prevent renewed outbreaks of many infections. In 1961 cholera spread to Hong Kong, Macao and Sarawak, and outbreaks of paracolera of the El Tor variety were reported from the Philippines and Indonesia. The outbreaks of yellow fever in Ethiopia and Peru, the sporadic appearance of imported smallpox in Belgium, Germany, Ghana, Spain, South Africa, the Union of Soviet Socialist Republics, and the United Kingdom of Great Britain and Northern Ireland, and the increase of infectious hepatitis, syphilis and gonorrhoea in many countries are a reminder that health services for the control and prevention of communicable diseases must be kept strong and active.

Experience shows that new, unknown infections appear from time to time and new methods must be devised to deal with them. Those methods must be based on continuous studies both of basic etiology and its related aspects, and on how the control of such infections can best be approached. For example, it has recently been discovered that 65 per cent. of severe non-bacterial illnesses of the lower respiratory tract in young children in temperate climates is due to viruses that can be identified. Further research on parasitic diseases and tuberculosis is required, to improve the present public health measures for their control. The extended WHO research programme covers all fields of communicable disease. Particular emphasis has, however, been given to certain virus and parasitic diseases. The programme has contributed to the establishment of stable freeze-dried BCG vaccines with high immunogenic potencies, promising brucellosis vaccines, improved rabies vaccine, improved reference antigens and antisera for the treponematoses and for the identification of viruses, and improved live polio vaccine. An international study of measles vaccine is under way and extensive international studies are being made of a trachoma vaccine and of the value of supervised intermittent ambulant chemotherapy in tuberculosis control.

WHO provided assistance for the conference, organized by the Government of the Union of Soviet Socialist Republics in September 1961 in Tashkent, on certain communicable diseases prevalent in hot countries. The conference discussed malaria eradication, the control of arthropod-borne virus diseases, amoebiasis, and helminthic diseases.

During the year, there were several developments in regard to the International Sanitary Regulations.

Additional Regulations, amending the Health Part of the Aircraft General Declaration and Article 97 of the International Sanitary Regulations, came into force on 1 January 1961 and no difficulties in their application have been reported.

The great increase in air travel, with rapid intercontinental flights, makes it more necessary than ever for the Organization to collect and disseminate speedily to all continents epidemiological intelligence on quarantinable diseases. For this purpose full advantage has been taken of advances in short-wave radio. There has also been a decline of quarantinable diseases in many areas of the world which has changed several aspects of international quarantine operations; the recommendations made by the Committee on International Quarantine, and subsequently adopted by the World Health Assembly, have established a considerable body of recommended practices to be followed in implementing the provisions of the Regulations; the number of complaints under the Regulations has diminished and none of these has reached the formal status of a dispute to be referred to the Committee on International Quarantine under Article 112 of the Regulations. For these reasons a greater centralization of the administration of the Regulations has become possible and desirable, and consequently responsibilities formerly delegated to the three WHO quarantine units in Alexandria, Singapore and Washington were transferred to Geneva in the second half of 1961.

The second annotated edition of the International Sanitary Regulations was issued in July. It includes the Regulations adopted by the Fourth World Health
Tuberculosis

The great gains in technical knowledge in recent years have made possible a double attack on the tubercle bacillus; directly, by the use of potent antituberculous drugs, and indirectly, by immunization with BCG vaccine. A number of national pilot area projects have been started in different regions with a view to finding ways in which the advances made in the prevention and treatment of tuberculosis can best be applied in different epidemiological and socioeconomic conditions. The experience so obtained is being used in the development of national programmes aimed at the effective and economical elimination of tuberculosis as a public health problem.

Especially in developing countries, the foremost problem is the need for a large body of workers trained in modern epidemiological methods of tuberculosis control. To increase the as yet limited facilities for such training, WHO supported two international courses, one in Rome (in French) and the other in Prague (in English).

Related to training are opportunities for group exchange of knowledge and experience. One such opportunity was provided by the technical discussions at the Fourteenth World Health Assembly in New Delhi on “Recent Advances in Tuberculosis Control”. Reports on preliminary national discussions on this subject were received from over fifty countries and were summarized for the technical discussions in a special background document. A final report on the technical discussions was published in the WHO Chronicle.1

Further advances in tuberculosis control depend on systematic research and a programme of field and laboratory research on tuberculosis was considered by the Director-General’s Advisory Committee on Medical Research.

A number of papers based on research work undertaken during the year have appeared in the WHO Bulletin, of which three special tuberculosis numbers were published in the period reviewed.2

Chemotherapy

The studies in the Tuberculosis Chemotherapy Centre, Madras, were carried further during the year. Several studies on drugs showed that a change of drug schedule could cope effectively with patients that did not respond to the initial treatment. Other studies examined the possibility of replacing the daily self-administration of drugs by some supervised intermittent chemotherapy and that of combining isoniazid with a companion drug less expensive than para-aminosalicylic acid (PAS). Dietary studies demonstrated that the adequacy of diet had no apparent influence on the effectiveness of chemotherapy, whether at home or in a sanatorium. Contact studies showed that the attack rate in close family contacts did not depend on whether the patient continued to excrete tubercle bacilli during the first year of domiciliary treatment; most of the contact cases arose as a result of exposure to the patient before the diagnosis was made. Studies on contacts are being continued to determine whether isoniazid-resistant bacilli excreted by patients are liable to spread and cause disease in the community. Thirteen papers on studies at the Tuberculosis Chemotherapy Centre were published in the Bulletin.3

BCG Vaccination

The Organization provided assistance with a five-year follow-up study of Danish schoolchildren vaccinated with different freeze-dried and liquid vaccines. One of the most important findings was that the duration of BCG-induced allergy was as good with the freeze-dried vaccines used as with the liquid vaccine.

A large-scale study carried out on guinea-pigs revealed that the immunogenic potency of very small doses of freeze-dried glutamate BCG vaccines was pronounced, and equally high whether the vaccine had been produced from the strain normally used in Japan for mass production of BCG vaccine or from the strain used for the same purpose in Denmark. On the basis of those and previous findings, the regional offices, on the recommendation of head-
quarters, are advising countries to use a heat-stable freeze-dried BCG product in vaccination programmes where the fragile liquid vaccine is likely to suffer an appreciable reduction in viability before use, because of unsatisfactory storage conditions.

**Venereal Diseases and Treponematoses**

A disquieting element in venereal disease control has been the reported increasing incidence of syphilis and gonorrhoea over the last few years. In 1961, in order to evaluate the situation, WHO undertook a survey among Member States. Of the countries that co-operated in the survey, thirty-one reported an increase of early infectious syphilis and thirty an increase of gonococcal infections in the period 1957-60. The increase in syphilis in 1960, as compared with 1959, amounted to 19 per cent. in Canada, 30 per cent. in England and Wales, 45 per cent. in the United States of America and 85 per cent. in Denmark. In other countries a similar, but perhaps less accurate, picture in regard to syphilis was shown. In the Western Pacific Region, four countries reported an increase in early syphilis and eleven an increase in gonorrhoea; in Africa, nine countries reported an increase in syphilis and eight an increase in gonorrhoea. These reports show that in many countries, in spite of settled conditions, good health services and potent drugs, syphilis and gonorrhoea are again becoming a cause of concern to health administrations.

In the past, syphilis and gonorrhoea have often been grouped for administrative purposes as the "major venereal diseases". In spite of their similar modes of transmission, they have a distinctly different epidemiological pattern. For instance, with a drug such as penicillin, highly effective against both infections, the incidence of syphilis receded significantly until the trend was reversed a few years ago, while the incidence of gonorrhoea has remained uncontrolled in practically all countries since the Second World War. In this failure to control gonorrhoea the gradual development of resistance of the gonococcus to penicillin in some countries and to streptomycin in others is significant, but is probably not of basic importance. However, WHO has continued to watch this development. At the Copenhagen Gonococcus Centre strains of *Neisseria gonorrhoeae*, collected from all parts of the world, are tested for sensitivity to drugs currently in use. The findings indicate that the cases reported as "resistant" are more often due to rapid reinfection than to the resistance of gonococci to the drugs used. WHO collaborated with the International Union against the Venereal Diseases and the Treponematoses in organizing a symposium on gonorrhoea that was held in Poland during the year, and an entire issue of the WHO Bulletin was devoted to gonorrhoea.

Surveys undertaken in ports and on board merchant ships by national health administrations and WHO support the view that transmission of venereal infections has increased considerably in recent years. The international importance of the question is underlined by the fact that several governments, including those of Sweden and the USSR, emphasize the number of cases now imported from abroad. In another country—Denmark—some 50 per cent. of the nationally reported cases of syphilis originated overseas. Studies of the maritime aspects of venereal diseases indicate that the true amount of syphilis and gonorrhoea among seamen is perhaps three or four times as great as that recorded in port health statistics, because many cases are treated on board and are not reported. WHO will therefore continue to give attention to this point in implementing its obligations as administrator of the Brussels Agreement of 1924, as brought up to date by the Thirteenth World Health Assembly in 1960. The Assembly, in resolution WHA13.52, recommended to governments the acceptance of the minimum standards for the management of venereal diseases, of technical definitions and of the appraisal scheme that had been prepared by the Expert Committee on Venereal Infections and Treponematoses. In 1961 several governments took steps to give effect to the Assembly's recommendations.

Under the auspices of WHO, a travelling seminar of venereologists and public health administrators, mostly from developing countries, visited the USSR for a month in 1961. They studied the methods used to control venereal diseases in the Soviet Union in urban, rural, industrial and maritime populations, the national and local organization of the control services, including the training of personnel, and the organization of research.

**Yaws**

Guided by the recommendations of the Expert Committee on Venereal Diseases and Treponematoses, activities against yaws continued to be co-ordinated on a regional and sub-continental basis. It is estimated that, since 1948, 278 870 000 people have been examined and 35 809 000 treated with long-acting penicillin in WHO-assisted mass campaigns in Africa, the Americas and Asia. The prevalence of clinical yaws has in some countries fallen from over 10 per cent. to under 0.5 per cent., with only a very small proportion of seroreactors in the young age groups. By 1963 or

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1964 many of the internationally-assisted yaws campaigns in tropical areas of West and Central Africa, South-East Asia, the Western Pacific and the Americas will have passed from the phase of mass campaigns into that of surveillance.

During the period under review WHO started an appraisal of the results of the yaws campaigns and of the methods used, and in this connexion organized, for the South-East Asia and Western Pacific Regions, an inter-regional evaluation meeting on the subject.

With a view to adapting technical policies to new conditions, particularly where mass campaigns have changed high-prevalence areas into low-prevalence areas, or where the prevalence of yaws in unsurveyed areas is unknown but suspected to be low, a WHO treponematoses advisory team initiated a study of the best means of carrying out fact-finding surveys by sampling methods in large rural populations. The team also attempted to determine the true extent of the remaining latent reservoir of yaws in such communities by co-operating with the WHO Serological Reference Laboratory, Copenhagen, in comparing sample results of standardized reagin testing (i.e. VDRL), and of techniques using treponemal antigens.

Further emphasis was laid on the need for better co-ordination of anti-yaws activities with those of other communicable disease control programmes and of the rural health centres. The establishment of rural health centres and the eventual integration into them not only of yaws but also of other communicable disease control activities are the long-term objectives of every health administration. It is still true that development of rural health services has been slow in several areas, mainly because of shortage of staff and resources. This makes it necessary to continue periodical long-term surveillance resurveys by national mobile teams to guard against any recurrence of infectious yaws. A practical and economic approach has been to employ the yaws teams on other preventive work. The teams may be given additional training, or may be reinforced by workers with specialized experience (e.g. in leprosy, mycosis, smallpox and other vaccinations, etc.), and can then continue to follow up the intensive measures started against yaws, as part of a mass action against another disease.

Work has continued at the WHO Serological Reference Centres at Chamblee and Copenhagen and at the International Treponematoses Laboratory Center at Baltimore. Progress was made in the international collaborative assay for defining standard procedures for the Fluorescent Treponemal Antibody technique. Efforts are being made to adapt this specific serological method to field use, in the light of recent findings that as many as 20 per cent. of seroreactors to lipoidal antigens have no treponemal infections.

Arrangements were continued for the implementation of the extended programme of assistance to treponematoses research, in which laboratories in several countries collaborate. A full review of the literature on the cultures of T. pallidum, and its survival in vitro, was prepared during the year.

Veterinary Public Health

In veterinary public health, work has again been chiefly directed to zoonoses and comparative medical research, but special attention was also given to the problems of tropical and developing countries, particularly in work on brucellosis, rabies, parasitic zoonoses and food hygiene.

Brucellosis

In many countries the elimination of sheep and goat reservoirs of brucellosis is for economic reasons impracticable, and therefore most of the work on brucellosis has again consisted in experiments with vaccination in man and animals. The clinical and bacteriological studies (referred to in the Annual Report for 1960) on groups of volunteers vaccinated with two living attenuated vaccines were continued. Strain 19-BA vaccine administered subcutaneously was found to be usually safe, but it did produce a few reactions. A paper based on the wide use of this vaccine in the Union of Soviet Socialist Republics was published in the WHO Bulletin, and one on safety trials in man is in the course of preparation. The second vaccine used in the safety trial, strain Rev. 1, was used for the immunization of Cynomolgus monkeys. They were successfully immunized without untoward reaction and with very rare occurrence of bacteremia. Serial passage of the strain in pregnant goats did not alter its virulence for goats or guinea-pigs, which indicated the relative stability of this attenuated strain. But in the safety trial on man, Rev. 1 produced unfavourable reactions so that it cannot be considered suitable for use in man by subcutaneous inoculation at the present dosage level.

Experimental vaccination of sheep and goats with strains Rev. 1 and 19 was continued in Argentina, Israel and Malta, in collaboration with FAO. Naturally-infected Maltese goats vaccinated with strain Rev. 1 showed evidence of protection inasmuch as they did not abort, although one third of the unvaccinated control group did so. There was also a reduction in the numbers of Brucella melitensis excreted in their milk. This experiment shows that mass vaccination of all goats in infected herds can be undertaken without any preliminary screening (or testing). The occasional excretion of Rev. 1 organisms in milk

of vaccinated goats was examined further, and it was found that excretion did not occur if young goats were inoculated before breeding. In lactating goats of the Maltese breed excretion was observed for about two weeks after vaccination. In another breed (Saanen), however, the organisms persisted in the udder for much longer periods. Comparison of serological diagnostic tests in relation to vaccination showed that the complement fixation test is the most specific and sensitive and is the least interfered with by vaccination. It could therefore be employed without delay in a goat flock when it is decided to change over from vaccination to eradication.

Experimental vaccination of sheep with two live attenuated vaccines (Rev. 1 and strain 19) is in progress. In preliminary tests those vaccines have given uncertain protection against the subcutaneous inoculation of Brucella organisms eight months after vaccination. This type of challenge is however considered too severe and tests by contact exposure such as occurs in nature are being arranged for future experiments.

Work is proceeding on identification of Brucella strains by metabolic and bacteriophage tests in order to find more accurate methods of typing for use in epidemiological investigations. An article on the laboratory diagnosis of brucellosis in man was published in the Bulletin 1 as one of a series of studies on the laboratory diagnosis of various diseases.

Grants were made to assist the research work described above.

Rabies

A meeting of rabies research workers, chiefly from laboratories collaborating in WHO co-ordinated research programmes, was held during the year, to examine the progress made to date and to plan future research. The group found that experimental work in man and animals had confirmed the value of the combined use of serum and vaccine in the immunization of man after exposure and that, in the local treatment of infected wounds, vigorous and adequate mechanical cleansing gives as much protection as cauterization with mineral acids. The group also made recommendations for basic studies on the pathogenesis and ecology of rabies to be carried out with the very effective techniques, such as fluorescent microscopy, that have recently been developed.

The search was continued for an efficient vaccine for the immunization of human beings which would be free from objectionable side-effects. A promising line of work is the propagation of the virus in tissue culture. Although the virus has been grown in several cell systems the results, as judged by virus titration and cytopathic effects, have not been uniform. Studies on HEP avianized virus, the virus grown in day-old chick embryos and the inactivated duck-embryo vaccine have shown that they are relatively free from the paralytic factor. At the suggestion of the meeting of rabies research workers mentioned above, a comparative study in guinea-pigs of the two first-named vaccines and of the widely used phenolized vaccine is being undertaken at the Pasteur Institute of Southern India.

One of the technical difficulties in the preparation and use of the widely used phenolized nervous tissue vaccines has been their bulk and their relatively short duration of validity, which have raised problems of storage and transport. This difficulty has been largely overcome by lyophilization of the vaccine. This method, first developed in the USSR, has been tried and the vaccine tested in collaborating laboratories in other countries. The claim that the dried vaccine retains its potency during lyophilization has been substantiated.8

The results of the third series of experiments on the immunization of non-exposed persons with different schedules of serum and vaccine inoculations have been published in the WHO Bulletin.8 Other papers on rabies published in the Bulletin include “Studies on the Pathogenesis of Rabies” 4 and “Protective Effect of Antirabies Serum after Intracerebral or Intramuscular Administration” 6.

Tests carried out in collaborating laboratories revealed that the International Reference Antirabies Vaccine, Lot 164, had dropped markedly in potency. This vaccine has now been withdrawn, its users notified, and arrangements made to prepare a new lot of vaccine for test.

WHO grants were given to provide some assistance with the collaborative research described above, but most of the cost was met by the laboratories themselves.

Animal Influenza

Studies on animal influenza and related virus infections were actively pursued in collaborating laboratories in Czechoslovakia, the Union of Soviet Socialist Republics and the United States of America to determine whether an animal reservoir of human influenza viruses exists in nature. The results so far available suggest that swine can be infected by man with type A influenza strains and that those strains persist in the

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herds without the antigenic change commonly observed in human populations. This may be because the shorter life of swine does not give time for their antibodies to complete the selective action that takes place in man. Those strains may be reintroduced into human populations from time to time when a suitable opportunity presents itself, as has been observed in Czechoslovakia and the United States of America. If it is confirmed that this process is fairly common, it would warrant the conclusion that swine do act at times as reservoirs, or rather as "repositories", for the human influenza virus strains, although this may not be a major factor in the normal epidemiology of human influenza.

Influenza-like viruses of equines and fowls appear to be related to each other but not to the human or swine strains. Duck influenza virus seems to be unrelated to any of those viruses and to be in a "group" by itself, although all those animal viruses share the common antigen of complement-fixation.

Recently, antibodies against human influenza virus strains have also been found in the sera of rats in Czechoslovakia. This finding warrants an extended study, which will be pursued in other areas.

Further surveys in animal populations are planned, particularly in swine, with and without reference to human cases of influenza.

Leptospirosis

Because exposure to infection with leptospirae is incidental to some occupations and is not easily avoided, work on vaccination against leptospirosis has been started at some of the WHO/FAO Leptospirosis Reference Laboratories. Preliminary results show that it is possible to prepare an antigenic inactivated suspension of certain serotypes that show promise of being useful as vaccines for man and animals. Those laboratories also continue to distribute reference anti-Leptospira sera and type cultures to national and other laboratories. Arrangements are being made to replace one of the sera, supplies of which are nearly exhausted. Collaborative tests on a fresh batch of sera for reference purposes have been completed and the results will be examined by a group of experts early in 1962. This group will also plan future research on leptospirosis.

Papers published in the Bulletin during the year included a study on the laboratory diagnosis of leptospirosis and a series of papers on animal leptospirosis in Malaya.3

Other Zoonoses

Hydatid disease is an important public health problem in several areas of the world where the parasite is endemic. Although the life-cycle of the parasite was elucidated a long time ago, the infection has so far defied control, for lack of precise knowledge of the ecology of the infection and in the absence of anthelmintics suitable for use against the adult worm and its eggs. A collaborative research programme has therefore been organized in which laboratories in Argentina, Kenya, Lebanon, New Zealand and the United States of America (Alaska) are taking part. The aim of these studies is to elucidate the ecology of hydatid disease in different areas, to find a safe and effective anthelmintic and to standardize diagnostic procedures.

For trichinosis WHO has helped to organize collaborative tests on a quantity of positive human serum. If the tests confirm that this serum is suitable, it is proposed to establish it as an international reference preparation for serological diagnosis.

Meat Hygiene

The Joint FAO/WHO Expert Committee on Meat Hygiene, at its meeting in 1961, brought up to date the information contained in the first report,8 and discussed the aspects of meat hygiene not covered at the earlier meeting. Its report included recommendations on measures needed for meat hygiene in tropical countries, the hygiene of poultry (which is being consumed in increasing quantities in many countries), and meat preservation by antibiotics and irradiation. The many problems presented by the widespread production of processed meats was one of several subjects mentioned as needing further study.

Comparative Medical Studies

An article entitled "Comparative Medical Studies of Chronic Degenerative Diseases as a Veterinary Public Health Activity",4 intended to stimulate in veterinary workers an interest in the study of chronic degenerative diseases of animals for the light that they may throw on similar or identical diseases in man, was published in several leading veterinary journals, and in a medical journal.

More than a dozen centres of comparative medical research in various parts of the world have been asked to participate in co-ordinated programmes of research on cancer and cardiovascular diseases. All have agreed to co-operate, and steps are being taken to designate them formally as collaborating

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centres. Details of such comparative studies are given on pages 31 and 32.

**Virus Diseases**

The use of living tissue cultures for the isolation of virus has in little more than a decade changed the face of virology. Viruses can now be isolated and studied in the laboratory almost as easily as bacteria, and the rapidity with which new knowledge is being obtained and applied to the prevention and control of disease has made it necessary to review the role of WHO in this field. A scientific group met during the year to consider the various ways in which WHO might assist research on the virus diseases.

One urgent need is the provision of reference antigens and sera for use in laboratories of different countries. Without them it is impossible to identify accurately the viruses which are isolated, and this results in confusion and uncertainty when the agents cultured in one laboratory or country are being compared with those cultured in another. Some countries have taken steps to meet their own needs, but the problem is essentially international, and WHO has an important part to play in making reference reagents available to national reference laboratories, which can in turn prepare or test suitable reagents for issue to their national laboratories.

To distribute the heavy load of preparing and testing reference reagents, and to reduce duplication of effort, a pilot collaborative scheme under WHO's auspices has been set up among a number of laboratories in Europe. In due course this scheme may be extended to other countries and aligned with schemes such as the one in the United States of America, so that uniformity in the identification of viruses may be assured.

The WHO reference laboratories are already playing a part in making and distributing reference sera. For the satisfactory discharge of this obligation, and to meet other advances in virology, the system of reference laboratories in each of the virus fields is being reviewed and, where necessary, expanded. Other activities of WHO—establishment of standards of technical performance, methods of collecting and disseminating information, the training of workers for service and research, and measures for giving aid in epidemics—are also being restudied and implemented in collaboration with directors of reference laboratories and members of the Expert Advisory Panel on Virus Diseases. Three long-term and three short-term research training grants have been awarded to research workers to enable them to carry out research under the supervision of experts in their special fields.

**Poliomyelitis**

Poliomyelitis is still the most serious illness caused by the enteroviruses. The inactivated vaccine has been highly effective in countries that use vaccines of good potency and have effective vaccination programmes. But there are countries in all continents where the incidence has remained stationary or even increased.

The data available to WHO (which are not complete) indicate that in Canada and the United States of America the incidence in 1958-1960 was 85 per cent. less than that in 1954-1956. In Latin America, on the other hand, the incidence in 1958-1960 was 5 per cent. greater than in 1954-1956. Similar contrasts can be found between countries or groups of countries in Europe. Poliomyelitis is by no means under control, and it will remain a serious and growing problem in some countries until good vaccination schemes are set up.

Live orally administered polio vaccine has been widely used in Czechoslovakia, Hungary, Poland, the Soviet Union, and South Africa, with most encouraging results. In Czechoslovakia not a single case has been reported since the campaign ended in mid-1960. In Israel live vaccine was used in the early stages of an epidemic that threatened to be extensive, and immediately brought it to an end.

The problem of adventitious viruses derived from monkey kidney tissue cultures used in the preparation of both inactivated and live vaccines still causes concern, but steps to exclude all such viruses that can be detected by present methods are now taken by most vaccine producers.

In accordance with the recommendations in the third report of the Expert Committee on Poliomyelitis,1 arrangements were made for the collection and dissemination of information on the characteristics of the strains of virus that are being isolated from paralytic cases, particularly those from persons recently vaccinated; and a long-term survey has been instituted on the distribution of virus types in different countries. Preliminary results of the survey indicate that Type 2 virus has almost disappeared but that the proportion of cases due to Type 3 is increasing. In one country nearly half and in another about 80 per cent. of paralytic cases in 1960 were due to this type. Further observations are required to determine the significance of these findings.

**Other Enteroviruses**

With the decrease of poliomyelitis in well-vaccinated communities more attention is being given to cases of paralysis due to ECHO and Coxsackie viruses. Although, except for sporadic cases, severe paralysis

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has not yet been attributed to them, the situation is being closely watched and arrangements are being made for the collection of information on the types of virus implicated.

**Hepatitis**

Delegates at the Fourteenth World Health Assembly expressed concern at the high incidence of hepatitis, which in some European and other countries appears to be increasing. Not enough is known of the epidemiology of the disease, which causes long and often serious illness, and an epidemiological study in countries of high incidence is being organized with a view to increasing the information available.

**Respiratory Viruses**

Infection of the respiratory system is the commonest form of human infectious disease. In the past decade advances in laboratory methods have led to the recognition of at least 96 new viruses, belonging to four distinct groups. Members of each of these groups have been associated with respiratory illness.

In recent studies of young children in temperate climates it has been shown that about 65 per cent. of severe non-bacterial illness of the lower respiratory tract and at least 20 per cent. of the milder upper respiratory tract illnesses of childhood can be attributed to known respiratory viruses. Further study of this question would be much facilitated by a reporting and information system such as is used for influenza. Except in epidemics, influenza viruses are not involved in most respiratory infections, and it is now necessary to consider how the system of WHO Influenza Centres should be expanded to include other respiratory viruses.

The experimental studies of animal influenza viruses and their relation to human strains, mentioned in earlier Annual Reports, have shown considerable promise and have been expanded. The collaborative studies being undertaken in laboratories in Czechoslovakia, the Soviet Union and the United States of America are reported on in the section on Veterinary Public Health (see page 10).

**Arthropod-borne Viruses**

WHO's programme on arthropod-borne viruses made great progress in 1961. First priority was given to the development of a system of regional reference laboratories. The increasing number of viruses being discovered in this group and the introduction of new diagnostic methods call for close co-ordination between laboratories working on the subject in different parts of the world.

Besides the WHO Arthropod-borne Virus Regional Reference Laboratory for Africa designated at Entebbe, Uganda, in 1960, six regional reference laboratories were designated in 1961—in Australia (Canberra), Czechoslovakia (Prague), Japan (Tokyo), the Soviet Union (Moscow), the United Kingdom (London) and the United States of America (Atlanta). Some areas are still not covered by this system, for lack of laboratories able or willing to undertake the responsibility involved, but, as the programme develops, it should be possible to provide reference services for all countries.

Assistant was given to investigations for determining the importance of arthropod-borne viruses as a cause of human disease in areas so far studied inadequately or not at all. The support given in 1960 to studies on migrating birds as possible disseminators of arthropod-borne viruses was continued. WHO also took steps to facilitate the exchange of technical and epidemiological information among investigators and administrators directly responsible for arthropod-borne virus programmes.

The importance to public health of arthropod-borne virus disease is shown by the serious epidemic of yellow fever, the largest so far recorded in Africa, which occurred in south-west Ethiopia in 1960-1961. WHO supplied yellow fever vaccine for a mass campaign, and a staff member visited Addis Ababa for consultations. As a result a plan for an epidemiological survey of the area during the next epidemic season (November 1961 to February 1962) was prepared at the Pasteur Institute, Addis Ababa; it was considered at a meeting of experts held in Geneva in October, and WHO provided financial support for its execution (see also page 89).

**Smallpox Eradication Programme**

The year 1961 saw the intensification of smallpox control and eradication in the three continents that still harbour endemic foci of the disease. Smallpox control is now a major concern in the countries where the disease has been persistently present. A number of countries have carried out effective mass vaccination campaigns, some have initiated pilot projects as a first stage of eradication programmes and others have intensified their current methods of control.

The Organization continued to sponsor field investigations and laboratory research on smallpox epidemiology and immunology, and to support and help Member States in planning and organizing eradication programmes.

Countries in Asia, which still form the highly endemic areas of smallpox in the world, went a long way towards eradication in 1961 by means of intensified
control measures, pilot projects, or mass vaccination campaigns.

In Africa, certain countries have succeeded in overcoming technical and administrative difficulties that had hindered the proper control of smallpox and have organized mass vaccination campaigns for its eradication.

In Latin America, where smallpox endemic foci are still to be found in a few countries, control and eradication work has made satisfactory progress.

With the assistance of the Organization, the production of freeze-dried smallpox vaccine is progressing rapidly in countries in Africa and in Asia. The centres where dried vaccine is produced will soon be able to supply vaccine to neighbouring countries after meeting their own needs.

Two inter-regional training courses were organized in the period under review to familiarize senior laboratory workers with modern techniques for the production of dried smallpox vaccine and with the difficulties that may be met in the use of complex freeze-drying apparatus in tropical and subtropical conditions. The first course, held in Lagos, Nigeria, in November 1960, was attended by participants from countries of the African and Eastern Mediterranean Regions; the second, held in Bangkok in 1961, had participants from twelve countries in the South-East Asia, Eastern Mediterranean and Western Pacific Regions, and also a participant from Europe.

Cell Cultures

The great reliance placed on tissue cultures in the study of virus diseases has created the need for a regular supply of animals and their tissues from which primary cultures are derived, and also for supplies of standard cell lines. The cells used are primary monkey tissue cells, human amnion and embryo cells and continuous cell lines such as the Hela cell. In many of those cells latent viruses are present and some of them show biological changes on repeated subculture. The latent viruses may flourish when the cells are grown in primary culture and contaminate not only future harvests but also vaccines produced from viruses grown in the cells. Other contaminants, such as organisms of the pleuropneumonia type, may find their way into cultures. Uncontaminated standard cells, which remain stable after repeated sub-culture, are therefore needed. Workers at the Wistar Institute, Philadelphia, United States of America, have established a cell from human embryo that appears to meet the required criteria. Such a cell will prove important in the isolation of viruses and in the production of uncontaminated vaccines. WHO has therefore provided fellowships to enable workers from four laboratories in different countries to attend a month's course on the management of this cell at the Wistar Institute, so that they may establish it in their own laboratories, make confirmatory tests of its usefulness, and possibly at a later stage set up centres for its distribution to other laboratories.

Serum Reference Banks and Serological Epidemiology

Banks for the storage and examination of samples of sera collected in field surveys have been set up in the United States of America (at Yale University), in Czechoslovakia (at the Institute of Epidemiology and Microbiology, Prague), and in South Africa (at the South African Institute for Medical Research, Johannesburg). Methods of storing sera for long periods without change in the level of antibody or in the constituents are being studied. A uniform system of cataloguing the sera has been devised, and field studies for the collection of sera have been set up.

These are preliminary steps in a scheme for the collection of sera for immediate study, but also, which is more important, for the conservation of sera that can be used for retrospective study as new disease agents and new disease-complexes are identified in the future. The plan is ambitious and its full development will require years of careful work both in the field and in the laboratory, but its value is unquestioned as a means of defining and anticipating problems of international importance, of making retrospective studies as new techniques become available, and of following the course of infections in populations exposed to newly-introduced disease agents.

Trachoma

Important advances continue to be made in trachoma research. A WHO scientific group met during the year to review the current situation and the trends of research. Improvements in methods of virus isolation and tissue culture and new immunofluorescence techniques have broadened many of the lines of study, including the nature and method of replication of the virus, antigenic composition and antibody response. The preparation of a specific trachoma antigen has recently been reported, and experimental vaccine production and vaccination trials are in an early stage. There is, however, definite evidence that protection has been obtained in simians, and some reports on trials with human subjects suggest that administration of trachoma vaccine may lower the attack rate and may also reduce the intensity of clinical
Malaria operations in Cambodia are at the pre-eradication stage. Insecticide spraying has not given fully satisfactory results, and distribution of medicated salt containing an anti-malarial drug is being tried in one area.

(1) Preparation of medicated salt by mixing ordinary kitchen salt with the antimalarial drug, at the Pasteur Institute in Phnom-Penh.

(2) At the Battambang distribution centre a Cambodian health officer and a WHO expert discuss the problems of transporting the salt to the widely scattered population of the province during the rainy season.

(3) One of the problems: a truck carrying tree-trunks has broken down, blocking the road, and a path for the salt convoy has to be cut through the undergrowth at the roadside.

(4) Distribution of medicated salt to the inhabitants of one of the villages in Battambang Province.

(5) After the distribution, the health team takes blood samples for examination in the laboratory.
In Mexico malaria eradication has reached a very advanced stage. One of the areas where regular insecticide spraying was still going on in 1961 was the State of Yucatan.

(1) A spraying team lines up for early morning inspection at its base in the town of Vallodolid.

(2) The team on its way to the operational area.

(3) A woman removes her belongings from her house before it is sprayed.

(4) A health officer takes blood samples at Chichén Itza, famous for its well preserved Maya monuments.

(5) The family of the guardian of the monuments lines up for blood testing.

(6) A teacher in the village of Calotmal gives his class a course on malaria. He shows how blood samples are taken and how they are examined in the laboratory.
In 1961 the Government of Pakistan completed a pre-eradication survey, with the assistance of two WHO teams, one working in East and one in West Pakistan. These pictures were taken in East Pakistan, where a population of 52 million is at risk.

(1) The malaria survey boat on one of the rivers of the Ganges Delta.

(2) A jeep of the WHO team on its way to the survey area.

(3) An entomologist crosses a bamboo bridge to investigate a suspected breeding area for malaria mosquitoes.

(4) Children in the Garo Hills are examined on their way home from school: a medical auxiliary takes a blood sample for laboratory diagnosis.
manifestations in the established disease. Much work remains to be done before the possibilities of active immunization in trachoma can be judged.

During 1961 WHO continued to assist trachoma research by helping in the co-ordination of studies and the exchange of information between workers, by providing technical advice on the design and evaluation of field trials, and by providing material assistance to a number of research projects. The long-range programme of combined microbiological, clinical, epidemiological and therapeutic research in China (Taiwan) — a joint undertaking of the Government, UNICEF, WHO, and the United States Naval Medical Research Unit No. 2 — is continuing according to plan.

The Expert Committee on Trachoma, meeting after the scientific group, considered the practical application of current knowledge and technical resources to the control of trachoma and related eye diseases. It gave further specific guidance on diagnostic criteria and classification of those diseases, on the study of environmental factors involved in transmission, on modern methods for mass treatment and on the integration of control programmes in the general health services.

The Organization continued to give practical assistance to governments in the study of local disease patterns, and the planning and implementation of control projects. Sixteen WHO-assisted projects of this kind, in which UNICEF is co-operating, were in operation at the end of 1961.

Parasitic Diseases

Bilharziasis

The spread of bilharziasis in endemic areas, its appearance in countries that had been considered free from it, and its aggravation in irrigated areas have again been confirmed by the results of surveys carried out by the WHO bilharziasis advisory team. By the end of 1961, the team had made comprehensive surveys in three countries of the Eastern Mediterranean Region and in thirteen of the African Region, and had revisited one country in the Eastern Mediterranean and three countries in Africa to assess their bilharziasis control programmes.

It is generally considered that at present bilharziasis can be most effectively controlled by attacking the intermediate snail host. A wide range of mollussecides is available and promising compounds are being tested in field and laboratory trials co-ordinated by WHO in eight countries in Africa, the Americas, Europe and in the Western Pacific Region, the aim being to find an inexpensive and effective product suitable for general use.

The programme of co-ordinated epidemiological investigations has been continued and further developed. Much of it is directed to the improvement and standardization of techniques for use in extensive epidemiological studies. For example, ten laboratories in nine countries are co-operating in trials to improve sero-immunological diagnostic methods with a view to arriving at cheap and efficient diagnostic techniques that can be easily applied by field workers.

In August 1961 WHO convened a scientific group to advise on research on the immuno-biological diagnosis of bilharziasis. The group agreed that examinations for eggs do not always provide a reliable index of infection in a population or an accurate assessment of the effectiveness of chemotherapy in an individual patient. Most investigators seem to agree that for the diagnosis of bilharziasis in the individual, the complement fixation test with adult worm antigen, the flocculation test with cercarial antigen and the fluorescent antibody test give the most reliable information. The value of the circuoval and urine precipitin tests for assessing cure in the individual or the results of control work should be further tested and the circuoval test should be adapted to the technique with dried finger blood on filter paper. The group also reviewed in some detail findings on other helminthic infections which might throw light on the immuno-diagnosis of bilharziasis, and made suggestions on further research and its implementation.

Standardized methods for stool and urine examination are needed for epidemiological studies on bilharziasis and on other intestinal parasitic diseases. WHO has collected information on the many varied procedures at present in use for excreta examinations with a view to obtaining agreement on standardized techniques.

The Organization has also distributed to interested laboratories information on the availability of strains of parasites and snails.

Accurate identification and classification of snail intermediate hosts of bilharziasis are fundamental both to the study of their ecology, and also to the control of the disease. Snail identification keys have been prepared for the use of personnel engaged in bilharziasis control in the field and it is proposed to stimulate further studies on the relations between the parasite and the intermediate host and on the ecology of the intermediate hosts. The work of the WHO snail identification centres in identifying snails forwarded by bilharziasis workers in Africa and the Eastern Mediterranean has continued and is to be further developed.

WHO has continued to help governments in a variety of field projects. For example, in the Philippines,
where a pilot project is receiving assistance from FAO and UNICEF as well as from WHO, measures for bilharziasis control—snail control, improved sanitation, case-finding and health education—are being successfully integrated into health programmes and rural health services. In the United Arab Republic, a pilot project was started with assistance from UNICEF and WHO to determine the most effective methods of controlling bilharziasis in the conditions prevailing in that country, and also to serve as a training centre for staff for bilharziasis control programmes. WHO assistance to projects in Ghana, Iran and Iraq continued, and in Yemen snail control measures were demonstrated, and training was given in the use of insecticides.

A special number of the Bulletin on bilharziasis was published in 1961.¹

Mycotic Diseases

Following the discovery of griseofulvin as an effective drug against most of the dermatomycoses, assistance was given to a field trial in Yugoslavia to assess its effectiveness against Tinea capitis. This method has now been shown to be practicable and efficacious, but the most economic and practical conditions for its use in mass campaigns are still being investigated. To measure the decrease of susceptibility of fungi to griseofulvin, it will be necessary to establish standard techniques and to assist laboratories in collecting pathogenic fungi.

Leishmaniasis

In preparation for a programme on leishmaniasis, assistance has been given to certain laboratories for the collection and distribution of Leishmania strains for use in comparative research, and for studying how the strains may be kept without losing their original characteristics. Assistance has again been given for continuing sero-immunological studies for the easy identification of Leishmania species and for the standardization of methods and techniques.

Trypanosomiasis

Trypanosomiasis surveys were made in twelve countries of the African Region, to assess the present status of human and animal trypanosomiasis, to collect data on new cases found during 1960 and 1961 and to explore further the epidemiological factors involved. The administrative organization and methods in force for trypanosomiasis control, both in man and in animals, were also noted. The results of the surveys are to be discussed by an expert committee in 1962.

¹ Bull. Wld Hlth Org., 1961, 25, No. 4-5.

Ancylostomiasis

A Conference on Ancylostomiasis was organized in Brazzaville during the year, in co-operation with the Commission for Technical Co-operation in Africa South of the Sahara (CCTA), and was attended by representatives of seven African countries. The Conference reviewed the importance of ancylostomiasis in Africa South of the Sahara and its frequency and gravity. Survey methods and the study of factors conditioning its distribution, its pathogenicity and clinical manifestations were discussed and suggestions made for treatment and prophylaxis. The Conference also recommended that research on the biology and physiology of ancylostomes should be undertaken in order to improve therapeutic and prophylactic methods.

A review of some problems that are hampering the successful control of ancylostomiasis and other soil-transmitted helminths was published during the year in Public Health Papers.²

Onchocerciasis and Filariasis

Further progress was made on the preparatory work for a five-year co-ordinated research programme on onchocerciasis. Pilot studies were made in Guatemala and countries of West Africa in order to select suitable areas for epidemiological surveys on the etiology of eye lesions caused by onchocerciasis. Survey techniques were tried out, and useful information was collected on local conditions and facilities. Agreements for the surveys, which will cover genetic and nutritional factors as well as ophthalmological aspects of onchocerciasis, were signed in December 1961.

The Second WHO Conference on Onchocerciasis in Africa was held in Brazzaville in June 1961, and is described in Chapter 13. Reference is there made to very satisfactory recent advances in vector control, but the progress in therapy since the first Conference in 1954 has been slower. Suramin kills the adult worms in the host and has started to be used in some countries in mass treatment; no complete assessment of results has yet been made. Diethylcarbamazine kills the microfilariae and has been largely used in mass treatment; allergic reaction, however, has often limited its use. It is possible that, as has been demonstrated for Wuchereria infections, new treatment schedules may reduce incidence of these reactions and therefore enable it to be more widely used in mass treatment.

After the Conference on Onchocerciasis, steps were taken to develop a research programme on the

Simulium vector, and suitable localities in endemic areas in Africa and America were visited. Assistance was given to Guinea and Venezuela for studies on local epidemiology. In Guinea the extent of the national onchocerciasis problem is to be assessed with a view to drawing up suitable plans for its control. In Venezuela, the local vectors and their biology were investigated.

An expert committee on filariasis met in July and considered particularly the Wuchereria and Brugia infections. The committee made suggestions for research on epidemiology, therapy (including clinical trials of new drugs) and control. It also drew attention to the need for biochemical research on microfilaria, co-ordinated studies on the clinical evolution of filariasis, and to the possibility of using isotopes in studying the life cycles of the Filariae, and in investigating certain clinical and therapeutic problems.

Preparations were made for a research programme on various aspects of filariasis—on the immunology, chemotherapy of filaria infections, on filaria infections in animals, and on the clinical evolution and therapy of filaria infections. Studies designed to improve control of vectors of Wuchereria and Brugia infections are mentioned on page 24. Plans have also been made to study the effects of malaria eradication activities on local epidemiology of the Wuchereria and Brugia infections in the different endemic areas, and what complementary measures should be taken against filariasis vectors in areas where malaria eradication work is in progress.

An article on the vectors of human infections by Wuchereria species and their biology was published in the WHO Bulletin.1

In Burma and Ceylon WHO gave assistance with surveys to assess the importance of human filariasis and the adequacy of the control measures. The preliminary report on the survey indicated that filariasis is a serious problem in Burma and in some areas affects as many as twenty per cent. of the population. In each country more research was held to be a necessary preliminary to the implementation of extended control measures.

Bacterial Diseases

Diarrhoeal Diseases

As part of the programme of studies on the diarrhoeal diseases, a WHO diarrhoeal diseases advisory team—consisting of a paediatrician, a sanitary engineer and a bacteriologist—visited Israel, where a government survey had been in progress for some time. It then went to Sudan and the United Arab Republic, where, in rural pilot areas, it carried out studies directed particularly to the environmental factors in the causation of shigellosis and salmonellosis in infants and young children. Methods of rehydration were demonstrated and recommendations based on the results obtained were forwarded to the health authorities. The team studied epidemiological methods that would be suitable for the investigation of diarrhoeal diseases and arrangements were made for international co-operation in this matter.

The visits of a similar team to Mauritius and to four countries of Europe, which were mentioned in the Annual Report for 1960, provided useful information on methods of control that have been used with good results in certain countries and on practical laboratory techniques for use in field work.

International Reference Laboratories for Enterobacteriaceae

International Reference Laboratories for (a) Shigella and (b) Salmonella, Escherichia and enteric phage typing continued to provide assistance to national reference centres in the study of those micro-organisms.

Typhoid Vaccine Studies

The long-term programme of co-operative laboratory and field studies on the effectiveness of typhoid vaccines was continued. Controlled field trials in Yugoslavia and British Guiana, which were started early in 1960, received continued support from WHO, and new trials on a large scale were organized in Poland. Nearly a million people are being covered by current trials sponsored jointly by WHO, the governments concerned and the United States National Institutes of Health. Other co-operative laboratory studies are proceeding in twenty laboratories in fifteen countries.

Leprosy

Many of the deformities and disabilities caused by leprosy can be prevented by early diagnosis and treatment, and yet it is estimated that not more than about 20 per cent. of the ten million or so sufferers from leprosy are receiving treatment of any kind. To advise how existing knowledge on treatment and rehabilitation could best be applied in leprosy control programmes a Scientific Meeting on Rehabilitation in Leprosy was held in Vellore, India, at the end of 1960. The meeting was sponsored by WHO, the Leonard Wood Memorial and the International Society for the Rehabilitation of the Disabled, with assistance from the National Institute of Neurology and Blindness of the United States Public Health Service, the Bureau of Medicine and Surgery of the United States Navy, and the Christian Medical College, Vellore.

This meeting of different disciplines brought out the fact that important advances in leprosy rehabilitation

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had been made by scientists who were not primarily leprologists but had interest and experience in related fields, and that several unsolved problems in the pathology and treatment of leprosy closely resembled problems that had been solved for other diseases. From this point arose one of the most important recommendations \(^1\) of the Scientific Meeting—that leprosy research should no longer be confined to institutions restricted to leprosy, in isolation from other scientists and experts, and that much more rapid progress in rehabilitation could be made if leprosy were studied and treated with other diseases in centres where a wide range of medical scientists would be at hand. Other recommendations in the report relate to surveys to ascertain the prevalence, mode and time of onset of deformities and disabilities, to the evaluation of drug therapy, to research on the various types of deformities, and to the provision of rehabilitation services and their relation to the general health services.

Since the Vellore meeting several countries have shown greater interest than before in leprosy rehabilitation, and substantial sums of money have been collected by non-governmental organizations. Some of them have since consulted WHO on the use of such funds for leprosy prevention and control.

The Fourth Inter-Regional Leprosy Conference, organized by WHO, was convened in Istanbul in October 1961, with participants from twelve countries in the European and the Eastern Mediterranean Regions. The Conference dealt with the organization of leprosy services, and case-finding in countries with a low endemicity, in special groups of the population and among contacts; the use of pilot projects to determine control methods most suitable for particular areas; training of personnel and evaluation of results. Agreement was reached on criteria for “arrested cases”, schedules for treatment and chemoprophylaxis, and methods for use in drug trials. Leprosy rehabilitation was also discussed.

In the period under review programmes for the ambulatory treatment of leprosy were started or planned in several countries and were further developed in others—mostly with help from both WHO and UNICEF.

In these programmes case-finding and treatment have generally been satisfactory. Special attention has been paid to the protection of child contacts and preventive treatment of such children has been under constant study. Field studies were planned on ways in which simple methods of preventing deformities and disabilities could be introduced into the regular control services. Efforts to create or strengthen rehabilitation services have been increased. Wherever possible, leprosy case-detecting services have been combined with services for the mass control of other communicable diseases, such as yaws or smallpox.

In some countries where case-finding has been completed, the transfer of control work to the regular public health services has been undertaken; in others, methods for such a transfer have been studied.

A WHO leprosy advisory team continued prevalence surveys in several countries in Africa. The work has indicated methods for improving case-finding services and for progress evaluation. The field studies of this team have produced interesting data on the spread of leprosy which, if confirmed in other countries, may lead to some revision of opinion as to the role of different types of leprosy in the spread of the disease. The team also assembled more accurate data on the frequency of disabilities and deformities, which have led to a better understanding of how prevention and rehabilitation should be organized. The team had completed its work in Africa by the end of the year and was due to move to the South-East Asia Region in 1962.

The shortage of personnel for leprosy campaigns is one of the biggest difficulties in arranging leprosy control projects in countries in which leprosy is an important problem. To help overcome this difficulty, WHO is organizing a series of inter-regional postgraduate leprosy training courses, the first of which was held in the Philippines in November 1961. The course provided opportunities for field studies in addition to theoretical training, and aroused so much interest that it was not possible to accept all the candidates who wished to participate.

WHO continued to support and co-ordinate research on the production of standardized lepromin, serological studies, studies of iced biopsy specimens of human leprosy lesions, and comparative studies of acid-fast mycobacteria. The successful infection of golden hamsters and black mice with human leprosy has encouraged many laboratories to take part in the WHO co-ordinated studies on the transmission of human leprosy to murine rodents and other laboratory animals.

Controlled clinical and field trials of antileprosy drugs with long-lasting repository effects were started in four centres. Methods were drawn up for a model

experiment to assess the value of BCG in leprosy prevention, and the areas in which it could be carried out were explored. Epidemiological field studies were planned to investigate, in different parts of the world, the attack rates for the various forms of leprosy and to relate them so far as possible to environmental factors such as housing, clothing, food, bathing habits. The mode of transmission, the possible role of vectors, and the susceptibility and resistance of the population will also be investigated.
CHAPTER 3

ENVIRONMENTAL HEALTH

Community Water Supply

The Organization’s programme for the improvement of community water supplies continued to develop and the number of WHO-assisted projects designed to provide or improve community water supplies is increasing steadily.

The definition of criteria that must be met by a satisfactory public water quality is one of the essentials in such a programme. The International Standards for Drinking-Water, published in 1958, proposed minimal standards of bacterial and chemical quality, considered to be within the reach of all countries, for public supplies of water for domestic use. The application of higher standards is clearly desirable where they are technically and economically attainable.

To stimulate further the improvement of standards of water quality in Europe, a report on European Standards for Drinking-Water was published during the year. It deals with the protection from contamination of piped water supplies and sets out the regular bacteriological, physical and chemical examinations required. It is the outcome of a series of studies, meetings and other activities promoted by WHO in Europe to help health administrations to improve the quality of water supplies.

Water quality was also the subject of a questionnaire circulated to all Member governments during the year. Information was requested on any significant changes in methods of treatment of public water supplies in the last ten years, and significant changes in the trend of mortality and morbidity in certain diseases; the standards of water quality for such supplies, and how those standards are applied; the bacteriological, biological, physical and chemical laboratory techniques used; the use made of the International Standards. Health administrations were also asked for their views on the desirability of further international activities to revise the International Standards and to review the laboratory methods of analysis for various pollutants in water and for the control of water processes generally.

Studies were also undertaken of the criteria in use for deciding the quantity of potable water required, and its accessibility. The results of the studies and inquiries will be considered by the WHO Expert Committee on Water Quality which is to meet in 1962.

An inquiry into the extent to which the International Standards are being applied in seaports and airports was undertaken during the year on a recommendation made by the Committee on International Quarantine and approved by the Fourteenth World Health Assembly. Under the International Sanitary Regulations, health administrations are required to provide every seaport and airport with a supply of “pure drinking-water”—defined by the Committee as “of a quality not less than that prescribed in the WHO publication International Standards for Drinking-Water”. In May 1961 a circular letter was sent to all Member States, inviting them to list their international ports and airports and indicate whether on the basis of laboratory examinations the water quality was satisfactory or unsatisfactory, or whether the data were insufficient for a classification to be made. The replies received from twenty Member States by the time the Committee met in November 1961 suggest that the standards are not yet being generally applied. More difficulties appear to arise in controlling water quality at airports than in seaports.

A number of guides to good practice in community water supply were in various stages of preparation at the end of the year.

Towards the end of 1960 WHO organized an interregional seminar on community water supply at Addis Ababa, for countries of the African and Eastern Mediterranean Regions. Representatives of the United States International Co-operation Administration (ICA) also attended. The purpose of the seminar was to bring to the attention of senior health and sanitation officials the latest information on the financing, management and organization of community water supplies, and to promote discussion of methods of stimulating new construction and of improving existing water systems. Particular attention was given to the forms of financial assistance that different international and other agencies might make available for the development of community water supplies, and to the types of projects being so financed in other parts of the world. Details of loans obtained for financing the water supply programme in the Americas are given on page 70.

WHO has helped governments to prepare applications for credits for community water supply projects.
and has maintained close contact with the International Bank for Reconstruction and Development and the International Development Association, mainly in connexion with such applications.

In Kenya, the Zaina water supply scheme, constructed with assistance from WHO and UNICEF, was inaugurated during the year. The system supplies river water to villages and farmsteads in the Nyeri district of Central Province. The project was remarkable for the high degree of co-operation received from the local population in the trench-digging and other construction work. (See also page 67).

WHO has also been appointed the executing agency for two projects approved by the United Nations Special Fund in India. The first of these consists primarily in engineering studies of long-term construction plans for water supply and sewerage works in the Calcutta Metropolitan District, to be carried out by the proposed Calcutta Metropolitan Authority. WHO also provided a short-term consultant sanitary engineer to advise the Calcutta Metropolitan Planning Association. Under the other project, equipment and consultants have been provided for the Central Public Health Engineering Institute at Nagpur and its regional institutes.

WHO provided teams of experts to help governments with the technical aspects of national programmes for community water supplies; teams have been sent to China (Taiwan), Ghana, Greece, Madagascar, Eastern Nigeria and West Pakistan, and similar assistance to other programmes is being planned. Some of the teams have included experts in the financing and administration of water supply schemes. In several countries, WHO has provided resident sanitary engineers to help implement the recommendations of consultant teams.

WHO has continued to help train the various types of specialized personnel needed for the construction, operation and maintenance of public water supplies. One example was the training course on waterworks design and operation organized in West Pakistan for engineers from countries of the Eastern Mediterranean Region. The course included teaching in basic bacteriology, chemistry and health principles, as well as in details of construction. In the Region of the Americas, courses and seminars have been organized on various subjects connected with the design, planning, administration and financing of public water supplies (see page 71).

The control of water pollution is inherent in many of the measures taken to protect and improve water quality and has therefore formed part of much of the work described above. In addition, WHO has participated in a number of activities on this subject. For example, the Economic Commission for Europe, FAO, IAEA and WHO jointly sponsored a conference on water pollution problems in Europe to promote more active international co-operation in dealing with the increasing pollution of the main European waterways. WHO contributed several of the working papers discussed.

Work with IAEA on the special problems arising from the disposal of radioactive waste into fresh waters is mentioned on pages 38 and 39.

Air Pollution Control

An illustrated monograph on various aspects of air pollution was published during the year. It consists of papers by experts from different parts of the world, dealing with such subjects as the nature of air pollution, its effects on human health, animals and plants, the economic consequences, and possible measures for control—by zoning of industrial concerns, by changes in processes or equipment, and by fuel selection and smoke control. Current legislation in various countries is reviewed. A final paper on radioactive pollution stresses the need for an effective monitoring system and for basic research.

A study was undertaken with a view to the international standardization of methods and instruments for measuring air pollutants.

The sampling and measurement of air pollution was also one of the subjects discussed at a European symposium organized by WHO in Copenhagen late in 1960 on the epidemiological aspects of air pollution. Recent epidemiological studies on the effects of air pollution on public health and the diagnostic and statistical criteria to be applied in epidemiological studies were the other items considered. Air pollution control was the subject of a special paper presented by WHO for discussion at the European Symposium on Planning and Administration of National Environmental Sanitation Programmes, in Dublin.

Community Sanitation

In several regions, during the period under review, the work in community sanitation was expanded by the reinforcement of existing projects and the starting of new ones.

The Organization assigned sanitary engineers to a number of community sanitation and health demonstration projects, some of which receive substantial aid from UNICEF in the form of well-drilling equipment,

pumps, pipes and other sanitation and teaching materials. The training of national staff as sanitary engineers, sanitarians and other auxiliary health personnel was an important part of all those projects, and some of them were wholly devoted to it.

In the Region of the Americas, the improvement of sanitation has received widespread attention. The meeting of the Inter-American Economic and Social Council at Punta del Este, Uruguay, urged that a ten-year programme be undertaken to bring water and sanitation to half the rural and over two-thirds of the urban population of Central and South America. A start was made on the planning of large-scale programmes and, as elsewhere, training was arranged for the various types of personnel required (see page 71).

The long-term programme of studies on the engineering and sanitation aspects of bilharziasis control and diarrhoeal disease control was continued in the African and Eastern Mediterranean Regions (see also Chapter 2, pages 15 and 17). Because of the scope and significance of the environmental factors in the epidemiology and control of these diseases, a full-time sanitary engineer has been assigned to work with the WHO Bilharziasis Advisory Team, and it is proposed shortly to make the same provision for the Diarrhoeal Diseases Advisory Team.

The sanitation of ships, especially of passenger ships, often leaves much to be desired. WHO's attention was called to this matter in recent years by several governments and by the Committee on International Quarantine in its eighth report, which was adopted by the Fourteenth World Health Assembly. The experience gained in the preparation of the Guide to Hygiene and Sanitation in Aviation was used in planning a similar programme on hygiene and sanitation in ships and in harbours. As a first step a questionnaire was sent to governments. The replies will be analysed in 1962 and should serve as a basis for the drafting, in collaboration with the Inter-Governmental Maritime Consultative Organization, of a guide for use by public health administrators, port health authorities and ship-builders and operators.

An expert committee on the public health aspects of housing was convened; it considered the fundamental purposes of housing, its various relations to man's health, the place in housing programmes of planning, training, education and research, and the part WHO can play in promoting programmes for better housing. In particular the committee considered that public health authorities should not confine their interest in housing to improving the sanitary conditions of the home environment, but should assist building and social planners and housing authorities in planning new or improved housing and in securing compliance with standards based on human needs.

Preliminary surveys have been made in the Americas and in the South-East Asia Region in order to determine the responsibilities of health departments for housing, and for metropolitan planning and development. Those surveys show that often health authorities do not fully appreciate the importance and long-range influence of proper environmental health planning and of their own participation in housing and town planning schemes.

Under the programme of concerted international action by the United Nations and specialized agencies in the field of housing, which was mentioned in the Annual Report for 1960, eight projects were started in which WHO has participated. They include seminars, workshops and expert groups. This is a programme in which the United Nations and its regional economic commissions, ILO, FAO, UNESCO, WHO and the Organization of American States collaborate. WHO has provided experts and technical papers; it has worked with UNESCO on the preparation of documentation on school buildings and school sanitation; it also participated in the United Nations Expert Group on Metropolitan Planning, which stressed the public health and sanitation aspects of city planning.

The ACC Inter-Agency Working Party on Housing and Related Community Facilities held its fifth session in 1961, and planned the extension of its programme to cover the years 1963, 1964 and 1965. It decided, with the concurrence of ACC and the Economic and Social Council, to give priority in that programme to training technical and administrative personnel, to strengthening research and to multiplying pilot and demonstration projects. It also drafted a list of such projects to be added to the 1961-1962 programme.

Vector Control, Environmental Biology, and Insecticide Resistance

Further progress was made in the comprehensive programme on insecticide resistance and vector control that was begun in 1958. This consists on the one hand of a scheme of collaboration between the chemical industry, independent research institutes and

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1 Off. Rec. Wld Hlth Org. 110, 42.
WHO for the development and evaluation of new insecticides in the immediate or near future; on the other, of basic research into the nature of insect resistance. This research, co-ordinated and encouraged by the Organization, has permitted a much clearer understanding of the problem of resistance and its full implications for eradication and control programmes. Good progress has also been made in giving services to research by the provision of standard materials and scientific information. More has been done to improve techniques and procedures for the control of vectors of public health importance, including the use of biological control agents. Special attention has been given to the toxicity of pesticides to man.

Under the collaborative scheme for the evaluation of new insecticides, some 500 new insecticidal chemicals have been voluntarily submitted for evaluation, by manufacturers in several countries. The confidential preliminary evaluation of nearly 300 of those compounds by the independent collaborating laboratories and the study and recording of results have been completed. Some thirty compounds have undergone further evaluation for such properties as suitability for use in tropical conditions, safety in handling, possible hazards to exposed persons during and after field spraying, duration of insecticidal effectiveness on typical surfaces, etc. The WHO insecticides testing team in Lagos, Nigeria, completed in village trials the evaluation for mosquito control of one new organophosphorus insecticide for house spraying. Another residual spray showed good effects on mosquitos, and its toxicological hazards in spraying were further investigated. As a result, two new insecticides have been recommended for evaluation in pilot projects of malaria eradication.

A new technique for mosquito control based on the release of a residual fumigant, dimethyl dichloro-vinyl phosphate (DDVP), from special dispensers, was tested during 1961 and showed great promise. It is estimated that the evaluation scheme must be maintained on the present basis for at least three more years before it can be said that a number of new and sufficiently tested insecticides will be available for use against resistant vectors.

Considerable progress has been made in understanding the nature of insect resistance and its implications. Research has emphasized the long-term nature of insect resistance and the likelihood that insects will in time become resistant to all new insecticides. Specific biochemical differences between normal and resistant insects have been discovered and have indicated the possibility of developing new insecticides by reasoning, rather than by trial and error. This, and related work, has also shown the potentialities of novel methods of influencing insect behaviour in the field to man's advantage, for example, by the use of natural and synthetic attractants, and by the mass release of chemically sterilized male insects—a procedure that greatly reduces the number of females fertilized. A useful result of the basic research on insect resistance has been to indicate which of the alternative available insecticides it would be advisable or inadvisable to use in the field. It has also shown certain properties that should guide the search for an evaluation of new insecticides under the collaborative scheme mentioned above.

It is always difficult to assess the ultimate practical value of long-term research, but by encouraging and co-ordinating this research the Organization is kept constantly aware of laboratory developments which ultimately may bring revolutionary advances in the problems of vector-borne diseases. For example, it has only recently been found possible to prepare and distribute living insect tissue for virus culture, an advance that greatly improves the prospects of studying and developing viruses pathogenic to insects.

Assistance with studies on the genetics of insecticide resistance has received special attention: for instance, the establishment of a department of genetics by the Malaria Institute of India. WHO gave grants to several laboratories collaborating to advance basic studies on insecticide resistance.

Services to research have included the equipment of research laboratories and field programmes with standard test methods for determining the levels of susceptibility or resistance in adult mosquitos, larval mosquitos, body lice and sandflies to insecticides; the bioassay of insecticidal residues on different types of surfaces and the bioassay or aerosol formulations for aircraft disinsection. During the same period standard test methods to determine levels of susceptibility in tsetse flies, bedbugs, cone-nosed bugs and fleas were essentially completed, and test methods for use on houseflies, blackflies and ticks were being worked out at the end of the year. Surveys of resistance based on these procedures have been started in a number of countries, particularly where the species concerned have been exposed to insecticides in malaria eradication programmes.

Steps have been taken to establish a genetically standard strain of houseflies, and its distribution to research laboratories will begin early in 1962. The
establishment of standard strains of other insects is being studied.

Quantities of isotopically-labelled DDT and dieldrin have been procured by the Organization. These substances are being made available to laboratories that receive grants from WHO or whose work is closely associated with the Organization's programme. Standard insecticides and other essential chemicals used in resistance research are also being obtained and distributed.

Information on resistance, toxicity and vector control has been collected and distributed.

In addition to the toxicological studies made as part of the collaborative scheme described above, WHO gave assistance to studies on the acute or chronic toxicity of a number of pesticides currently in use in public health programmes. This work culminated in a meeting of the Expert Committee on Insecticides, at which recommendations were made for the protection of spraymen and others handling those materials, persons living in treated premises, and individuals who may come into contact with them accidentally.

In collaboration with the Government of the United Arab Republic, trials were undertaken with malathion for the control in villages of lice resistant to DDT. Malathion has been proved to be an efficient and safe substitute for DDT or BHC. Preparations were made for a three-year programme of field trials in Israel of new insecticides against DDT-resistant rat fleas, and for similar programmes in other areas, including field trials for the control of flies, mosquito larvae and bedbugs.

As part of the long-term programme for vector control, steps were taken after the Second Conference on Onchocerciasis in Africa in June 1961 (see also page 66) to define and develop Simulium control research programmes in Africa in collaboration with governments in the countries concerned.

A WHO research project for filariasis control was planned in 1961. The control of the vectors (especially the most important, Culex fatigans) gives rise to many problems, such as those occasioned by insecticide resistance and the creation of new breeding places by unplanned urbanization without adequate sanitation. The planning of the research project, therefore, included studies of vector ecology and biology, as well as control methods to be carried out by a WHO research team.

Practical trials of a new procedure for aircraft disinsection were organized in regular passenger flights with the collaboration of the Governments of Italy, Switzerland, the United Kingdom and the United States of America, of insect laboratories in London and Rome, and of the International Air Transport Association and several leading airlines. The results showed that treatments with single-use aerosol dispensers at the "blocks away" period, i.e. between the closing of the doors and take-off, could combine effectiveness against vector mosquitoes with a minimum of inconvenience to passengers and airlines. The "blocks away" procedure was recommended for aircraft disinsection by the Committee on International Quarantine in November 1961.
Public Health Administration and Organization of Medical Care

Problems of organizing and administering health services are nowhere greater than at the local level—that of direct service to the public—and in rural areas they are often particularly acute. Success in dealing with these problems does not depend on the efforts of any single profession or type of health worker, but on the ability of all to work as a team within an appropriate organizational framework. In several countries in the Americas and in the South-East Asia and Western Pacific Regions where health services are in process of development WHO has helped to establish field practice training areas to provide all categories of professional and auxiliary health personnel with experience in team work in a general public health service.

Gradual integration of specific control programmes and mass campaigns into the general public health services is being undertaken in a number of countries, and is contributing in no small measure to the promotion of rural health services. As examples may be cited the bilharziasis control programme in the Philippines and the yaws control programme in Eastern Nigeria.

International and other agencies engaged in programmes to promote economic and social development are increasingly accepting the principle that all technical work under those programmes must be co-ordinated in the field. Outstanding examples of such co-ordination, worked out in practice, are given by the rural health development programmes that form part of the comprehensive community development programmes in Burma, Cambodia, India, Kenya, Laos, the Philippines, Sudan, and in several countries of Central and South America. Large-scale programmes of a similar kind in which WHO is participating are those assisted by the United Nations, ILO and other specialized agencies for the economic and social development of the Indian populations in the Andean highlands, and the two UNESCO inter-regional centres for training in community development, one for the Arab States and one for Latin America.

WHO has participated in the various programmes of concerted action sponsored by the United Nations and other international organizations. Examples are the UN/ECA Urbanization Reconnaissance Mission which visited several of the chief cities in Africa in preparation for a workshop on urbanization to be sponsored by the United Nations in 1962; the meeting of experts on metropolitan planning, and the conference on decentralization of public administration, both convened by the United Nations. Through its Regional Office for the Americas, WHO took an active part in the work of the special committee—called the “Committee of Twenty-one”—set up by the Organization of American States to study the formulation of new measures for economic co-operation, and the planning of social and economic development in Central and South America.

There have been increased consultations at the field level between WHO and countries that, under bilateral agreements, are assisting others in health work, as in the case of the health aid being given by Canada and Israel to Nigeria and the Ivory Coast respectively.

As in previous years, assistance was given to governments in developing national health plans for specific periods, such as five or ten years. For example, in Malaya work being done, with assistance from WHO, to improve rural health services forms part of the country’s five-year plan for rural economic development. Most of those plans emphasize the need for decentralizing health services. The form and degree of decentralization and the distribution of responsibilities at national, regional and local levels depend on the social and economic status of each country and on its general system of administration.

In the African Region, special efforts have been made to provide advisory services adapted to the local needs of newly independent countries by the assignment of country public health advisers and area representatives. This work is reviewed further in Chapter 13.

In view of the increased need to provide such assistance to governments, the problem of recruiting competent and experienced public health administrators has become acute. Some solution might be found—in part at least—in the secondment by national health administrations of senior and experienced members of their staffs to WHO for shorter or longer periods.
The solution of many problems of organization and administration requires systematic investigation of their constituent elements. Two scientific groups on research in public health practice, one in 1960 and another in 1961, recommended lines for research.

Pilot studies on the cost and means of financing medical care services were completed in Ceylon, Chile, Czechoslovakia, Israel, Sweden and the United States of America. A first draft report on the findings was discussed in December by an inter-agency working party, which was attended by representatives from the United Nations and its Economic Commission for Europe, ILO, WHO and the International Social Security Association. The main purpose of the study was to establish a workable methodology for the study of health costs. The draft report sets out the economic concepts and defines the medical terms used in this study; it describes and analyses the systems of medical care in the six participating countries. In spite of the difficulties encountered, it appears that a system of classification of health service expenditure has been established, which would allow governments to study trends in health expenditure.

A beginning was made with two other studies. One on hospital utilization is to determine the patterns of hospital utilization suitable in different circumstances of social structure, available manpower, outpatient facilities, patterns of finance, etc. Two questionnaires were designed, one for basic country-wide data, the other for selected individual hospitals. They will be tested first in the European Region and then reconsidered for wider application. The second study is on the integration of curative and preventive services; its main object is to test the efficacy and economy of the integrated system as compared with the more traditional systems.

A second report on the world health situation was compiled following substantially the pattern used in the First Report.\(^1\)

### Health Education

The planning, establishment and use of health education services as an integral part of specialized field projects and of comprehensive health services was again a main element of the Organization’s co-operation in this field with Member States. Health administrations are becoming more aware of the value of health education as a means of securing effective local participation in health projects and programmes; often, however, progress is still slow because of the shortage of professional workers in health education and because of inadequate facilities for giving training in health education to the categories of health workers who could put it to best use—medical practitioners, nurses, midwives and sanitation personnel.

As in previous years, fellowships were awarded for the training of professional health education personnel, most of whom were appointed to technical health education services of national ministries of health, state or provincial health administrations, or to institutes of hygiene or schools of public health. Assistance was also given to central, provincial, or state health departments in Cuba, Cyprus, Syria, Iraq, Israel, Japan, Jordan, Malaya, Mexico, Nigeria, Spain, Thailand, and Turkey.

In WHO-assisted field projects, conferences, seminars and training courses, health education has received considerable attention, particularly in technical fields such as nutrition, maternal and child health, school health and environmental sanitation. It has been generally accepted that professional health education personnel, properly used, can be of considerable assistance in securing public co-operation for malaria eradication programmes. The regional malaria eradication training centre for the Americas, in Jamaica, has had on the teaching staff a professional worker in health education. The programme of the centre included training in practical methods of health education that can be used by various categories of malaria eradication personnel and other health workers. Assistance was also provided with health education in malaria eradication projects and training programmes in the Eastern Mediterranean Region, in Mexico and in Turkey.

The improvement of health education in schools and the preparation of school-teachers for that purpose were subjects in which WHO and UNESCO continued to collaborate closely. An annotated bibliography on school health education and teacher preparation for health education was prepared by WHO for publication by UNESCO. It includes annotated references to textbooks, reports, curriculum planning, selected health education books designed for school-age children, and journals. Again in co-operation with UNESCO, WHO convened technical meetings in Europe and the Western Pacific Region on teacher preparation for health education and on child health in schools.

National projects for improving health education in schools also received assistance. For instance, WHO provided advice and fellowships for a project in India, under the joint auspices of the ministries of education and health. A school education section was set up in the Indian Central Health Education Bureau, training courses were organized and measures taken in several states to promote health education in schools.

\(^1\) Off. Rec. Wld Hlth Org. 94.
In co-operation with the Soviet Union health authorities, a travelling seminar was arranged in the USSR. The participants, who came from seventeen countries, were qualified health education specialists, responsible for health education services in health ministries, and public health officers and epidemiologists concerned with health education aspects of training programmes and health services. The group visited various types of health education services in the USSR.

There was close collaboration with the International Union for Health Education, particularly in the planning and preparatory work for an international conference on health and health education, to be held in the United States of America in 1962. The Organization provided programme information on this conference to all its Member States and to the international non-governmental organizations in relations with WHO. In addition, assistance was given in the technical planning of preparatory meetings convened in some areas in advance of the conference sessions in Philadelphia.

Health Laboratory Services

In 1961 WHO gave assistance to twenty-six countries in the planning and organization of their laboratory services, in developing or strengthening laboratory work such as the production of biologicals, in the training of laboratory personnel and in furnishing equipment and reagents. In some instances this assistance was requested for national programmes of considerable magnitude such as the planning of national health laboratories in Islamabad (Pakistan) and the central public health laboratory in Riyadh (Saudi Arabia). In two countries—Laos and Sierra Leone—serological laboratories originally established as part of treponematoses control programmes have been developed with WHO assistance so that they may undertake the wider functions of central public health laboratories. Technical advice was also given for several rural health and community development programmes, which include laboratories.

A seminar on health laboratory services was organized in Manila late in 1960 for the countries and territories of the Western Pacific Region. Discussions centred on the planning and operation of laboratory services, the categories of laboratory staff required and their training, and the best use of assistance available from international and other agencies. A national laboratory service, grouping all laboratories, was considered indispensable to efficiency.

The publication of methods recommended for use by public health laboratories in the diagnosis of certain diseases was continued. Papers published in this series in the Bulletin in 1961 include studies on the laboratory diagnosis of leptospirosis, of gastroenteritis due to *Escherichia coli*, and of brucellosis in man.\(^1\)

In collaboration with the League of Red Cross Societies and the International Society for Blood Transfusion, preparatory work was started for a manual on the organization of a blood transfusion service. This is intended particularly for countries where such a service has yet to be developed. The preparation of manuals on techniques for the training of laboratory technicians was also started.

Steps were taken to extend the network of national blood grouping laboratories in Europe working in collaboration with the International Blood Grouping Reference Laboratory in London; at the time of reporting, nineteen governments had designated such national laboratories.

As part of the research programme on antibiotics, collaborative studies were organized among several laboratories concerning the standardization of methods for testing microbial sensitivity to antibiotics for clinical and survey purposes. WHO also provided a grant for the establishment of an international information centre on antibiotics at the Centre d'Etude et de Production de Substances d'Origine microbienne, at Liège (Belgium). The purpose of the new international centre is to facilitate studies on known and newly discovered antibiotics by collecting and distributing information to institutes and research workers interested.

Collaboration continued with the International Committee on Laboratory Animals; and with the International Organization for Standardization, with regard to laboratory glassware and related apparatus.

Maternal and Child Health

WHO's work on maternal and child health during the period reviewed was concerned particularly with the problems of prematurity, training for health services to mothers and children and a survey of the needs of children.

The first phase of the WHO study on birth weight, designed particularly to assist in deciding whether the current definition of prematurity (a birth weight of 2500 g or less) is equally valid in all areas, was carried out from 1958 to 1960. Data were collected on approximately 40,000 babies from 37 institutions in 18 countries and were presented to the Expert Committee on Maternal and Child Health, which met late in 1960 to consider the public health aspects of low birth weight.\(^2\) The Committee considered methods

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for determining, for individual countries or population groups, the birth-weight level at or below which newborn infants need special care, and reviewed in detail measures by which the birth of low-weight babies can be avoided. Some of those measures can be carried out by all countries, whatever the level of their technological development or the extent of their health services. Special care for babies of low birth weight does not necessarily mean incubator care; the needs of most of those infants can be very simply met in the hospital or in the home.

Many of the factors associated with low birth weight are still not fully understood, and the Committee indicated some of the more important questions for further study, field investigation and research. It is planned to continue the study for three years in two areas, one with a relatively low, and the other with a high, incidence of low birth weights, and to obtain data on the social and economic status of the families whose infants are included in the study.

WHO prepared a study on the health and welfare needs of mothers and children as a contribution to the world-wide survey on the needs of children carried out at the request of UNICEF in consultation with beneficiary countries, and the technical agencies concerned. The purpose of the survey was to determine the priority needs of children and so facilitate the preparation of long-term plans for meeting them. The WHO study 1 reviews the needs of children with regard to growth and development within their family and community, and in relation to nutrition, the control of disease, mental health, dental health, and the prevention of accidents. It also deals with health and social services for children. It is clear from the study that the health and welfare needs of mothers and children are inseparable from those of the family and of the community as a whole.

A study of UNICEF/WHO-assisted training for permanent health services benefiting mothers and children, undertaken by the Organization on the recommendation of the UNICEF/WHO Joint Committee on Health Policy, was completed during the year. The report, 2 which was transmitted by the WHO Executive Board to the UNICEF Executive Board in June, showed that much work has been done by governments with relatively little international assistance; and that the UNICEF/WHO-assisted training programmes have contributed to raising the standards of care and the quality of work. However, there is still need, especially in the developing countries, to strengthen and expand further the training of medical, nursing, midwifery and auxiliary personnel for permanent health services for mothers and children. It is therefore recommended that the relevant joint activities of UNICEF and WHO should be continued and extended, and suggestions are made as to how this might best be done. (For findings on the training of nurses and midwives, see also page 29.) The study was concerned primarily with paediatrics in medical and nursing education; the teaching of obstetrics and midwifery to doctors, nurses, midwives and auxiliary personnel will be dealt with in a further study.

The International Children's Centre in Paris (ICC), which receives assistance from UNICEF, organizes many courses and meetings in which WHO has a direct interest and for which WHO awards fellowships. WHO is able to present its views, particularly on the Centre's training and research work, by participating in the meetings of its Technical Advisory Committee. One of the most important of those was the meeting in April 1961 at which was discussed the Centre's programme of work for the years 1962-1966.

WHO also participated in the ICC Seminar on Crèches, in December 1960. The work of day-care centres and the care of children in institutions raise health problems to which WHO has been giving greater attention, particularly in view of the accelerated growth of industrialization and urbanization, and the increased number of women who work outside their homes.

Nursing

The rapid expansion of health services in all countries creates a pressing demand for more and better trained nursing and midwifery personnel, to whom increasing responsibility may be given. As the following examples show, the Organization's assistance is adapted to the particular needs of the countries concerned.

In some of the newly independent countries of Africa, WHO has assisted in an initial survey on which recommendations for long-term planning will be based. In other countries—for example, Cambodia, Nepal and Sudan—assistance is being given both to improve basic schools of nursing and midwifery and to develop and improve the clinical services in hospitals and in public health as fields for teaching and practice.

In many countries the Organization continued its assistance in establishing post-basic and post-graduate courses, as a means of meeting the persistent need for nurses trained in teaching and administration. Plans were made to set up two centres of post-basic nursing education in Africa, where the shortage of senior personnel is most acute.
nurses is particularly acute. As competent and qualified nurses become available, opportunities are given for them to take their part in long-term planning of national nursing services and education. In several countries WHO is helping national staff with this essential planning. In Indonesia, for example, a WHO nursing adviser worked in 1961 with the Indonesian national director of the Division of Nursing, which was established by government decree.

Improvement in a country’s economic conditions opens a wider selection of occupations to women. Nursing and midwifery therefore have serious competitors and need to be able to attract good candidates. Schools of nursing with a sound educational programme attract more candidates able to take responsibility than those of lower standard. With WHO assistance the Higher Institute of Nursing, University of Alexandria, United Arab Republic, has been firmly established and accepted. At the time of reporting, forty-seven nurses had graduated from the Institute and were being given further training and experience for responsible posts. There were ninety-seven applicants for the sixty places for students in 1961. In several other countries, too, plans were made to have at least one school of nursing of university standard.

A report, issued during the year, on the recent survey of schools of nursing in Central and South America shows some encouraging trends in the ten years since the original survey was made. The qualifications for admission have been raised; more schools are connected in some way with universities; more schools are directed by nurses; more schools have full responsibility for student training; and physical facilities such as libraries, classrooms, laboratories and student residences have been improved. The chief needs are for further improvements in the basic curriculum to include more attention to public health and psychiatric nursing and some preparation and experience for teaching and administration. Reports from other regions indicate that these findings are broadly valid there also.

A study of the training of nurses and midwives for work in maternal and child health was completed during the year as part of the broader UNICEF/WHO study of jointly assisted training for permanent health services benefitting mothers and children. Twenty training programmes were visited in five countries in the course of the survey. The findings confirm the need for continued and extended help for the training of nurses of all grades, and mention particularly the present weaknesses at the supervisory and administrative levels in both hospitals and health services. The report recommends further improvements in methods of teaching and in the basic curriculum to attain a better integration of public health into the teaching and close co-ordination of theory and practice (see also page 28).

In midwifery, also, the development of training in administration and teaching received particular attention. In the Americas, for example, the first of a series of courses at the Graduate Nursing School of the University of Chile was given to midwives already employed in the national health service to enable them to serve as instructors in further courses and in schools of midwifery. In the Philippines, WHO and UNICEF collaborated in a joint evaluation of midwifery services, with a view to further improving the standard of midwifery training, particularly for senior posts.

Regional seminars and conferences on various aspects of nursing again provided opportunities for exchanges of information and ideas. The first seminar on nursing in the Eastern Mediterranean Region was held in Lahore, West Pakistan, and discussed problems met in organizing the provision of comprehensive nursing care. In the Western Pacific Region, a seminar in Tokyo, Japan, and in the South-East Asia Region, a conference at Kandy, Ceylon, reviewed ways of improving nursing administration. In the Americas, two seminars for directors of schools of nursing considered changes required in the curriculum to relate it more closely to the services required of nurses. In the European Region, a conference on the role of the nurse in mental health practice discussed new trends in the care of psychiatric patients, both inside and outside hospital.

Two numbers on nursing were published during the year in the Public Health Papers series. The first, Aspects of Public Health Nursing, contains a number of articles on some aspects of the training and the work of public health nurses in various parts of the world and sets out some general principles on which any public health nursing service should be based. It also discusses the proper use of auxiliaries to relieve nurses of certain tasks without prejudice to the quality of the service as a whole. The second publication in the series, Basic Nursing Education Programmes

—a Guide to their Planning,¹ suggests methods for appraising existing schools of nursing, assessing the needs of the community and planning appropriate nursing education, both on a country-wide scale and for individual schools. Work continued on the guide for staffing public health nursing services and outpatient departments, which was referred to in the Annual Report for 1960.

Studies are required to determine the actual needs of the community for nursing services, and the most efficient forms of training and administration.

MALARIA ERADICATION:
REGIONAL TRAINING CENTRE, CAIRO

The regional training centre in Cairo, established with WHO assistance, provides specialized training for malaria eradication workers from all over the Eastern Mediterranean Region.

(1) A student from the centre, out collecting anopheles larvae, draws specimens into a test-tube for examination.

(2) Students at work in the larva breeding room under the supervision of a WHO entomologist.

(3) Students are shown how to transfer mosquitos to exposure tubes for insecticide resistance tests.

(4) A spraying squad from the centre gets ready to leave for an operational area near Giza.
REHABILITATION OF THE HANDICAPPED

Morocco

In collaboration with the League of Red Cross Societies, ILO and UNICEF, WHO continued its assistance to the Government of Morocco in rehabilitating the victims of the widespread outbreak of paralysis that occurred in September 1959 as a result of the adulteration of cooking oil.

(1) At the rehabilitation centre in Khemiset, Morocco, one of the half-dozen centres set up to care for the victims of the TOCP poisoning, young patients exercise with a ball.

(2) Treatment at the Khemiset centre includes sessions of infra-red ray therapy.

(3) At the Sidi-Kacem rehabilitation centre a Moroccan nurse leads a group of patients in foot exercises.

(4) A Red Cross physiotherapist tests the leg reflexes of a young patient at the rehabilitation centre in Meknès.

(5) At the nursing school in Rabat a WHO physiotherapist teaches Moroccan physiotherapy auxiliaries the use of various physiotherapeutic appliances.
Spain

A national programme for the rehabilitation of handicapped children is being developed by the Spanish Government with assistance from UNICEF and WHO.

1. At the rehabilitation centre in Valencia, which deals mainly with poliomyelitis cases, a WHO physiotherapist shows the mother of an ambulatory patient the exercises he must be given at home to supplement those at the centre.

2. Children with paralysis of the lower limbs are given hydrotherapy in the pool at the Valencia centre.
DEVELOPMENT OF HEALTH SERVICES IN SUDAN

The blood bank established with WHO assistance in Khartoum was officially inaugurated on 31 December 1960 and is now being run by Sudanese staff. Assistance in the development of nursing education continued throughout the year.

(1) Water distillation apparatus in operation at the blood bank, Khartoum.
(2) Blood collection in Khartoum.
(3) First-year students at the new school of nursing in Khartoum.
(4) One of the second-year nursing students doing her practical training at the Khartoum General Hospital.
Chapter 5

Health Protection and Promotion

Cancer

In cancer a principal concern of the Organization is the stimulation of research, and during the period under review much attention was given to the development of a co-ordinated plan for this aspect of the work.

Among the malignant neoplastic diseases of man and animals, the leukaemias are an important group. Although the diseases in man and animals have many similarities, medical and veterinary investigators have been working in relative isolation. Full advantage has not yet been taken of the fact that the condition in animals lends itself more readily to epidemiological, genetic and therapeutic studies.

To stimulate such studies and to co-ordinate more closely the work on leukaemias in man and in animals, WHO organized a conference in Philadelphia early in 1961 on comparative studies in leukaemias. The conference, which was attended by some thirty medical and veterinary oncologists, reviewed the present knowledge of animal leukaemias and proposed future studies, in particular, studies that would require international co-ordination. Recommendations were also made for uniform technical criteria and the standardization of nomenclature.

WHO convened a scientific group late in 1961 to advise on co-ordinated research on human leukaemias and other malignant neoplastic diseases of the haematopoietic cells. Among the items discussed was the importance of establishing a nomenclature and classification of those diseases acceptable to haematologists and cancerologists in all parts of the world as a basis for epidemiological studies on a national or international scale. The group also considered such studies in relation to the development of research programmes, the present data of epidemiology and the current knowledge of the leukaemias, and the epidemiological aspects of genetics and radiation. Mention is made on pages 38-39 of a study on the relationship of human leukaemia to radiation exposure.

An expert committee on chemotherapy of cancer reviewed the present position and trends of experimental and clinical research, and made suggestions for the co-ordination and standardization of the biological testing and clinical assessment of new drugs. A tentative list was drawn up of neoplasms sensitive to chemotherapy, showing which of the known agents was indicated for each case.

WHO has co-operated in preliminary work for various epidemiological studies. Thus, in the Americas, the Organization helped to plan a co-ordinated regional statistical study of cancer, cardiovascular and other chronic diseases. In the Eastern Mediterranean Region it prepared plans for two new studies—one in Israel on the comparative incidence of cancer in several ethnic groups, the other in the United Arab Republic on the comparative incidence of cancer sites and the relation of bilharziasis to bladder cancer. In preparation for this second study, plans have been made to give assistance with a cancer registration system at Qalyub.

Further progress was made in two studies undertaken with WHO assistance following recommendations made in 1959 by the Study Group on Epidemiology of Cancer of the Lung. In Ireland the effect of social factors and air pollution is being investigated in a pilot study in Dublin and Belfast where samples of the population were surveyed. A first evaluation of the preliminary results has shown that the methods used were satisfactory and would be suitable for an extension of the study to other cities. For the second study—on the reasons for the important difference in the mortality rates from lung cancer in Finland and Norway—a survey was planned of environmental factors of samples of population in the two countries.

It has been suspected, also, that the incidence of lung tumours in dogs living in towns may be higher than in those living in the country. Since it is possible that such a phenomenon may be paralleled in human oncology, a study of methods has been started, as a preliminary to epidemiological studies on dogs in different types of environment.

Work continued in the international reference centres for lung tumours, soft tissue tumours and breast tumours which were set up in 1958 with help from WHO in Oslo, Washington, D.C., and London. Negotiations for a new international reference centre for leukaemias and for a centre for oral tumours were continued. Two European centres were set up under WHO auspices late in 1960 to provide cancer research institutes with experimental materials: one for the provision of frozen transplantable tumour strains, at
Stockholm, and the other for the provision of tumour-bearing laboratory animals, at Amsterdam.

Work on the carcinogenicity of food additives is described on page 36.

WHO was represented at the First International Congress on Exfoliative Cytology, in Vienna, the Subcommittee for Geographic Pathology of the International Union against Cancer, at Kampala, Uganda, and the European Conference on Tumour Biology, in Warsaw.

**Cardiovascular Diseases**

Lack of knowledge of the factors that give rise to the major cardiovascular diseases limits the formulation of protective and preventive public health programmes. WHO's work on these diseases, therefore, has been mainly concerned with the promotion of research.

The examination of autopsy material should provide basic information on the extent of atherosclerosis of aortas, coronary arteries, and possibly other vessels, in different communities, age and occupational groups. Comparison with the clinical diagnosis should also be informative. During the year WHO co-ordinated the preparations for combined pathological and epidemiological studies of atherosclerosis to be carried out initially in Czechoslovakia, Sweden and the USSR and possibly to be extended later to other areas. Preliminary work, in which pathologists from several countries took part, included testing definitions, criteria and techniques, with a view to the adoption of methods of grading autopsy material suitable for use in international epidemiological studies. The European study is closely related to the current inter-American atherosclerosis project for investigations into the prevalence of atherosclerosis in a number of countries in North, Central and South America.

International epidemiological studies of hypertension and ischaemic heart disease cannot be undertaken successfully until standardized methods and techniques to ensure comparability have been devised and accepted. During the year WHO carried out a study of diagnostic criteria, and of problems of methodology and classification for discussion by a scientific group in December 1961. The group assessed the methodological studies and trials in progress, indicated where trials were needed, defined the areas in which there is international agreement, and advised on ways of promoting the general adoption of minimum methodological criteria for use in epidemiological research on these diseases.

Cardiovascular diseases in animals offer an abundant source of material that can throw light on human disease. With a view to making more use of this source, WHO convened a scientific group to advise on profitable lines of research and to recommend a few specific subjects suitable for international co-ordination. The group proposed surveys of atherosclerosis and allied conditions in animals and birds used for food, examination of animal hearts in areas where cardiomyopathies are frequent in man, and other studies likely to yield information of interest for human cardiology. Collaborative studies on those problems have been arranged in several laboratories and interesting results have already been reported. For example, a fair proportion of slaughter pigs have shown a degenerative lesion in the aorta, and some have fibrositis of the coronary arteries.

In spite of the obscure etiology and pathogenesis of arterial hypertension and ischaemic heart disease, there are indications that certain health and medical care measures may change the usual course of these diseases. The Expert Committee on Arterial Hypertension and Ischaemic Heart Disease was convened in October 1961 in order to evaluate these measures. The Committee proposed a simple classification of essential hypertension and ischaemic heart disease suitable for screening, surveys and research studies; and recognized that no effective means of preventing the occurrence of these diseases was yet available, and that the measures at present in use were not simple and might affect seriously the personal and social activities of the subject. It indicated means by which the present situation could be clarified and suggested important fields in which research should be concentrated.

Although chronic cor pulmonale is now recognized as being an important chronic disease and cause of death in certain areas, adequate methods for its diagnosis have only been established very recently by physiologists, and still need simplification before they can be widely used. The routine mortality statistics compiled according to the International Classification of Diseases provide no information on the frequency of chronic cor pulmonale as the condition is not properly identified, and the lack of agreement as to terminology has hampered the communication of results of investigations. In view of the need for a unifying statement on the syndrome, WHO convened, in October 1960, an expert committee which defined chronic cor pulmonale in terms of right ventricular hypertrophy, provided a tentative classification, and described broadly the pathophysiology of cor pulmonale and criteria for diagnosis. The committee's report also contains a section on prevention and treatment, and suggestions for further research. The report of the expert committee has been brought to

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the notice of cardiologists in all parts of the world by the International Society of Cardiology, with which WHO has continued to co-operate.

Recommendations of these expert committees were considered by the Sub-Committee on Classification of Diseases of the Expert Committee on Health Statistics which met in Geneva in November 1961 as a preliminary to the revision of the International Classification of Diseases.

Dental Health

In recent years increasing numbers of dental surveys have been carried out with the dual purpose of investigating the epidemiology of dental disease and conditions, and of obtaining a basis on which dental services can be planned. The rapid growth in the demand for dental care and the shortage of trained personnel make such planning particularly necessary if the limited services available are to be used to the best advantage. However, very few of the results of the surveys have been comparable, owing to the different terminology, diagnostic criteria, and examination and reporting methods used. There is therefore a clear need for international standardization of dental terms, and recently the subject has been closely examined by a special commission of the International Dental Federation, in collaboration with WHO.

The international standardization of terms and methods used in reporting dental diseases and conditions, particularly for public health purposes, was discussed by an expert committee on dental health that met in November 1961.

In its report, the committee specified the basic data that it considered important in surveys. It dealt with the subject under three main heads: (1) dental caries, (2) periodontal disease, and (3) handicapping dental anomalies (malocclusion, cleft lip and palate, and loss of all natural teeth); and it recommended indices and diagnostic criteria to be used in public health surveys and in epidemiological studies. The recommended examination procedures and method of reporting the data were kept as simple as possible, in order to encourage their wide use and the adoption of acceptable and comparable standards. The committee also considered the planning of surveys and the training of the examiners required.

An indication of the extent to which the dental services fall short of the demand for dental care is given in the World Directory of Dental Schools, which shows the ratio of registered dentists to population in each of the seventy countries listed. The striking shortage in most countries is not being remedied because the growth in population is outstripping the expansion of training facilities. The Directory, which gives details of the dental schools, curricula, conditions of admission and of licence to practise, contains information not readily available elsewhere on the dental education in different countries, and it has been well received.

Some countries are expanding their dental services by a greater and more efficient use of dental auxiliaries for some types of work. In Sudan, for example, where there is a great shortage of dental surgeons, WHO helped to establish a dental assistants' school at Omdurman, which gives two-year training courses.

Dental health was the subject of the technical discussions at the Regional Committee for the Western Pacific, in September 1961 in New Zealand. The subject was dealt with under two headings: the significance and importance of dental disease, with special reference to the problems of the Region; and the organization and administration of a dental health service and the use of trained personnel, including auxiliaries. A special session was held at the fluoridation plant at Lower Hutt City. There is an impressive volume of evidence in favour of the view that water fluoridation will reduce the incidence of dental caries.

In the period under review, WHO has provided advice on dental health to a number of countries: to Ghana and Nigeria for the further development of dental services generally, to countries in the Americas on the fluoridation of water supplies, and to Poland on dental health services for schoolchildren. This last project, for which UNICEF and WHO have jointly provided assistance, is described in Chapter 16 (see page 85).

Dental health has also formed part of projects concerned primarily with more general subjects. Thus dental health services for children was one of the topics discussed at a symposium on maternal and child health problems in Europe, and the incidence of dental caries was studied during a nutrition survey in French Polynesia.

The International Dental Federation has continued to co-operate closely with WHO.

Mental Health

In the mental health programme, emphasis is shifting to means of reaching larger numbers of those in need of mental health care. An expert committee on mental health, meeting late in 1960, paid particular attention to the organization of mental health services that would provide wider coverage for populations. The mental health activities of WHO from 1949 to 1960 were reviewed, and national advances in mental health programmes during the same period were
considered on the basis of replies to a questionnaire on mental health resources, plans and priorities that had been addressed to members of the Expert Advisory Panel on Mental Health. The Expert Committee's report includes recommendations on the training of mental health personnel and other health workers, on information programmes for members of certain other professions and for the general public, and on topics of high priority for research.

Even the best-provided countries are still very short of trained mental health personnel, but it is increasingly appreciated that general physicians and medical specialists other than psychiatrists can do much in the prevention of psychiatric disorders, as well as in early treatment of mental patients and their rehabilitation. The roles in mental health care of two categories of physician in close contact with the community—the public health officer and the general practitioner—were discussed by an expert committee on mental health which met late in 1961. Consideration was given to the actual and potential contributions of these "community doctors" within existing patterns of mental health care in various countries. Requirements such as training, and co-operation with medical and other administrative personnel and agencies were examined. Attention was concentrated on postgraduate training and refresher courses, since the undergraduate teaching of psychiatry had been discussed by a previous expert committee. A selection of the papers presented to that committee was published during the year in the Public Health Papers series, with the title Teaching of Psychiatry and Mental Health.

Certain non-medical workers with training in mental health can make an important contribution to mental health services. A special study was conducted during the year on the place of the psychiatric social worker in the mental health team.

In furtherance of the programme on the epidemiology of mental disorders, started in 1956, an inter-regional conference on techniques of surveys on the epidemiology of mental disorders was convened at the end of 1960 in Naples. The discussions focused on three main topics: sample surveys of prevalence; surveys based on hospital populations; and studies of the influence of social factors on psychiatric pathology and their interaction with genetic factors.

A critical review of the potentialities and limitations of epidemiological investigations of mental disorders was prepared. It brings together a vast amount of material on the subject, including data from Asia and Africa.

A survey was conducted in Israel as a preliminary to a programme of epidemiological research on mental disorders in that country.

A paper on the epidemiology of mental subnormality was circulated to a number of specialists for comment. It deals with the classification of mental deficiency, nomenclature, etiology, and facilities for care and treatment in countries at different levels of development. It also contains recommendations for future surveys.

Special attention was given to the possibilities of carrying out comparable epidemiological studies on epilepsy. An interview schedule for international surveys on epilepsy and kindred disorders was drafted in October 1960, and a comprehensive description of the clinical manifestations was later prepared for use as a guide in classifying cases into diagnostic subgroups. In September 1961, a version of the schedule, amended in the light of pilot surveys, was discussed at a meeting in Rome sponsored by the International League against Epilepsy, the World Federation of Neurology and WHO. Questions discussed included type and amplitude of surveys and preparation of interviewers. It was agreed that further pilot studies co-ordinated by WHO should be the next step in obtaining information on the incidence, prevalence and evolution of convulsive disorders in different countries.

In preparation for the technical discussions at the Fifteenth World Health Assembly, in May 1962, on the subject "Mental Health Programmes in Public Health Planning", a suggested outline and reading list for preliminary discussions was sent to Member States and appropriate non-governmental organizations. Their reports are to be consolidated in a background document for the main discussions.

Nutrition

The joint FAO/UNICEF/WHO programme for the development of protein-rich foods continued throughout the year. Accounts of this programme and of the work of the Protein Advisory Group which guides it are to be found in previous annual reports. Reference is made to a study (in the Annual Report for 1960) of the use of pulses for child feeding. This study has progressed sufficiently for the Protein Advisory Group to be able to make comprehensive recommendations. The Group has considered the current methods of eliminating the toxic substances that occur in some pulses and recommended further

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work to ensure that such pulses are safe for child feeding.

There has been increased emphasis on the use of fish products, and it now appears that the industry is interested in developing methods of processing the raw material in order to obtain a product suitable for consumption by young children. Since those products are likely to contain varying amounts of fat, the problem of rancidity, and its effect on the nutritive value and on the general safety of these products for human consumption, is now being studied.

For the purposes of this programme, accurate methods of determining the nutritional value of dietary proteins are essential. There has been a substantial measure of agreement in the results obtained in most investigations, but there have also been discrepancies. In consequence, the Protein Advisory Group has planned further collaborative studies in order to obtain agreement on practicable and reliable methods for the nutritional evaluation of dietary proteins.

Lack of trained staff—a great obstacle to the development of nutrition programmes in many parts of the world—is a difficulty which FAO and WHO have been trying to overcome since the beginning of their work in nutrition by organizing courses and by providing fellowships. In recent years it has become UNICEF policy to provide wider assistance in the development of nutrition programmes, and a good proportion of the funds available is to be devoted to strengthening the training of nutrition workers at different levels. A preliminary step in this programme was to obtain a general picture of the training now being undertaken and the opportunities for its improvement and expansion.

A survey of training in nutrition, which is part of a general survey of the training of health personnel in developing countries, was therefore undertaken by FAO and WHO in Africa, Latin America, and South-East Asia. Organization, length and type of training, categories of trainees, curricula, and the strengthening of nutrition teaching in basic curricula of medicine and agriculture were considered in detail. A comprehensive report on the findings of the surveys, with recommendations for future action, was prepared and communicated to the UNICEF Executive Board.

Following a request from the Inter-Governmental Maritime Consultative Organization (IMCO) for an expert opinion on the consumption of sea-water by castaways, WHO convened a small group to consider the question. The substantial conclusion was that shipwrecked mariners should not drink sea-water or use it to eke out scanty supplies of fresh water. The report, which was transmitted to IMCO, contains other advice about survival procedures.

The Joint FAO/WHO Expert Committee on Nutrition met in Geneva and reviewed progress in the nutrition work of the two organizations, examined current activities and made recommendations for future programmes. Items that received special attention were the development of programmes, assisted by FAO, UNICEF and WHO, for combating malnutrition by expanded and improved food production and education, the promotion of protein-rich foods for child feeding as recommended by the Protein Advisory Group, and the organization and establishment of national nutrition services. Other subjects considered were the effect of nutrition on pregnancy and lactation, the public health significance of marasmus, group feeding programmes, especially for workers, and data on food consumption and nutritional status as indicators of levels of living.

Many people fail to meet certain current recommended allowances with respect to calcium, but, on the other hand, there is little convincing evidence of specific disabilities attributable to dietary calcium deficiency. As considerable uncertainty exists and conflicting views are held on the amount of calcium required, and as large-scale and sometimes expensive programmes for the fortification of foods with calcium would be needed in many parts of the world to bring the levels up to some of the standards now recommended, a joint FAO/WHO expert group was convened to consider the calcium needs of different population groups. One of the main questions discussed was whether the high levels of calcium currently recommended could be justified in the light of present knowledge.

Information available was found inadequate to provide unequivocal answers; but the group was of the opinion that the current allowances were on the high side. The group also felt that it would be inadvisable to recommend specific figures for calcium requirements under different physiological and environmental conditions. It reviewed the present knowledge on the effects of high and low intakes of calcium on the physical development and health of the population and recommended tentative ranges of "practical allowances" for infants, children, adolescents and adults. It also suggested investigations designed to fill the gaps in present knowledge.

Collaborative investigations on the etiology of iron-deficiency anaemia were started during the year.
Studies were undertaken in India, South Africa, and Venezuela, on the availability of dietary iron for haemopoiesis, tissue stores of iron and the relation of hookworm infestation to anaemia. Trials in India of preventive measures have indicated the possibility of using the maternal and child health services and antenatal clinics for the control and prevention of anaemia associated with pregnancy.

Investigations into the epidemiology of xerophthalmia and keratomalacia and into the prevalence of different types of anaemia were planned.

At the request of UNICEF, a report on nutritional needs of children and how they can be met was prepared in association with FAO.

**Food Additives**

The evaluation of the carcinogenic hazards of food additives and food contaminants was discussed at a meeting, in December 1960, of the Joint FAO/WHO Expert Committee on Food Additives.\(^1\) The Committee reviewed the available evidence on the alleged carcinogenicity of a number of such substances, and suggested suitable testing procedures on rats and mice. It recommended that information available on the biological effects of food additives and contaminants should be evaluated periodically and lists published indicating any major risks (including carcinogenicity) and the estimated safe level of total daily intake. The safety level for food additives is a relatively new idea, and its observance should lead to greater uniformity of practice in different countries on the permitted quantities of additives.

The contamination of food by pesticide residues was considered at a meeting in October 1961 of experts designated by FAO and WHO. The meeting discussed the measures taken by various countries to prevent such contamination, tolerance limits, and the toxicological studies required before pesticides are widely used.

The toxicity of a number of antimicrobials and antioxidants was considered by the Joint FAO/WHO Expert Committee on Food Additives at its meeting in June 1961. The Committee recommended maximum daily consumption limits for most of the substances and advised that the use of certain others in food should be discontinued. The preservation of food by radiation was considered by the Joint FAO/IAEA/WHO Technical Meeting on the Evaluation of Wholesomeness of Irradiated Foods, which met in October 1961.

**Social and Occupational Health**

A study of the nature and extent of the health problems of seafarers and the health services available to them was completed early in 1961, and its results were discussed later in the year at a meeting of the Joint ILO/WHO Committee on the Hygiene of Seafarers. The study was based on the replies to a questionnaire which WHO had compiled and circulated to Member States and on information collected during visits to fifteen major ports. After considering the ways in which present services could be improved, the Committee made specific recommendations regarding medical examinations, medical services on board ship, services on shore, medical records, and coordination of services. Services on board, it agreed, were generally adequate where a surgeon was carried. It considered that where a ship had no surgeon on board special attention should be given to the three medical aids at sea—medicine chests, medical guides and the use of radio in emergencies—and to the training of lay medical attendants. The Committee's report\(^2\) stresses the need for a coordinated scheme incorporating those three medical aids and recommends that ILO, WHO and the Inter-Governmental Maritime Consultative Organization (IMCO) should prepare as a matter of urgency an international scheme for providing medical advice to ships at sea.

Late in 1961 an eight-week inter-regional training course on occupational health, organized jointly by ILO and WHO, was held at the High Institute of Public Health, Alexandria. Its main purpose was to study ways of promoting and maintaining a high degree of physical, social and mental well-being among employees in newly industrialized countries. It was attended by physicians, engineers and chemists currently engaged in occupational health work in seventeen countries. Both theoretical and practical training were given in occupational health, and the course included a number of field visits. The subjects studied included a wide range of occupational factors leading to fatigue, absenteeism, labour turnover, accidents, psychoneurosis and occupational diseases—all problems that are increasing with industrialization.

Accident prevention was stressed in the Organization's programme during the year. It was the theme for World Health Day and the subject of a special issue of the magazine *World Health* published for the

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occasion. Although in some countries accidents cause more deaths than any single illness except cancer and cardiovascular disease, they have been studied less than any fatal disease of equal gravity, and it is only recently that scientific research on this subject has been undertaken.

A study on road accidents for publication in the *Public Health Papers* series was in press at the end of the year. It gives an account of the epidemiological features 'characterizing motor traffic accidents, discusses the causes of traffic accidents in relation to the road, the vehicle and the road user (pedestrian and driver), examines the importance of alcohol in traffic accidents, and makes suggestions for preventive measures and for further research. A corresponding study on home accidents was also in course of preparation.

Further progress was made in assisting countries to improve their medical rehabilitation services, with continued emphasis on training the required technical personnel locally. Governments are showing increasing interest in the prosthetic and orthotic field, and particularly in ensuring an adequate supply of orthopaedic aids and appliances, without which rehabilitation of the handicapped is often unnecessarily slow. Thus in Pakistan assistance was given by UNICEF and WHO in setting up a prosthetic workshop, and a similar project was in operation in Chile.

Rehabilitation of the handicapped was the subject of an ad hoc inter-agency meeting held at Geneva during the year and attended by representatives of the United Nations Bureau of Social Affairs, UNICEF, ILO, UNESCO and WHO; the International Society for Rehabilitation of the Disabled, the World Confederation for Physical Therapy, the World Council for the Welfare of the Blind, the International Union against Tuberculosis and the International Union for Child Welfare were also represented. The meeting considered the problems of achieving integration of the different aspects of the total rehabilitation process (medical, educational, vocational etc.) and of improving programmes and facilities for the training of rehabilitation personnel. It reviewed the practical experience of different agencies, including WHO, in providing international assistance in the rehabilitation field. Finally, it assessed the progress made since the last such inter-agency meeting, held in 1958, and reviewed in general terms the plans of the various agencies for the next two years. It was noted that activities had been stepped up considerably and that the number of requests for assistance in rehabilitation was increasing.

The International Diabetes Federation and the International League against Rheumatism, both of which are in official relations with WHO, held their respective quadrennial congresses during the year. They adopted resolutions, which were officially communicated to WHO, expressing the wish that the Organization should undertake more activities, including research, in the fields of diabetes and rheumatic diseases.

**Radiation Health, Radiation Medicine and Human Genetics**

WHO's work on radiation health has been chiefly directed to helping health authorities to develop their national programmes in regard to ionizing radiation, in which public health authorities have both broad and specific responsibilities. The scope of this work has been wide, ranging from consideration of fundamental questions, such as the relative place of radiation hazards among other dangers to health, to the details of design of medical X-ray equipment used in projects assisted by UNICEF and WHO. It is hoped that WHO's interest in the design of medical X-ray equipment will contribute to a steady further improvement of radiation protection in medical X-ray apparatus generally. As medical radiation is one of the largest sources of man's exposure to radiation, it is clear that this hazard should be kept at the lowest practicable level.

A report was prepared for the Fourteenth World Health Assembly on the progress made by Member countries in developing and staffing their radiation control programmes, with particular reference to the responsibilities of national health authorities and of WHO. An earlier report to the Thirteenth World Health Assembly, on reducing radiation hazards before they endanger man's health, was published during the year in the *Public Health Papers* series. ¹

The Expert Committee on Radiation, whose members were drawn from a number of fields (radiobiology, genetics, toxicology, neurophysiology, occupational medicine and public health), considered at its meeting in October 1961 the question of radiation hazards as compared with other major health risks of modern life, such as air pollution, and the use of toxic and mutagenic materials in industry, medicine and everyday life. The aim was to place radiation in its true perspective as a public health problem.

The meeting on standardization of radiological dosimetry for radiation beams, convened jointly in April 1961 by the International Atomic Energy Agency, the International Commission on Radiological Units and Measurements, and WHO, defined special terms used in clinical dosimetry and discussed methods

of determining, by measurement and calculation, dose distributions in patients, and of recording clinical dosage. Recommendations were made to improve standards of accuracy and comparability.

At a scientific meeting on the diagnosis and treatment of acute radiation injury, which was held in October 1960 under the joint auspices of IAEA and WHO, and in which scientists from eight countries took part, the experience gained from serious radiation accidents in various countries was reviewed in the light of current research on the effects of large doses of radiation and of possible therapeutic approaches.

A joint FAO/IAEA/WHO seminar on the public health and agricultural aspects of radioactive contamination in normal and emergency situations was held in Scheveningen, Netherlands, in December 1961. The prime aim of this seminar was to acquaint participants with the measures that should be taken in the event of contamination of food, water, or agricultural land, or of individuals, as a result either of regular procedures such as the disposal of radioactive waste material or of accidents associated with nuclear reactors or the spilling of radioactive material.

The Organization is concerned also with the use of ionizing radiation and radioactive isotopes in health work. A symposium on the use of radioisotopes in the study of endemic and tropical diseases, jointly sponsored by IAEA and WHO, was held in Bangkok in December 1960. Experts in the medical uses of radioisotopes and experts in tropical medicine reviewed the results so far obtained with such applications of radionuclides. One object of the symposium was to show scientists from tropical countries what problems in tropical medicine might be successfully investigated with radioisotopes so that, in their own countries, they might initiate or extend clinical research work with these tools.

Late in 1961 FAO, IAEA and WHO convened a conference, at which several disciplines were represented, on the use of radioisotopes in animal biology and the medical sciences. Specialists engaged in radioisotope studies in animal biology and in investigations in medicine and the medical sciences discussed the methods used and the results achieved by such studies.

General genetics has in recent years become an advanced discipline, but the need for basic data in human genetics is very great. WHO is sponsoring a comparative study of congenital malformations, to provide information on the incidence of congenital abnormalities in different parts of the world. Differences in the incidence and patterns of the commoner malformations have been thought to be related to geographical and ethnic differences. The results of this survey are expected to indicate the localities in which particular questions should be studied in more detail. The data for the study are being collected from selected hospitals in different countries.

In December 1961 a small group of experts met in Rio de Janeiro to examine the possibilities of studying populations living in the areas of high natural radiation in Eastern Brazil. There are few opportunities of gathering data directly from man on the possible genetic and somatic effects of chronic low-level irradiation, and it was therefore considered that useful information might be obtained from human genetic studies in this area.

Human genetics is a rapidly expanding subject in which the need for special training is great. An expert committee on human genetics was convened during 1961 to consider the place of human genetics in the medical sciences and to make recommendations on the teaching of genetics in the undergraduate medical curriculum and in post-graduate training. In October 1960 an advanced laboratory course was organized at the Anatomical Institute of the University of Basle, Switzerland, on the basic techniques of human cell culture and chromosome cytology.

In all radiation work there is an acute need for trained health staff. IAEA and WHO co-operated with the Government of Japan in a training course in radiation health and safety which was held at the Institute of Radiological Sciences in Chiba City. The course was attended by participants from fourteen countries in the Western Pacific, South-East Asia and Eastern Mediterranean Regions. It dealt with the basic physical and biological principles involved in radiation health, problems in the medical and industrial use of X-rays and radioisotopes, the public health aspects of atomic radiation activities and waste disposal, and some of the health problems associated with atomic energy installations.

As practical radiation health work is greatly dependent on better understanding of the actions of ionizing radiation on living systems, assistance to research is taking an increasing and more fundamental part in the Organization's programme in this field. Much of this work is still at the preparatory stage. The preliminary planning and discussions of some research projects have already been mentioned above. A further instance
is the international collaborative study, sponsored by WHO, of the incidence of leukaemia among women treated with X-rays and radium for cancer of the uterine cervix. This five-year study of the relationship of human leukaemia to radiation exposure was planned at a meeting called by WHO in 1960 and put into operation in 1961 in clinics in a number of countries.

WHO gave grants to the International Commission on Radiological Units and Measurements, which is developing improved standards and units for the measurement of radiation as it affects health, and to the International Commission on Radiological Protection, for assistance in determining fundamental data on radiation exposure and exposure to radionuclides. Such data are necessary for the preparation of recommendations on maximum permissible levels and other measures of protection.

Until a few years ago, radiation was mainly used in medicine: now it is employed in a wide range of activities by which life and health may be affected. WHO is therefore now directly concerned with many such activities, often jointly with IAEA. For example, the two agencies have discussed the parts they could take in connexion with emergency assistance in the event of nuclear accidents, and the possibility of compiling a register of radiation exposures and radiation accidents to facilitate follow-up studies.

WHO also took part in many meetings of IAEA at which health questions were considered—such as the panel of experts on basic safety standards, the panel on radioactive waste disposal in fresh water, the panel of experts on the chronic toxicity of strontium-90, the panel on dose distribution of high energy radiation, the IAEA/IMCO symposium on nuclear ship propulsion, with special reference to nuclear safety, and the IAEA symposium on radioisotopes and radiation in entomology. In 1961 a WHO representative attended meetings of the IAEA Board of Governors and the General Conference, the panel review of the Agency’s manual on low-level waste disposal techniques, the panel on methods of monitoring radioactive waste disposal in the sea, the diplomatic conference, sponsored by IAEA in cooperation with the Belgian Government, on the liabilities of nuclear ships, the symposium on the detection and use of tritium in the physical and biological sciences, the conference on nuclear electronics, the symposium on whole body counting, and the scientific/legal panel on legal implications of radioactive waste disposal.

WHO took part in 1961 in the meetings of the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR). UNSCEAR, which among other things compiles and reviews information on radiation levels and the effects of radiation on man and the environment, asked WHO for information on the natural mutational load of human populations, and a paper on this subject was presented by WHO at the IXth session.

Close relations have also been maintained with other organizations concerned with radiation and with genetics. WHO participated in the FAO Expert Committee on Radioactivity Surveys in Food and Agriculture; two meetings planned jointly with FAO have already been mentioned. WHO representatives took part in a UNESCO symposium on initial effects of ionizing radiations on living cells; an international meeting on the role of administrations for agriculture, fisheries and food in radiological protection, organized by the European Productivity Agency of the Organization for European Economic Co-operation the sixth congress of the Italian National Nuclear Energy Committee; a colloquium on the relationship between the chromosomes and the sex chromatin at the University of Basle; the fifth congress of Médecins électro-radiologistes de Culture latine (Paris); a symposium on genetics of human populations in Israel; and the Second International Conference of Human Genetics (Rome). At the EURATOM symposium on the medical supervision of workers exposed to ionizing radiation, WHO presented a paper on blood counts and radiation work.
CHAPTER 6

EDUCATION AND TRAINING

In most countries the greatest hindrance to the development of health services and of communicable disease control is the shortage of trained personnel at all levels. For this reason the provision of training in some form is a major part of almost all the Organization's work of assistance to governments, and is mentioned throughout this Report. This chapter is therefore mainly concerned with the principles and methods in this varied and necessarily flexible training programme, in which the organization of conferences and other educational meetings, of courses and training centres, and the provision of internationally recruited teachers, fellowships and other forms of assistance are common elements. For instance, during the period under review, WHO organized courses in malaria and in virus diseases, in anaesthesiology and in leprosy, in social paediatrics and in tuberculosis control, in smallpox vaccine production and in radiation protection, and it again helped with professional training in nursing, environmental health and health education. These training activities were co-ordinated with the general educational programme of the Organization and with the particular form of assistance being provided to the government concerned.

Co-ordination has increased also in educational work done by two or more agencies of the United Nations family jointly or with other organizations. WHO participated in the planning of inter-agency surveys of educational needs in Africa—a co-operation commended by the Administrative Committee on Co-ordination (ACC). WHO prepared working papers for, and was represented at, the Conference of African States on the Development of Education in Africa—a co-operation commended by the Administrative Committee on Co-ordination (ACC). WHO prepared working papers for, and was represented at, the Conference of African States on the Development of Education in Africa, organized jointly by UNESCO and the Economic Commission for Africa and held at Addis Ababa in May 1961. At the invitation of the United States International Co-operation Administration, WHO technical officers discussed medical education at a joint conference held in Cairo in November 1960. To facilitate co-operation among agencies on education questions, the ACC has set up a Sub-committee on Education, in which WHO takes part.

The Organization's work on education has necessarily been influenced in each country by the level of education there and its general social and economic development; and this is particularly true of Africa. In eleven countries of Africa fact-finding surveys have been made of the current arrangements for the training of health personnel and of the possibilities for its expansion and more rapid development. The recommendations should lead to the promotion of training programmes as part of a long-term plan. In cooperation with ILO and UNESCO preparations are being made for other surveys of a few selected countries as part of a study of the problem of providing manpower in these countries for the many facets of their socio-economic advancement.

In the Republic of the Congo (Leopoldville) a special programme has been set up to increase medical manpower, especially by helping assistants médicaux to complement their training as physicians by study abroad and by enabling the faculty of medicine at Lovanium University to train more medical students. Of sixty assistants médicaux sent to France in 1960 for the last three years of medical studies, fifty-eight passed their examinations in July and October 1961. The United Nations has agreed to finance for the year 1961-1962 fifty-five additional assistants médicaux instead of the thirty originally planned. In October 1960 seven other undergraduate medical students from the Congo started their studies abroad. No fellowships were provided in 1961 for Congolese secondary school graduates to begin their medical studies abroad, since they are now able to study in their own country at Lovanium University. WHO assistance to Lovanium is designed to facilitate the attendance of Congolese medical students—twenty-five in 1960-1961 and fifty-five in 1961-1962. WHO has also supplied to this faculty seven visiting professors to maintain the teaching at a high level for those two years. Supplementing this assistance for medical studies, twenty qualified infirmiers were awarded WHO fellowships for specialized courses abroad in laboratory techniques, X-ray work and dentistry. In January 1962 six more infirmiers were due to start their training as entomology technicians.

WHO's educational programmes for medical personnel fall under three broad heads: post-graduate...
training in public health, undergraduate medical education, and the training of specialists. In each of these there have been several developments.

To assist post-graduate training in public health, fellowships have been given for formal post-graduate courses abroad, and professors of schools of public health have been enabled to visit countries from which some of their foreign students came. The educational programmes of the fellows have been appraised and reports from the professors analysed. The information so obtained was considered (as was mentioned in the Annual Report for 1958) by an expert committee which discussed the foreign student and post-graduate public health courses. Post-graduate training in public health was further analysed by the Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel, which, at its meeting in December 1960, considered "Recommended Requirements for Schools of Public Health". The main conclusions concerned common factors in the organization and administration of schools of public health, their required facilities and teaching staffs, the organization and content of their curricula, and their methods of teaching. This may prove to be a step towards reciprocal or international recognition of schools that meet the recommended basic requirements, and may open to their graduates possibilities for more advanced training elsewhere, such as would lead, for example, to a doctorate in public health. Such a move would reinforce the perceptible trend towards a wider international basis for training in the health professions, which, among other advantages, would make medical education more readily accessible to students and post-graduates seeking more advanced knowledge abroad. The Second Conference of Directors of Schools of Public Health in Latin America, held at Caracas in November 1961, discussed problems common to those schools and reviewed the curriculum for biostatistics in the light of trends in the teaching of that subject.

On undergraduate medical education, preparatory work was done for the meeting of the Study Group on Internationally Acceptable Minimum Standards of Medical Education, which took place at the end of 1961. The International Association of Universities co-operated in the preparation of background material for that meeting. Besides facilitating study abroad, the study group's conclusions should be useful for the planning of new medical schools and the revision of existing patterns.

Some countries have received WHO assistance in planning or reviewing their medical education. Advisory groups visited Tunisia in connexion with the planning of the proposed medical school at Tunis; Iraq, to survey the medical schools at Baghdad and Mosul; and selected medical colleges in India, to assist in planning or reviewing their systems of medical education.

An article published in the Journal of Medical Education reviewed internationally important trends in medical education.

The organizers of the International Congress of Paediatrics, to be held in Lisbon in 1962, have asked WHO to co-operate in the special session on the training of medical students in the preventive and social aspects of child health.

The training of specialists in various branches of medicine is receiving growing attention in many countries—particularly, but not exclusively, in newly independent areas. International specialists' associations and federations are taking a lively interest in this matter and are circulating decisions and recommendations designed to promote internationally a high level of proficiency in their several specialties. A joint meeting of WHO, the International Federation of Surgical Colleges and the League of Red Cross Societies (which are non-governmental organizations in relationship with WHO) discussed the possibilities of helping countries by means of teaching missions. At a meeting with the World Federation of Societies of Anaesthesiologists (another non-governmental organization in relationship with WHO) to discuss ways of improving standards of teaching anaesthesiology, consideration was given to the possibilities of supplying visiting professors on request to medical schools in different countries and of providing fellowships. WHO and UNICEF co-operated with the Institute of Child Health of the University of London and with associated training centres in other countries, in planning a course of advanced paediatric training in London.

The first edition of a World Directory of Dental Schools was published during the year (see page 33).

The training and use of auxiliary personnel in medicine, nursing, midwifery and sanitation were discussed by the Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel at its session of September 1960. This was followed in December 1961 by an inter-regional
conference on the same subject, attended by participants from countries of all regions and by WHO headquarters, regional and field staff. The principles set out in the report of the expert committee were considered as they apply at regional and country levels.

The need to increase the number of auxiliaries and improve their quality becomes more urgent as many new countries embark on expansion of their health services without either adequate resources in manpower or time to await the training of fully qualified personnel. It is certain that for many years most of these services must be carried on by auxiliaries under the supervision of a minimum number of professional staff.

At the same time, with the increasing subdivision of modern medicine into specialized techniques for which trained personnel are needed, the demand for subprofessional grades working in limited fields is constantly growing, as much in highly developed countries as in those at a less advanced stage. It is to be expected that the grades of auxiliary health workers will evolve into echelons of health services as well-defined and well-organized as those that exist among doctors and nurses. This means an established and fully recognized subprofessional cadre, offering satisfactory careers and, in some circumstances, individual opportunities for further education leading to professional qualification.

These principles are being applied in a number of training schemes assisted by WHO in several countries, mainly in the training of auxiliaries in general health and medical work, in nursing and in sanitation.

Travel Abroad for Study and Scientific Exchanges

Because of special circumstances, advanced specialized training may be available only in some centres abroad. On the other hand, some countries may have to look elsewhere even for basic training until they have the human and material resources necessary to establish and maintain their own universities at the standards required.

There is therefore much demand for WHO to promote training abroad through its fellowships programme. The training may consist of a series of observation periods, or of attendance at a set course. Certain of these courses, especially ad hoc courses of short duration, are organized or assisted by WHO, sometimes in the form of a "travelling seminar".

This is a collective study tour by persons experienced in a particular subject, who wish to observe and discuss developments in one or more countries. To the institutions visited it is more convenient than a constant stream of successive visitors; if there is a language problem, it is more easily solved. To the group, there are also the advantages of having programmed presentation of topics, of holding discussions and exchanging views, and often of being accompanied by consultants. Three such seminars were organized in the Union of Soviet Socialist Republics—on health education, public health administration, and venereal diseases. The participants came from 35 countries.

The seventh edition of the information booklet on WHO fellowships was published in 1961. A total of 43 000 information booklets have now been printed for the use of governments and candidates.

In all, 2157 fellowships were awarded by WHO over the period 1 September 1960 - 30 November 1961. The recipients were nationals of 145 countries and they studied in 92 countries. The number of fellowships awarded between 1 December 1960 and 30 November 1961 was 1731, as compared with 1432 in the previous twelve-month period.

A summary of fellowships, by subject of study and by region, is given in Annex 11. The following analysis may also be of interest:

Occupation of fellows:

- Teaching ........................................... 272 (13%)
- Research .......................................... 61 (3%)
- Service institutions ............................. 1454 (67%)
- Undergraduates ................................ 370 (17%)

Profession of fellows:

- Physicians ...................................... 1309 (61%)
- Nurses ............................................ 195 (9%)
- Sanitarians ....................................... 80 (4%)
- Other .............................................. 573 (26%)

Type of studies undertaken with WHO fellowships:

- Group studies arranged by WHO .......... 614 (28%)
- Other courses ................................... 810 (38%)
- Individual studies .............................. 733 (34%)

Place of study:

- In the fellow's region .......................... 1267 (58%)
- In another region ............................... 890 (42%)

Of the fellows 1799 were men and 358 women; their average age was 35. The average period of the fellowships was 6.3 months.
Information on individual fellowships awarded is given in the project list in Part IV of this Report.

In addition, for the above period 687 special fellowships were awarded for participants in educational meetings organized by WHO. These meetings—seminars, symposia, conferences—are mainly for the exchange of knowledge, views and experience of problems of common interest and for the exploration of methods of dealing with such problems and of the possibilities of co-ordinated action. During the period reviewed there were 36 meetings of this kind in 27 countries and territories; 687 participants came from 113 countries and territories. Of these meetings, 5 were inter-regional, and the others were regional. For the purposes of this Report they have been treated as projects, and included in Part IV.
CHAPTER 7

MEDICAL RESEARCH

During the period under review WHO's programme of medical research developed further along the lines described in previous Annual Reports, and was extended to a more comprehensive range of subjects. Collaborative research projects were continued or initiated to give effect to the research programmes for which the advice of scientific groups and the recommendations of the Advisory Committee on Medical Research had been obtained.

This chapter deals only with the general organization for the programme as a whole. Progress in the execution or planning of the individual research projects in cancer, cardiovascular diseases, various communicable diseases, nutrition, radiation health and human genetics, vector control, and veterinary public health is described in the chapters dealing with those parts of the Organization's work.

The Organization's main support of research has been in collaborative work undertaken on the invitation of WHO by individual investigators, who carry out particular pieces of work that form part of a wider programme. In addition, a few individual investigators have asked for WHO assistance for their own investigations, and some of them, whose work is related to the Organization's research programme, have received financial support.

WHO has also given considerable support to "services to research". These are activities which, although not directly involving original scientific investigation, are of the greatest importance to medical research. Examples of such services are the international reference centres; the drawing up of nomenclatures and classifications for international approval and use; the preparation of standard sera and substances and the development of standard techniques. These are essential if the results of studies in many fields are to be comparable, and they are particularly needed now for epidemiological studies of cancer and cardiovascular diseases (see also pages 31 and 32).

An important part of WHO's research programme to be put into operation for the first time in 1961 was the award of grants for research training and the exchange of research workers. The purpose of the grants is to facilitate the visits of research workers, for short or long periods, to institutions working in other countries in their own or related fields, in order to acquire new knowledge and skills, and experience in research disciplines and administration. These grants have been limited to investigators working on projects supported by or of interest to WHO, but, at the same time, they contribute indirectly to the development of research in the recipients' countries. Such grants are approved by the directors of the institutes from which the workers come, which ensures that a worker thus aided will have a post and facilities for work awaiting him on his return to his own country. During 1961, nine grants were made for research training and four for exchange of research workers.

The Organization has again accepted the offer of the Swedish National Association against Heart and Chest Diseases to provide an annual research training grant of 25 000 Swedish kronor to enable a candidate recommended by WHO to work in Sweden. In 1960, there were two very good candidates, and the Association generously awarded two grants.

Between 1 October 1960 and 31 December 1961 WHO convened eight meetings of scientific groups and seven other meetings on subjects related to its research programme. These are listed in Annex 4. The members of the scientific groups came from all the regions and most of them were drawn from the expert advisory panels.

The Advisory Committee on Medical Research held its third session in June 1961 and made recommendations on the reports of three scientific groups—on the Assessment of the Medical and Public Health Importance of Bilharziasis; on Research in Public Health Practice; and on the Establishment of a Centre for Antibiotics and for Micro-organisms producing them. The Advisory Committee also had before it a special report giving a comprehensive picture of WHO's whole research programme, from 1958 to 1961. The report, which is to be presented separately to the Health Assembly, contains individual summaries of the research done in nineteen fields of medical science. The Committee expressed satisfaction with the progress that had been made and with the direction that the research programme is taking.

The National Institutes of Health of the United

— 44 —
States Public Health Service provided three grants, two in the autumn of 1960 and one in September 1961, for research in bilharziasis (molluscicides, chemotherapy and sero-immunological diagnostic methods), insecticide resistance and vector control, and certain aspects of virus diseases. These further contributions to the Special Account for Medical Research in specific fields bring the annual funds provided by the National Institutes in support of such research to a total of approximately half a million dollars.

During the year WHO continued to collect information on medical research institutes throughout the world and on the work being undertaken in them.
CHAPTER 8

HEALTH STATISTICS

The value of accurate and complete statistics, both as a measure of progress and as an essential element in the planning and carrying out of effective health programmes, has already been amply attested; and the development of health services throughout the world has led to a marked increase in the requests from national authorities for international assistance and co-ordination in this type of work.

In keeping with its function of ensuring comparability of statistical data, WHO has made a survey of the procedures followed in different countries in applying the Nomenclature Regulations (WHO Regulations No. 1) with respect to diseases and causes of death. A comparative study has been made of the methods used in recording and reporting causes of death, in classifying and tabulating the statistics, and in the application of the WHO definitions of "live birth" and "foetal death". The results will be made available to countries for study and information; the material collected for the European Region has already been submitted to the European Technical Conference on Mortality Statistics, which was held in October 1961 (see page 86).

The information will also be of value for the forthcoming revision of the International Classification of Diseases. For this revision preliminary national and international studies have already been undertaken of certain sections of the Classification. Apart from the general aspects of the Eighth Revision, those studies dealt with the classification of cardiovascular diseases, mental disorders, and causes of perinatal morbidity and mortality. Their results were discussed at the meeting of the Sub-Committee on Classification of Diseases, held in November 1961. Besides health statisticians, clinicians took part in this meeting to advise on the clinical aspects of the three specific disease sections considered.

The WHO Centre on the Classification of Diseases has been active in work to improve the statistical classification, and was represented at meetings to consider a joint proposal from the United Kingdom and the United States of America as to the classification of cardiovascular diseases.

The frequency of requests to WHO for assistance in the application of international standards and with technical problems connected with particular health statistical projects has been increasing steadily.

An Expert Committee on Health Statistics, convened in December 1960, gave general advice on the use of health or morbidity surveys to supplement routine methods of obtaining statistical information about the health of a population or a population group, or other information relevant to the work of health departments.

The Committee also discussed the circumstances that should be taken into account in determining the scope of such a survey and described the three main types of survey—the interview survey, the health examination survey, and the medical record survey—and commented upon the potentialities and limitations of each type in relation to the stage of development of the health organization of the country concerned and the resources available to it. The Committee made recommendations to governments and to the Organization on those questions, on preparations for the Eighth Revision of the International Classification and on the issue of a statement setting out WHO's statistical programme. It also considered some suggestions made by the UN/WHO Seminar on the Use of Vital and Health Statistics for Genetic and Radiation Studies, at its meeting in September 1960.

Statistical techniques are being increasingly used to facilitate the analysis of data required for scientific purposes or for the planning and execution of health programmes. To provide guidance on the application of modern statistical methodology to field projects a number of manuals were prepared on such subjects as the adequacy of sample size in field studies, reporting procedures for the malaria campaign in Turkey, sampling in public health, graphic presentation of data, controlled field trials, and on aids for data-processing. A chapter on statistical methods in entomological work was prepared for a manual for malaria entomologists to be issued by the Regional Office for Africa. A paper on sampling methods in dental health surveys was prepared for the Expert Committee on Dental Health.

Projects or studies in which modern statistical

techniques were used included: a live-birth-weight study; controlled field trials on griseofulvin for the treatment of ringworm infections of the scalp; comparability trials of grading tests in combined epidemiological and pathological studies of atherosclerosis; field evaluation of intradermal tests for the diagnosis of bilharziasis; and certain aspects of field research on the treponematoses, diarrhoea and leprosy.

In addition to the processing and analysis of data on those projects, statistical analyses were made of data collected in Israel on diarrhoeal diseases in children; data from entomological experiments in Nigeria; and data from international collaborative assays of nystatin. Further statistical analysis was done on the data collected in a health and morbidity survey in Seychelles, in order to study the relationship between parasitic infestation, nutrition, and other factors. The statistical machine unit established at headquarters in 1960 has proved invaluable for the speedy and accurate processing of voluminous data.

The Annual Epidemiological and Vital Statistics, 1958, was issued in June. This volume contained much fuller data on various subjects than it had previously been possible to publish, and statistics on hospital in-patients were included for the first time.

The monthly Epidemiological and Vital Statistics Report contained data on a number of subjects of special concern, including mortality from leukaemia, food poisoning, malignant neoplasms of the skin, and mental diseases. Data on mental patients in hospitals were also included for the first time.

Further statistical information was provided for specific purposes, on such subjects as cardiovascular diseases, endemo-epidemic diseases, and cancer.

To help in meeting the great demand from national health workers for training in health statistics generally and in health statistical methodology applicable to specific diseases, WHO organized a number of courses. Examples are the training course on vital and health statistics for the Western Pacific Region, in Manila, the international malaria eradication training course in Belgrade, and the course in advanced entomological techniques at the Cairo Malaria Eradication Training Centre. The last two of these included training on statistical methods.

In day-to-day work close co-operation was maintained with the United Nations. WHO was represented at the meeting of the United Nations Population Commission in February. A chapter on health was prepared for the United Nations Handbook on Household Surveys, and tables on health status and health service activities were prepared for the Compendium of Social Statistics. Those two subjects have been discussed at the ACC's Inter-Agency Working Party on Statistics for Social Programmes. WHO co-operated with the Economic Commission for Europe on matters of common interest, and particularly in connexion with the Commission's Seminar on Household Surveys.
Addiction-producing Drugs

Within the international system of narcotics control WHO is responsible for a number of functions relating to the chemical, pharmacological, clinical and public health aspects of addiction to drugs. The increase in the number of incriminated substances and the growing international concern with the economic, social and public health implications of drug addiction are reflected in the increasing range of harmful agents coming within the scope of international control. Thus, in addition to the "classical" drugs of addiction (such as opium, the opiates and allied synthetic substances with morphine-like effects, cannabis, and coca) a number of sedatives (e.g. barbiturates) and stimulants (e.g. amphetamines and khat) have recently been the subject of international discussions to which WHO contributed basic information.

A new development in the organization of international narcotics control was the adoption of the Single Convention on Narcotic Drugs, 1961, by the Plenipotentiary Conference on 30 March 1961, and its subsequent signature by sixty-four governments. A number of comments made by WHO, mainly on the basis of opinions expressed by the Expert Committee on Addiction-producing Drugs in its ninth, tenth and eleventh reports, were taken into account in the final text of this instrument, which replaces nine previous Conventions. WHO's responsibilities under the Single Convention are substantially the same as before.

The Expert Committee on Addiction-producing Drugs, in its eleventh report, made recommendations on the international control of twelve drugs with morphine-like effects and two preparations containing such drugs. It also formulated opinions in reply to resolutions of the Economic and Social Council inviting WHO, in connexion with the new Single Convention, to re-examine the question of the therapeutic usefulness of cannabis, to establish criteria for the exemption from international control of certain types of preparations, and to consider the possibility of preparing a code of practices by which the addiction-producing properties of drugs are established. On the first point it confirmed the view expressed at its third session, in 1952, that there is no justification for the medical use of cannabis, and on the third point it agreed that, in view of the limitations of available tests, a more precise code of practice could not be outlined at present.

National legislation relating to treatment measures for drug addicts was reviewed to obtain guiding lines for recommendations to the international narcotics control organs. The Expert Committee on Addiction-producing Drugs, in its eleventh report, approved the principle of a civil commitment procedure entrusting the addict to the authority of a medical panel.

As a contribution towards rationalization of the assessment of the therapeutic needs of countries for narcotic drugs, which is the responsibility of the Drug Supervisory Body, statistics obtained both from this organ and from WHO's own sources were evaluated for possible relationships between morbidity, hospitalization, extent of medical care and other factors on the one hand, and the legal consumption of narcotic drugs on the other.

In these various activities, very close working relations were maintained with the United Nations bodies for narcotics control.

Biological Standardization

The international standards and international reference preparations of biological substances—which include vaccines, antigens, sera, antibiotics, hormones, enzymes, vitamins and diagnostic reagents—are kept in the custody of the two International Laboratories for Biological Standards, at Copenhagen and London. With yearly additions of new standards and reference preparations, the burden of these two laboratories has been steadily increasing. A third International Laboratory for Biological Standards has therefore become necessary, and steps were taken, in consultation with FAO, to nominate a laboratory which will assume responsibility for biological standards that are primarily of importance in veterinary medicine.

Since the last Annual Report international units for swine erysipelas vaccine and for antistreptolysin-O, as well as new international reference preparations of...
ristocetin, of egg lecithin and of rabies vaccine, were established. Work was undertaken to establish international reference preparations of BCG, anthrax and Newcastle disease vaccines, and anti-echinococcus, anti-trichinella, and anti-toxoplasma human sera.

It is important that the formulation of internationally acceptable requirements should keep pace with the rapid development of new biological prophylactics. For example, only two years after international requirements had been formulated for inactivated poliomyelitis vaccine the need arose in several countries for quality criteria and requirements for live poliomyelitis vaccine. In order to co-ordinate the work being done in different countries and arrive at internationally acceptable criteria, WHO convened, in November 1960, a study group to formulate requirements for oral poliomyelitis vaccine (live attenuated poliomyelitis virus).

Studies on correlation between the prophylactic efficacy of typhoid vaccine and its potency as determined in laboratory animals progressed satisfactorily. Field trials of two large quantities of stable typhoid vaccine were conducted in British Guiana, Poland and Yugoslavia (see Chapter 2, page 17), parallel with studies of the same vaccine in about twenty laboratories.

Collaborative assays of the proposed international reference preparation of smallpox vaccine were completed. The establishment of this reference preparation will improve the precision of the method of determining the potency of unknown vaccines.

Steps were taken to develop a WHO programme on general and applied immunological research.

Pharmaceuticals

The work of preparing specifications for the quality control of important pharmaceutical preparations continued, emphasis being laid on the checking of the suggested specifications by collaborative work undertaken in different countries with the co-operation of national health administrations, pharmaceutical institutes and manufacturing firms. The texts of many of the monographs of the first edition of the International Pharmacopoeia have been revised, with a view to inclusion in the second edition together with monographs of newer pharmaceutical preparations for which specifications are also being established. The Expert Committee on Specifications for Pharmaceutical Preparations examined and discussed these draft specifications.

The establishment of proposed specifications for the reagents required in the various tests and assays applied to pharmaceutical preparations described in Volumes I and II of the International Pharmacopoeia and its Supplement was completed and the specifications revised in consultation with specialists. The volume of these reagent specifications was in press at the end of the year. Most of the methods prescribed in this volume can be applied by laboratories using equipment generally available. To keep the special equipment required to a minimum, instrumental procedures have been avoided where possible. Where instrumental methods are specified, they should not preclude the use of other suitable methods in laboratories where the required equipment is not available and adequate procedures have been developed. It is recognized that differences of opinion concerning the details of methods of testing and their adequacy, as well as the magnitude of allowable tolerances for unavoidable trace impurities, exist between the several nations now producing reagent chemicals, and that the establishment of limits for trace impurities is dependent in many instances upon the methods used.

The WHO Centre for Authentic Chemical Substances in Stockholm completed its work on the preparation of a series of substances for use in standardizing melting-point determinations, and work started on a series of reference standards for chemical identification and assay of pharmaceutical preparations of steroids. Inquiries were addressed during the year to pharmacopoeia commissions and national authorities about present and future needs for chemical reference substances. The answers were presented for discussion to the Expert Committee on Specifications for Pharmaceutical Preparations, meeting at the end of the year, with a view to establishing guide lines for the future activities of the Centre.

Requests continued to be received from national authorities, pharmaceutical associations and manufacturing firms for non-proprietary names for pharmaceutical substances before their introduction on the market. It was possible to issue an eleventh list of ninety-one proposed international non-proprietary names, which was sent to Member States and afterwards published in the WHO Chronicle. Another series of requests was communicated to the members of the Expert Advisory Panel on the International Pharmacopoeia and Pharmaceutical Preparations designated to deal with the selection of international non-proprietary names, and discussed by the Subcommittee on Non-proprietary Names of the Expert Committee on Specifications for Pharmaceutical Preparations, which selected 185 names. A cumulative list of the 890 proposed international non-proprietary names published in the WHO Chronicle up to 1960 inclusive, designed to facilitate the work of national administrations in their regulations concerning pharmaceutical preparations, labelling and classification, was in press at the end of the year.

CHAPTER 10

PUBLICATIONS AND REFERENCE SERVICES

It was mentioned in the Annual Report for 1960 that the Thirteenth World Health Assembly had decided that certain of the Organization's publications should be issued in Russian and that the Ministry of Health of the Union of Soviet Socialist Republics had agreed to accept a contract to undertake the translation, editing and printing of them in Moscow. After detailed negotiations in Moscow and subsequently a formal agreement was signed by representatives of the Ministry and the Director-General at the beginning of 1961.

During the fifteen months covered by this Report, special numbers of the Bulletin were published on the following subjects: tuberculosis, communicable diseases, gonorrhoea, insecticides and malaria, and bilharziasis. Second editions were published of Specifications for Pesticides, the World Directory of Venereal Disease Treatment Centres at Ports and the International Sanitary Regulations (annotated edition). Among the new publications issued were the first edition of the World Directory of Dental Schools, European Standards for Drinking-Water, and Diagnosis and Treatment of Acute Radiation Injury. The last-mentioned was published by the Organization on behalf of the International Atomic Energy Agency and WHO.

Seven issues of Public Health Papers were published, their subjects being: Aspects of Public Health Nursing, Trends in Juvenile Delinquency, Ionizing Radiation and Health, Basic Nursing Education Programmes, The Role of Immunization in Communicable Disease Control, Teaching of Psychiatry and Mental Health, and Control of Soil-Transmitted Helminths. Favourable reviews in the technical press and the volume of sales indicate that this new series is likely to become an important element in the WHO publishing programme.

The second Cumulative Index to the International Digest of Health Legislation, covering the years 1955-1959, was published, and 22 new titles were issued in the Technical Report Series.

The sixth edition of the Handbook of Resolutions and Decisions and the twelfth of Basic Documents were issued at the end of the year. Plans had been made for the publication during the period under consideration of several new monographs but, because of unavoidable delays, only one of them—No. 46, Air Pollution—had been published by the end of the year (in English and Spanish editions). In addition, No. 42—Water Supply for Rural Areas and Small Communities—was published in French and Spanish; No. 45—Differential Diagnosis of Yaws—was published in French, and No. 44—Endemic Goitre—in Spanish.

There was a progressive increase in the sales of WHO publications, receipts from this source amounting to $114,600 in 1961 as against $83,300 in 1960.

Arrangements for the distribution and sale of WHO publications in South-East Asia are now made almost entirely by the Regional Office for that region, and steps were taken to facilitate a greater degree of participation by other regional offices in this respect.

An examination was made of the library and documentation centre and the publishing service of the International Children's Centre, Paris, and there were consultations on publishing activities with FAO, IAEA and UNESCO. The Organization was represented at the first meeting of UNESCO's International Advisory Committee on Bibliography, Documentation and Terminology.

The international collection of current medical and scientific literature received by the WHO library continued to increase, reflecting both the expansion of the technical work of the Organization and the growing output of publications from all countries. At the end of the year, 1934 medical and scientific periodicals were being regularly received, of which 445 were acquired by purchase, 1046 received in exchange for WHO publications, and 443 by donation. Other serial publications received by the library included 1763 annual reports, directories, statistical bulletins and official governmental gazettes, and the calendars and prospectuses of some 500 medical schools and faculties.

Since the initiation of the scheme for the international exchange of duplicate medical literature in March 1960, eighty-one libraries in forty-three countries have notified their wish to participate. A clearing centre in Geneva records information supplied by participating libraries about the gaps which they wish to fill in their collections and the material they are prepared to offer for free disposal. Needs are then correlated with surpluses and the participants are informed of the names of libraries that are prepared to make available the literature they require. To date,
participants have been informed where to obtain 1000 items formerly missing from their collections, and the WHO library distributed over 4000 items from its own collection of duplicates.

The effective planning of the library in the new WHO building was a subject of major concern during the year. In the course of visits to modern university and special libraries in a number of countries, information on modern library design and equipment was obtained which will prove valuable in the detailed designing of the new WHO library.

Surveys were made of the libraries of the regional offices for Africa and the Eastern Mediterranean. Because of limitations of space, staff and funds, the holdings of such libraries are, in general, necessarily limited to relatively small working collections of essential reference books, monographs, technical periodicals and documents for the day-to-day use of the staff. The Regional Office for Africa has a particularly acute problem because at present it has no access to other medical library facilities. Lists of recommended reference works and basic medical and scientific works were prepared, and measures were taken to extend the collaboration between the headquarters library and those of regional offices.
CHAPTER 11

PUBLIC INFORMATION

The work of WHO in the Congo (Leopoldville) has attracted widespread interest, particularly in the latter part of 1960 and the early months of 1961. The Organization’s press releases on what was being done were used by newspapers in many countries, and additional facts and details were given in response to individual requests. A special number of World Health was published at the end of 1960, and the photographs it contained—taken by a photographer who had been sent to the Congo by the United Nations and WHO—were later reproduced in several illustrated papers and magazines. A television programme on WHO’s work in the Congo, entitled “The Unforgotten”, was produced by the British Broadcasting Corporation (BBC) with the help of WHO. It was shown on BBC television, and by twelve other European stations, in the first months of 1961, and, as a 16 mm film, it was later distributed generally in English-speaking countries. A well-known science writer went to the Congo, under the auspices of the United Nations and WHO, in October 1960. He wrote a series of articles on health and other aspects of the Congo crisis, which appeared in a prominent English daily paper, and a book which was published in London.

The theme of World Health Day (April 7) 1961—“Accidents and Their Prevention”—aroused interest in all regions, and the press made good use of the considerable volume of material prepared by the Organization on the subject. A special “Accidents” number of World Health was issued and was featured on a television programme in France. The April number of the UNESCO Courier included a good deal of the same material. Eighteen recordings on accident prevention were made in collaboration with Swiss radio services and the European Office of the United Nations, and in all 165 dubbings of them in six different languages were distributed on request to forty-three radio broadcasting stations in all regions. Seven programmes, up to thirty minutes in length, were distributed in five languages over the United Nations radio networks. World Health Day programmes were prepared and broadcast by at least ten other national or regional broadcasting stations.

In the period under review, the subjects that attracted the greatest newspaper interest and comment were: the work in the Congo, accident prevention, the problems of food additives, the recrudescence of venereal infections, increasing mental disease, and the diverse health problems of Africa.

A special number of World Health on the Americas drew particular attention to the relation between health levels and economic and social conditions. Other special issues dealt with the South-East Asia Region, with mental health, and with the needs of children. A 40-page extra number was produced on malaria and its eradication.

In 1961, 750 000 copies of World Health were distributed in English, French and Spanish editions, as against 550 000 in 1960. Besides this, an edition of 5000 in Portuguese was printed in Rio de Janeiro, and the publication was begun of a Russian edition, printed in Moscow, of which 10 000 copies of each number were produced. More than 30 000 copies of World Health were sold during the period covered by this Report, mostly to organizations, but copies of the magazine were on sale at kiosks in various parts of the world. Paying subscribers numbered 1000 at the end of 1961, as compared with 226 at the end of 1960.

During the Fourteenth World Health Assembly in New Delhi, public information work in South-East Asia was intensified. Several hundred press clippings dealing with the Assembly were collected from Indian newspapers, including more than 150 from Indian-language newspapers. Seven stations of the All-India Radio network gave three daily broadcasts on the Assembly’s opening sessions, and their substance was re-broadcast in thirteen different languages for the rest of Asia. Radio Ceylon broadcast a weekly report on the Assembly’s work. A round-table discussion on the subject of the Assembly’s technical discussions—tuberculosis—was used by twenty-nine stations of the All-India Radio. Forty recordings made in New Delhi were redistributed from Geneva in English, French, Russian, Spanish and some other languages, and thirty-five radio stations throughout the world received recorded material on the Assembly.

Contacts were established with new radio stations, particularly in newly-independent countries, bringing
the number of producers of radio programmes receiving WHO material to 174 in 84 countries. Broadcasts continued in the series “WHO Feature Programme”, and eighty sets of tapes relating to this series were issued on request. Recorded material on malaria, collected in the Eastern Mediterranean Region by Radio Genève with WHO assistance, was used in a programme entitled “Perspectives internationales”, broadcast by some forty French-language stations around the world. Over a hundred recordings on subjects connected with WHO’s work were made and distributed to radio stations during the period under review.

The animated cartoon film in colour on the world’s water problems, which was mentioned in the Annual Report for 1960, was completed, and was shown in March 1961 to members of the United Nations Visual Information Board, eleven of whose organizations had contributed to it financially. The world distribution of the film has been undertaken by the United Nations Office of Public Information.

WHO co-operated with the United Nations Office of Public Information in producing a television programme on the Organization’s epidemiological services. This programme, part of the series “International Zone”, was used on British, Canadian and United States television networks. WHO also assisted in programmes produced by French and German television.

Negotiations for the production of a series of twelve half-hour television programmes dealing with major world health programmes were begun with an educational television network in the United States of America and with Eurovision, in which are grouped television networks in twenty-one European countries.

The demand for earlier WHO films continued. A further 158 copies of the animated colour cartoon film on alcohol, “To Your Health”, were sold in 1961, and versions in Danish and Russian were produced for the first time.

WHO’s photo library was further expanded and some 50,000 prints were distributed in the fifteen months under review.

WHO participated in a conference on “Global Research for Global Health” organized in Los Angeles during two days in October and sponsored by various medical and health schools of the University of California, Los Angeles, and of the University of Southern California, by the American Association for the United Nations, and by a large number of local societies and institutions. This conference was instrumental in stimulating wide interest in WHO and its work.

“The Prevention of Blindness” was selected as the subject for World Health Day in 1962.
CHAPTER 12

CONSTITUTIONAL, FINANCIAL AND ADMINISTRATIVE DEVELOPMENTS

Constitutional and Legal

Membership of the Organization

Following their admission to membership of the United Nations, the countries mentioned below became Members of the World Health Organization by depositing with the Secretary-General of the United Nations a formal instrument of acceptance of the WHO Constitution: Chad, Congo (Brazzaville), Congo (Leopoldville), Cyprus, Gabon, Ivory Coast, Madagascar, Mali, Niger, Nigeria, Senegal, Sierra Leone, Somalia and Upper Volta. The Fourteenth World Health Assembly admitted Mauritania to membership and Ruanda-Urundi and Tanganyika to associate membership. However, on 9 December 1961, Tanganyika became an independent State. On 22 October 1961 the Syrian Arab Republic informed the Director-General that Syria was resuming its membership of WHO. WHO now has 108 full Members and two Associate Members. A list of the Members and Associate Members at 31 December 1961 is given in Annex 1.

Amendments to the Constitution

By 25 October 1960, 64 Members, two-thirds of the 95 States then Members of the World Health Organization, had accepted the amendments to Articles 24 and 25 of the Constitution, as adopted by the Health Assembly in resolution WHA12.43. Consequently these amendments, increasing the membership of the Executive Board from eighteen to twenty-four, entered into force on that date in accordance with Article 73 of the Constitution. The first election of Members entitled to designate persons to serve on the Executive Board on the basis of the amended articles took place during the Fourteenth World Health Assembly, in February 1961.

Privileges and Immunities

The Ivory Coast, New Zealand, Nigeria, Pakistan and Thailand acceded to the Convention on the Privileges and Immunities of the Specialized Agencies together with its Annex VII, which relates specifically to the World Health Organization.

The Financial Position

Budget for 1961

In resolution WHA13.28, the Thirteenth World Health Assembly established an effective working budget of $18,975,354 for 1961. This was an increase of $2,056,654 over the corresponding figure of $16,918,700 for 1960. On the recommendation of the Executive Board, the Fourteenth World Health Assembly in resolution WHA14.13 approved supplementary budget estimates for 1961 amounting to $805,094, thereby increasing the effective working budget to $19,780,448. The supplementary budget estimates were approved to meet the following additional requirements:

(a) Increased contribution to the United Nations Joint Staff Pension Fund approved by the General Assembly of the United Nations;

(b) Additional costs resulting from the amendments to the Constitution adopted by the Twelfth World Health Assembly in resolution WHA12.43 to increase the membership of the Executive Board from eighteen to twenty-four;

(c) Administrative and operational services costs of the planned malaria eradication programme which the Assembly decided should be included in the regular budget as from 1961 (see below); and

(d) Assistance to the Republic of the Congo (Leopoldville).

Taking into account these supplementary estimates, the total amount of the approved budget for 1961 was $21,114,348. The difference between this amount and the effective working budget of $19,780,448, viz. $1,333,900, was appropriated as an Undistributed
Reserve equalling the assessments on China and on the inactive Members (the Byelorussian SSR, Hungary and the Ukrainian SSR). The distribution of the approved budget among the Appropriation Sections is shown in Annex 7. This annex also shows the transfers between appropriation sections, made with the concurrence of the Executive Board, and the amounts of the approved supplementary estimates.

**Technical Assistance Programme**

Under the Expanded Programme of Technical Assistance, the earmarkings to WHO for 1961—the first year of the 1961-1962 biennium—amounted to $7 119 066, to which must be added authorizations from the Contingency Fund of the Expanded Programme amounting to $145 386. This total of $7 264 452 compares with the total amount of $5 806 979 made available to the Organization under the Expanded Programme in 1960.

**Financing of the Malaria Eradication Programme**

Under the Malaria Eradication Special Account contributions received in 1961 amounted to $4 452 895, bringing the total value of contributions received from inception of the programme to 31 December 1961 to $17 224 489.

The Fourteenth World Health Assembly decided, in resolution WHA14.14, that the administrative and operational services costs of the malaria eradication programme should be financed from the supplementary budget estimates for 1961 and that, beginning with 1962, these costs, including those of the Region of the Americas, should be financed from the regular budget of WHO. In resolution WHA14.15 the Health Assembly further decided that the costs of the malaria eradication field programme should be incorporated in the regular budget by stages over a three-year period starting in 1962, with the addition to the effective working budget for that year of an amount of $2 000 000 as a contribution towards the Malaria Eradication Special Account. In respect of 1963 the Director-General was requested to include in his budget estimates an amount of $4 000 000, and in respect of 1964 and subsequent years the full costs of the malaria eradication programme. In order, however, not to place too heavy a burden on countries engaged on malaria programmes, the Health Assembly adopted a credit plan under which all active Members carrying out such programmes, if their assessments are 0.50 per cent. or less, or their per capita income low, will be eligible in 1962 for credits of 75 per cent. towards the payment of their share of the contribution of $2 000 000 to the Malaria Eradication Special Account, these credits to be covered by the cash balance available in that account. It recommended to the Fifteenth and Sixteenth World Health Assemblies that similar credits, equal to 50 per cent. and 25 per cent. respectively, should be provided in 1963 and 1964.

**Voluntary Fund for Health Promotion**

Under the Voluntary Fund for Health Promotion contributions received in 1961 amounted to $1 381 770, bringing the total value of contributions credited to the Fund by 31 December 1961 to $2 893 268. These contributions related to the following sub-accounts of the Fund:

<table>
<thead>
<tr>
<th>Account</th>
<th>1961</th>
<th>Total from inception</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Account for Undesignated Contributions</td>
<td>2 421</td>
<td>2 790</td>
</tr>
<tr>
<td>Special Account for Smallpox Eradication</td>
<td>120 096</td>
<td>509 106</td>
</tr>
<tr>
<td>Special Account for Medical Research</td>
<td>1 053 833</td>
<td>1 841 606</td>
</tr>
<tr>
<td>Special Account for Community Water Supply</td>
<td>175 000</td>
<td>475 000</td>
</tr>
<tr>
<td>Special Account for Assistance to the Congo</td>
<td>30 420</td>
<td>64 766</td>
</tr>
</tbody>
</table>

**Headquarters Building Fund**

The Fourteenth World Health Assembly noted that, following negotiations undertaken by the Director-General in pursuance of resolution WHA13.42, the United Nations had agreed to reimburse WHO for the book value of its investment in the Palais des Nations. This decision made it possible to reduce by $203 000 the budgetary provision of $500 000 proposed by the Director-General for 1962 in order to bring the total amount available for the building from all sources up to the equivalent of Sw. fr. 40 000 000, as authorized by the Thirteenth World Health Assembly. In resolution WHA14.43 the Fourteenth World Health Assembly therefore appropriated $297 000 to the Headquarters Building Fund.

The amount of 1000 Ghana pounds ($2 800), pledged during the Thirteenth World Health Assembly as a voluntary contribution from the Government of Ghana to the Fund, was received.

**Contributions and the Working Capital Fund**

The payment of contributions for 1961 was again very good and the collection of arrears was satisfactory.

The obligations incurred during 1961 and the status of collection of contributions and of advances to the Working Capital Fund at the end of 1961 are shown in the Financial Report (a supplement to this volume), which is being submitted with the Report.
of the External Auditor to the Fifteenth World Health Assembly.1

The Thirteenth World Health Assembly, in resolution WHA13.41, decided that, as from 1 January 1961, the size of the Working Capital Fund should be increased from $3,414,631 to $4,000,000, to which amount should be added the assessments on any Members joining the Organization after 30 April 1960; that advances to the Working Capital Fund should be assessed on the basis of the 1961 scale of assessment; that the additional advances should be due and payable prior to 31 December 1963; and that any credits due to Members should be refunded on 1 January 1964 by applying them to any contributions outstanding on that date or to the 1964 assessments. It was further decided that the assessments of advances to the Working Capital Fund should be reviewed every five years, the Executive Board being requested to make such a review at its first session in 1965 and to submit a report to the Health Assembly.

Administration

Structure and Staff

The total number of the staff increased from 2040 on 30 September 1960 to 2244 on 30 November 1961, exclusive of the staff of PAHO. Details of the composition of the Secretariat at the latter date are shown in Annexes 9 and 10.

A number of changes in organizational structure at headquarters came into effect during the year. Radiation and Isotopes was transferred from the Office of the Director-General to the Division of Health Protection and Promotion. Within the Division of Health Statistics, a new unit for Epidemiological Studies was established, the title of the unit International Classification of Diseases and Development of Health Statistical Services was shortened to Development of Health Statistical Services, and Consolidation of Health Statistics was renamed Dissemination of Statistical Information. In addition, the Mechanical Equipment Unit was transferred from the Office of the Director to Health Statistical Methodology.

The title of the Division of Environmental Sanitation was changed to Division of Environmental Health, and two of its units were also renamed, Rural Sanitation becoming Community Sanitation and Housing, and Vector Control and Pesticides becoming Vector Control. Urban Sanitation was abolished and its functions allotted to two new units, Water and Wastes, and Air and Water Pollution.

A further change in designation took place in the Division of Public Health Services, where the unit of Health Education of the Public became the unit of Health Education.

In the Division of Communicable Diseases, Endemic Diseases was renamed Parasitic Diseases, and a new unit, Bacterial Diseases, was established.

The process of centralizing at headquarters the functions hitherto performed by the quarantine units at Alexandria and Washington and by the Epidemiological Intelligence Station at Singapore was carried on gradually during the second half of 1961 and completed on 31 December, when the three units ceased to exist.

The structure of the headquarters secretariat is shown in Annex 8.

The New Headquarters Building

The plans for the new headquarters building were completed during the year. Invitations to submit tenders for the major elements of the construction work were issued at the end of October 1961 to a considerable number of contractors from ten countries.

World Health Assemblies away from Headquarters

At the invitation of the Government of India the Fourteenth World Health Assembly was held in New Delhi from 7 to 24 February 1961; it was preceded by the twenty-seventh session of the Executive Board.2 Under an agreement between the Government of India and WHO on the administrative, legal and financial arrangements for these meetings, all the additional costs were defrayed by the host country. Through the excellent preparations made and by their cordial welcome and hospitality, the Government of India and the local authorities greatly contributed to the success of the Assembly and Board sessions.

During the Fourteenth World Health Assembly invitations were received from Argentina and the Union of Soviet Socialist Republics for the holding of the Sixteenth World Health Assembly in Buenos Aires and Moscow respectively. Subsequently the Soviet Union Government agreed to defer its invitation to another Health Assembly, and negotiations were initiated with the Government of Argentina regarding the necessary arrangements and facilities.

1 The Financial Report and the Report of the External Auditor for the financial year 1960 is also being submitted to the Fifteenth World Health Assembly, as the Fourteenth World Health Assembly was held too early in the year to permit of their submission at that time (see resolutions WHA13.14 and WHA14.34).

2 The twenty-sixth session of the Executive Board, which would normally have followed the Thirteenth World Health Assembly in May, took place from 25 October to 4 November 1960.
Medical Supplies

A recent aspect of the Organization’s supply services to Member States has been the development of prototype radiophotographic units specially designed for the needs of WHO-assisted tuberculosis field programmes. Through technical collaboration with and stimulation of equipment manufacturers, improvements have been made in respect of simplicity of operation, reduction of weight, increased durability under difficult field conditions and adequate radiation safety. Inquiries were received during the year from Member States with regard to the purchase of such units through WHO.

The facilities for rapid emergency purchases by WHO on behalf of Member States, under the arrangement whereby the purchase is initially financed from the Working Capital Fund and no advance payment is therefore required from the government concerned, were used by several countries. One example was the procurement of cholera vaccine to combat the epidemics which took place in Laos in the summer of 1961.

Emergency consignments of freeze-dried smallpox and poliomyelitis vaccines were provided to the Congo (Leopoldville).

Emergency Assistance for Somalia

Late in the year, WHO received a request from the Government of Somalia for help in a disastrous situation caused by floods. Five months of heavy, persistent and unprecedented rains had ruined crops, drowned cattle, cut off large areas and exposed some 600 000 people to starvation, malaria, and water-borne intestinal diseases. The Government made a general appeal for aid and asked the WHO public health adviser to assess the medical needs and to co-ordinate the urgently needed public health work.

On 26 November, four days after the first cable had been received by headquarters, half a million tablets of antimalarial drugs, 10 000 doses of antityphoid vaccine and 15 000 doses of smallpox vaccine had been purchased and sent by air from Rome to Mogadishu. Between 29 November and 10 December, WHO arranged for the purchase of substantial supplies of vaccines and drugs and had them sent by air to Somalia, mainly with the help of funds provided by the League of Red Cross Societies. This prompt response was made possible by suppliers in Europe and the United States of America, who had been warned by cable and telephone, and who worked over weekends and public holidays to pack and dispatch the goods, for which they charged the lowest prices. When the weight and urgency of the shipments exceeded the capacity of regular air services, the Red Cross arranged that they should be reinforced by Italian and Norwegian military aircraft.

The difficulties of the people were aggravated in early December by the threat of a plague of desert locusts, and later by the risk of a smallpox epidemic. WHO allocated, from government donations to the Smallpox Eradication Special Account, 370 000 doses of dried vaccine to be delivered between 4 and 25 December, and bought for immediate use 100 000 doses on behalf of the League of Red Cross Societies.

WHO sent two public health advisers from headquarters, and the League of Red Cross Societies sent two of its staff to survey the needs on the spot.
PART II

THE REGIONS
MAP 1. WHO REGIONAL OFFICES AND THE AREAS THEY SERVE

AREAS SERVED, AS AT 31 DECEMBER 1961:

- WHO Headquarters
- Regional Office
- Liaison Office with United Nations
- Regional Office for Africa
- Regional Office for South-East Asia
- Regional Office for the Americas/PASB
- Regional Office for Europe
- Regional Office for the Eastern Mediterranean
- Regional Office for the Western Pacific
CHAPTER 13
AFRICAN REGION

The swift evolution of the African territories towards autonomy and independence is a dominant feature of the Region. It has as a concomitant a desire for accelerated social and economic development, to ensure equally rapid progress in the health and living standards. This is no mean task, and it is made still more arduous by great variations in climate and terrain, the extraordinary variety of scattered ethnic groups, a population estimated at 150 million and increasing by about 2 per cent. each year, and a territory covering a vast area.

The WHO programme in Africa is in many ways like that which the Organization is carrying out elsewhere. The special conditions, however, in the many newly independent States in Africa have made it necessary to concentrate on fundamental needs—communicable diseases, the education and training of national staff, and the strengthening of health services. The Organization, through its fellowships programme, through direct technical aid to medical, public health and nursing schools and through projects for the administration of services and training of personnel, is endeavouring to help the health administrations to increase the supply of trained staff so urgently needed by their countries. As a first step in strengthening the health services of newly independent countries, WHO public health administrators are being assigned to central health administrations to assist in surveying health needs, establishing priorities, co-ordinating the planning of health services and intensifying programmes of education and training adapted to African needs.

One outstanding problem that arises from the attainment of independence is the acute reduction of medical and paramedical staff when the nationals of the outgoing authorities leave.

This results in an increasing number of requests being made to WHO by newly independent States in Africa, faced by a shortage of medical staff, for doctors engaged in clinical work. This type of problem is being studied in all its aspects, for the Organization is confronted with the need to help to protect the basic medical care and health services from the disruption that threatens to follow the departure of foreign medical staff.

It is becoming increasingly clear that in many instances the need of the new African States is for the type of expert who is able to combine in his work executive as well as advisory duties. This raises problems which may well require a special approach. A possible answer may be to make arrangements for posts which, while essentially executive, still contain a substantial element of training and advisory functions, which would bring them within the scope of technical assistance.

The need for special consideration of such questions in the African Region is attested by the remarkable recent increase in the membership in the Region. Since 1 October 1960 the following countries in the Region have become full Member States: Chad, Congo (Brazzaville), Congo (Leopoldville), Gabon, Ivory Coast, Madagascar, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone and Upper Volta. Ruanda-Urundi and Tanganyika were admitted to associate membership at the Fourteenth World Health Assembly. Tanganyika became independent on 9 December 1961.

Particular aspects of the work in the Region are described in the following paragraphs.

Malaria is still one of the chief problems of the Region. Progress has been made with the development and expansion of eradication campaigns. A. gambiense continues resistant to the Dieldrin-BHC-Chlordane group of insecticides in various areas, but so far no indication of a resistance to DDT has been found. Recently, infected A. welcomesi have been found in the Gabon, and it seems probable that in this area it is an important vector. Research to complete these findings is in progress.

During the period under review, a thorough study has been made of the type of malaria programme appropriate to each country. Under the social, economic and administrative conditions that prevail in Africa, it is impossible in a large number of countries to embark on an eradication campaign, although technically it would be feasible. The new concept of pre-eradication programmes has a special importance in this Region, for such programmes are not strictly limited in time. WHO is planning to assist countries in building up the rural health infrastructure that is essential for a malaria eradication programme, and to train the national personnel required.
In order to ensure maximum efficiency and cooperation between neighbouring countries, co-ordination boards are being set up, with representatives from the various countries and outside agencies concerned. The Co-ordination Board for the countries in the south-east met in Salisbury in January 1961, and that for western countries in Lomé, Togo, in April 1961.

Away from the mainland of Africa, but in the Region, a full eradication programme is operating in the island of Mauritius; part of this island has already reached the consolidation phase, but there have been setbacks through local outbreaks in 1960 and 1961, which may delay the final achievement of eradication. A further eradication project, still in the attack phase, but in which surveillance techniques have already been introduced, covers the islands of Zanzibar and Pemba. A pilot project for the use of medicated salt is progressing in Ghana. In Liberia, a medicated salt project on a larger scale is contemplated as part of a pre-eradication scheme.

WHO has organized two training centres for the preparation of personnel of all grades for malaria eradication programmes, and full use is being made of the existing projects for training purposes. For several years now special attention has been given to this matter of training. The policy of developing basic health services so that they may be able to absorb and carry on special services created to deal with particular communicable diseases is also of special relevance to malaria eradication. Such services help the campaigns as a whole and make the consolidation and maintenance phases easier and cheaper.

In order to test new insecticides for malaria eradication, a WHO inter-regional insecticides testing unit has continued its work in Nigeria on field trials of Baytex, malathion and DDVP. (See also Chapter 3, page 23.)

There is much to be done in the African Region for maternal and child welfare. One form of assistance to governments in the development of maternal and child health services is assistance to training at university level, where the teachers required for field programmes will be prepared. Recently WHO has provided lecturers in paediatrics for some of the leading African medical schools, and this form of assistance is likely to become increasingly important in the future: it produces a widespread effect at relatively modest cost.

The most serious obstacle in the Region to the supply of trained health workers is the shortage of students with an adequate standard of general education. This problem was discussed at the ECA/UNESCO Conference of African States on the Development of Education in Africa, held in Addis Ababa in May 1961, in which WHO also took part. It was evident from that conference that a very great effort will be required of the governments of the Region to supply enough candidates for special training of different kinds.

To increase the efficiency of its assistance to governments in education and training, WHO sent three fact-finding missions—each consisting of a public health man with special knowledge of education and training and a nursing consultant—to a number of countries in the Region—Cameroon, Central African Republic, Chad, Congo (Brazzaville), Ivory Coast, Kenya, Mali, Senegal, Tanganyika and Uganda. Madagascar was visited by staff of the Regional Office for the same purpose. Information is also to be collected from the other parts of the Region.

During the period under review, 417 fellowships were awarded, of which 245 were for basic professional studies (including the fellowships for students from the Congo (Leopoldville) of which details are given on pages 64 and 65): fourteen of these fellowships were awarded for study in Africa. Between 1 December 1960 and 30 November 1961 328 fellowships were awarded, as compared with 172 during the previous twelve months. The emphasis on medical education is shown in the table of subjects of study in Annex 11. A number of fellows from other regions came to the African Region for study.

In nursing, there is a general demand for assistance with inter-country programmes for post-basic nursing education. With the help of the universities, courses are being arranged to train the public health nurses, ward sisters, nurse-administrators and nurse tutors who are needed for the full implementation of country training programmes and the development of national nursing services.

Communicable diseases are a major problem. Many of them are crippling diseases, such as poliomyelitis, leprosy, onchocerciasis and trachoma, that often have lasting after-effects.

Tuberculosis remains a major communicable disease of the Region, and antituberculosis work is therefore of steadily increasing importance. During the period under review, the WHO tuberculosis survey teams have continued their work—one in the Seychelles, and another in the Federation of Rhodesia and Nyasaland and later in Mozambique—and have sent the data collected to the Tuberculosis Co-ordination Centre in Nairobi for processing. The chemotherapy project in Kenya has extended over a wider area and has given special attention to contacts of infectious cases.

Taking into account the results of the surveys, the importance of tuberculosis for the African Region, and the need to set up antituberculosis campaigns, a new policy for tuberculosis control has been adopted:
the survey teams are to be changed into advisory teams, of which there will be three. Requests for advisory teams have so far been received from seventeen countries of the Region.

Work has continued on leprosy, which is fast ceasing to be the dread disease of the past; early diagnosis and treatment of cases, with some selective and temporary isolation, now permit effective control. The main object of the public health campaign is to make all cases non-infectious, and at the same time to arrest the progress of the disease and to cure it whenever possible. Fourteen countries received assistance in such work during the period under review.

In the same period, seventeen projects against the treponematoses were in operation in the Region. Between 1953 and 1960 there were over 47 million examinations at initial treatment surveys and re-surveys for yaws in the territories in West and Central Africa, and more than 16.5 million cases were treated. These achievements are important in terms both of systematic coverages of the population and of the reduction achieved in the transmission of yaws. In most countries the initial prevalence rates were as high as 5 to 20 per cent. active cases and 1 to 5 per cent. infectious cases. After the mass campaign and re-surveys, these rates were reduced to 0 to 2 per cent. active cases and 0 to 0.5 per cent. infectious cases respectively. However, efforts should not be relaxed, since sporadic infectious cases varying from 0.5 to 0.05 per cent. and localized outbreaks continue to occur in the treated areas. This necessitates the continuation of long-term surveillance, periodical evaluation and adequate financial provision by each country for the purpose. The latter will continue to be “sound investment” on the part of governments, because endemic treponematoses control programmes, apart from ensuring that yaws will not occur, are in fact nowhere monovalent: other programmes for the control of communicable diseases—such as smallpox vaccination and leprosy case-finding—are started either at the same time or subsequently. Yaws campaigns also serve, of course, as a basis for stimulating the development of rural health services in some countries, as, for example, Nigeria. Communities in which yaws was formerly an important public health problem are now to a very large extent enjoying the social and economic advantages that follow its removal: freedom from disabling deformities and lesions and from the commensurate loss of working capacity in adolescents and adults. In this way, modern treponematoses work can significantly increase the manpower available for rural development and agricultural production.

Follow-up activities for yaws by governments and WHO will therefore be needed for several more years. These should be accompanied by critical epidemiological and evaluation studies, and much thought is being given by WHO to this problem. A regional treponematoses assessment team is being envisaged for Africa for the near future to assist in these studies. During the year, WHO sent consultants to Mali, Mauritania, Senegal, Upper Volta, Dahomey, Ghana, Nigeria, Liberia and Cameroun (Western Province) to advise on national programmes. WHO personnel continue to assist in the yaws campaigns in Sierra Leone, Liberia, Togo and Nigeria.

In connexion with the world-wide campaign for smallpox eradication, WHO sent experts to a number of countries to give advice on problems arising in smallpox programmes. With the assistance of WHO, the Ivory Coast has undertaken an eradication campaign.

Helminthic diseases are still a serious economic and health problem in many parts of the Region. The creation of new agricultural zones, the conversion of irrigation schemes from periodical to perennial, the flow of immigrants, the concentration of population in and near the new zones, and, finally, the incompatibility of bilharziasis with the regular physical effort necessary for economic development, have combined to bring bilharziasis to the fore as a public health problem. A bilharziasis advisory team visited Tanganyika, the Federation of Rhodesia and Nyasaland, and Ghana. Up till now, the only WHO-assisted bilharziasis project in the Region has been in Ghana.

Onchocerciasis has led to the abandonment of some areas in a number of countries, so that fertile land is wasted. A number of countries have requested assistance with control work. A team of consultants visited countries in West Africa to examine the facilities for onchocerciasis research in that area. A conference on onchocerciasis, held in Brazzaville in June 1961, is described elsewhere (see pages 17 and 66).

In 1961 WHO gave assistance to the Congo (Brazzaville) in the control of an outbreak of poliomyelitis, by providing oral live vaccine and technical advice on its use. Fifteen thousand children were vaccinated, and an adviser was made available for the latter part of the year to assess the results.

An adviser in tse-tse control visited Bechuanaland. Discussions were held with a number of governments on the expansion of WHO assistance in the control of trypanosomiasis.

Environmental sanitation received considerable attention. The appointment of a second sanitary engineer in the Regional Office made it possible for visits to be made to a large number of countries in the Region that have requested advice and assistance. New projects were started in Dahomey and Sierra
Leone, and one for the Ivory Coast had reached an advanced stage of planning by the end of the year.

The main purpose of WHO's work on environmental sanitation has been to assist governments in strengthening their environmental sanitation units in the health administrations, the training of sanitation personnel and the organization of sanitary surveys. In the period covered by this Report, three WHO teams were assigned to Ghana, Madagascar and Eastern Nigeria to assist the governments on questions of financing, administrative and legal matters connected with water supply schemes and water supply planning. The teams are recommending the appointment of autonomous water authorities, supported by economic water rates.

The sanitary engineering project in Kenya developed well (see also page 67). The water supply scheme to bring piped water to every compound and standpipes in small towns in a selected area in the Nyeri district was almost completed. The co-operation of the local population has been above expectation. A campaign of construction of latrines, wash-places and laundries is halfway to completion. In two other areas—in the Rift Valley Province and the Coast Province—different types of pumps and wells are being constructed.

A long-term nutrition project in Kenya was started in 1961 with assistance from WHO. The first phase is a nutritional survey to provide information for a broad programme to be undertaken in collaboration with FAO and UNICEF.

The fourth CCTA/FAO/WHO Inter-African Conference on Food and Nutrition was held in Douala, Cameroun, in September 1961, to discuss national nutrition policies.

**Assistance to the Republic of the Congo (Leopoldville)**

During the year the long-term assistance to the Republic of the Congo (Leopoldville) began to take shape. The initial emergency for the health services has been tided over by the assignment of WHO staff, who had been detached from headquarters, the regional offices and projects, and by the thirty-four teams sent by the International Red Cross from twenty-four countries. These were gradually replaced by 130 WHO medical officers who were assigned to key positions in the health and medical care services of the country, which are staffed mainly by assistants médicaux and infirmiers. The unstable situation in the Congo gave rise from time to time to difficulties that hampered operations, though never for long enough to interrupt seriously the medical and health services made available to the population.

For instance, an emergency arose in South Kasai when a number of refugees, estimated at between 100,000 and 150,000, were left destitute during the tribal warfare in their province. As a result of near famine conditions hundreds of more or less severe cases of kwashiorkor and similar deficiency diseases were seen in the hospitals and dispensaries of that district. Lack of medical supplies and trained personnel made adequate care almost impossible until four WHO specialists were assigned to the area and food supplies were made available by UNICEF, which was followed by a marked improvement in the situation. Continuous vigilance is being maintained to ensure that any outbreaks of disease are rapidly controlled and to forestall shortages of food supplies.

To help the Government to organize and run its central and provincial health department, WHO has assigned to each provincial health ministry an advisory public health team, which works in close collaboration with the advisory team in the central Ministry of Health in Leopoldville. Various WHO short-term consultants, also, have visited the country to advise on specific problems of the organization of health and medical care services. The relations between the consultative teams and the departments of health to which they have been assigned have been throughout both cordial and effective. The abnormal circumstances in the Congo have now and again compelled staff members to assume functions which normally would have been considered the exclusive responsibility of the local health departments; but those various tasks have invariably been undertaken with the full accord of the central and provincial authorities.

Although it must be recognized that there are still serious deficiencies in the structure and functioning of the health services, a minimum organization has been effectively maintained in spite of a wholly unusual situation.

From the outset it was realized that the fundamental long-term solution to the health problems of the Congo must lie in the availability of adequate numbers of local fully-qualified staff; WHO therefore organized immediately a programme for the education and training of Congolese. This programme has two main aspects: training in the Congo itself; and, where that is not possible, training abroad.

To promote training in the country itself, teaching staff were provided for the Medical Faculty of Lovanium University, Leopoldville, and a collective study grant was made to subsidize new students; by those means it was possible to increase the number of students that could be admitted for medical studies.

Assistance was also given to set up a nursing school, under the University, to prepare the necessary nursing
fifty-eight passed the examinations at the end of the academic year in three years. Of the 1960-1961 group of sixty, education which would lead to full medical qualifications in faculties of medicine in Europe, for complementary training are in progress.

When admission to the Lovanium Faculty of Medicine was still very limited, WHO fellowships were given to seven students to begin their medical studies abroad, but thanks to the action described above to increase facilities at that university, it was not necessary to send other students abroad for the academic year 1961-1962.

In the academic years 1960-1961 and 1961-1962 a total of 115 assistants médicaux (including one financed by the Norwegian Red Cross) were admitted to faculties of medicine in Europe, for complementary education which would lead to full medical qualifications in three years. Of the 1960-1961 group of sixty, fifty-eight passed the examinations at the end of the academic year—a very encouraging result for this undertaking.

Another fifteen fellowships were awarded to selected infirmiers diplômés, for specialized training as technicians in laboratory work and radiography, and one in kinesitherapy, financed by the Norwegian Red Cross. Arrangements were completed for the award of a further eleven fellowships in entomology and dentistry.

The Regional Committee

The eleventh session of the Regional Committee was held at Brazzaville, Republic of the Congo, from 25 September to 4 October 1961. Twenty-four Member States and three Associate Members were represented. Representatives of the Technical Assistance Board, United Nations and UNICEF and observers from the CCTA and three non-governmental organizations were also present. The Director-General was represented by the Deputy Director-General.

The Committee discussed and approved the Regional Director's report and noted several resolutions adopted by the Executive Board and the World Health Assembly, in particular those on the malaria eradication and smallpox eradication programmes. One of the resolutions adopted concerned the waiving of "local costs" for newly independent countries. The Committee also discussed the serious lack of accommodation at the regional office and adopted a resolution recommending that Members contribute voluntarily to the cost of extending the present premises.

The representative of the Congo (Leopoldville), participating for the first time as a Member State at the Regional Committee, spoke of the efficient assistance given by WHO to his Government, in the special circumstances obtaining in his country.

A new departure was a two-hour meeting devoted to information on WHO, talks being given by members of the Secretariat.

The Committee approved the revised regional programme for 1962 and the draft programme and budget for 1963 for submission to the Director-General, in both cases with amendments and adjustments. It considered that the existing procedure for establishing programme priorities was satisfactory. It also approved the 1962 programme and the 1963 budget estimates for the Malaria Eradication Special Account, subject to review by the Director-General; it noted the Technical Assistance projects proposed by governments in the African Region for implementation in 1962 and 1963, and expressed the hope that these projects would be approved by the Technical Assistance Board and the Technical Assistance Committee.

The Committee decided to hold the twelfth session of the Regional Committee at Dakar, Senegal, from 24 September to 3 October 1962, and to accept the invitation of the Government of the Republic of the Congo (Leopoldville) to hold the thirteenth session at Leopoldville in September 1963.

The technical discussions at the eleventh session were on "The Role of Health Services in the Implementation of Environmental Sanitation Programmes". The subject chosen for technical discussions at the 1962 session was "Problems and Methods of Cooperation in the Control of Major Endemic Diseases".

Administrative and Organizational Developments in the Regional Office

The staffing pattern has been remodelled to take into account the increase in the work and staff of the Regional Office. The regional advisers have been grouped directly under three public health administrators.

Owing to the continuing increase in the regional activities, the main administrative building and the recently leased adjacent buildings are overcrowded. It has been found necessary to convert the conference hall into offices and to make alterations in the main building to provide additional office space.

The need for the ultimate extension of the main building was discussed at the Regional Committee (see above).

Trends and Developments

Most countries in the Region are at the stage of health development in which the outstanding need is to control communicable diseases, and there can be little doubt that the paramount trend of WHO's
assistance will be in support of the organization and development of resources that are essential for that purpose. That will mean, in most countries, fostering the growth of rural health services and promoting the quantity and quality of facilities for educating and training the large numbers of personnel of all grades that will be required to staff them. More administrators will be required to direct the services and more training institutions, with teachers competent to train in their own country the health workers of the future or expanded services. To undertake those tasks, and to ensure that the growing resources of trained manpower are properly and efficiently employed, the central health administrations will require continued assistance with organization and planning, which must take account of the local needs. In the meantime, an increasing number of international advisers will be needed to support and guide the growth of national health organizations and the development of education and training.

Assistance is also likely to be required in long-range planning for social and economic progress, which is being undertaken by a growing number of countries in Africa and will doubtless call for an increase in concerted action with the United Nations and other specialized agencies.

Some Aspects of Work in the Region

A list of projects current during the period under review will be found in Part IV. The following have been selected for further description.

Conference on Onchocerciasis in Africa, Brazzaville

The Second WHO Conference on Onchocerciasis in Africa, held in Brazzaville in June 1961, was attended by representatives from fifteen countries of the Region and from two in the Eastern Mediterranean Region. Representatives of FAO, CCTA, the International Association for the Prevention of Blindness, and Makerere College, Uganda, also attended.

The Conference had before it the most recent information on the distribution of onchocerciasis in Africa and on the progress of the chief control programmes in operation. The economic importance of onchocerciasis was emphasized, in connexion particularly with the development of economic resources, such as the construction of dams, irrigation, fisheries and forestry.

Recent advances in knowledge of the symptomatology, pathology and pathogenesis of onchocercal infections were reviewed. There was a large measure of agreement as to the etiology of eye lesions found in patients infected by onchocerciasis, though disagreement remained about the etiology of certain of these lesions. The Conference did not consider, however, that it impaired the validity of the general conclusion that onchocerciasis is responsible for blindness and other clinical manifestations that make it a major public health problem.

Discussion of the progress that had been made in the control of the *Simulium* vector by insecticides, notably by DDT, led the Conference to confirm the view that generally speaking it was possible to control, and even to eliminate, the vector; agreement was reached as to the most suitable techniques, it being emphasized that full knowledge of local conditions, including vector ecology, was essential. Injury to fish in waters infested by the vector could be avoided if the measures for *Simulium* control were properly planned. Suggestions were made on the methodology for epidemiological surveys: better epidemiological criteria, and studies of prevalence rates in man, were necessary.

The Conference considered a report on the examination in 1957 of the population in an area of Kenya from which black fly was eliminated in 1946 by using DDT as larvicide. One conclusion from the report was that, although interruption of transmission in this way protected the next generation and prevented serious complications in infected persons, it did little for those heavily infected who already had active and progressive onchocerciasis.

The Conference discussed the influence on the prevalence of onchocerciasis of the dams that are now being constructed as part of economic development plans. They eliminate breeding places, by flooding up-stream tributaries, but the water at the outflow is rich in nutrients and encourages a high population of *Simulium*: this can be dealt with by using larvicides from the dam itself. The dams can also be used to flush periodically the river down-stream and so limit breeding.

Finally, the Conference recommended co-operation between WHO and UNICEF for onchocerciasis control, the planning of inter-country and inter-regional programmes of control, an increase, with international assistance, of training for this work, and further research.

Public Health Administration, Togo

The main purpose of this project was to study the public health services and to consider how they could best be improved in a public health programme covering the next few years.
As a first step, information was collected about the country and its economic resources, about the cultural background and occupations of the people, and their customs and habits relevant to matters of health. A study was also made of the development of the several health services and of the existing central, provincial and local health organization. The study included a survey of the financial resources that could be used for health development and of the help available from outside through agencies working in the country.

The next stage was to examine and review health legislation and regulations. It was considered that the revised legislation should define in detail the powers and duties of the central Ministry of Health and of the provincial and local health administrations, cover the appointment and functions of the technical staff, and include provisions for the collection of vital and health statistics, the control of communicable diseases, medical and institutional care, the control of food and drugs, and other relevant matters.

The preparation of an administrative manual, to serve as a guide for existing staff and also for the orientation of new workers, was discussed with national staff of the Ministry. Lack of statistics has made it difficult to assess accurately the factors affecting public health and the appropriateness of the existing health services. There is much evidence that communicable diseases are prevalent, but their reporting, though adequately developed in the cities, is in many cases inadequate or absent in the rest of the country. The Ministry of Health is giving training in statistical work to a Togolese as a preliminary to the institution of better statistical services.

On the basis of the study, recommendations are now being formulated for improving the health services through measures in keeping with the country's economic resources, its social structure and availability of personnel, and the specific health problems to be met. Because of uncertainties concerning the extent of future resources, the recommendations have been confined to measures that can be initiated in the immediate future and could produce appreciable results within a five-year period.

Department of Paediatrics and Child Health, Makerere College, Kampala, Uganda

There are over nine million children in East Africa, including Uganda, Tanganyika, Kenya and Zanzibar. Not only is there a lack of health workers trained in child care, but the training at all levels has not given sufficient emphasis to child health or to the preventive and social factors that can help to prevent high infant mortality and morbidity.

In 1958 UNICEF and WHO provided assistance to Makerere College, Kampala, for the establishment of a chair of paediatrics, and for nearly six years the Hospital for Sick Children, Great Ormond Street, London, has also helped the College with teaching and clinical services.

This paediatric unit has for some time served as a small but expanding centre for training staff, for advising the Uganda Ministry of Health and for research on problems of child health in East Africa.

By 1961 it had become extremely difficult to meet adequately the demands for post-graduate and undergraduate training. At present some thirty doctors qualify each year, and this number is likely to increase. The unit has also heavy responsibilities for training nursing and paramedical staff.

A new medical school is therefore being constructed to meet the need for more African doctors. For this school WHO is providing, for five years, two lecturers in paediatrics, and the Rockefeller Foundation is providing a lecturer for the department of preventive medicine, which is also being expanded; UNICEF is providing teaching and training equipment and other forms of assistance.

The Makerere project is an example of current trends in the teaching of paediatrics. It provides an autonomous department of paediatrics, closely connected with the departments of internal medicine, obstetrics, and public health, and with the East African Institute of Social Affairs. A recently created Advisory Committee on Maternal and Child Welfare, chaired by the Professor of Paediatrics, provides a valuable link between the teaching institutions and the government services, keeps the university in touch with the needs of the community and facilitates the use of the public health services as training ground.

Environmental Sanitation, Kenya

The Zaina water supply scheme in the Nyeri district of Central Province was inaugurated in July 1961. The scheme was designed, at the request of the Nyeri African District Council, by the technical branch of Agricultural Land Development (ALDEV), and was submitted to the Ministry of Health for UNICEF assistance as part of the WHO-assisted environmental sanitation project. As a piped community water supply has many advantages over individual supplies, the proposals were readily agreed.

The technical plans for the construction were reviewed by the WHO sanitary engineer before the work began. The construction was carried out by the technical branch of ALDEV and all the incidental works in the schools and villages—drained stand-pipes, laundries, showers and water closets—were
built under the direct supervision of the provincial and district sanitation staff, with the technical advice of the WHO sanitary engineer. The water comes from a river and is chlorinated before it is distributed. The system has a total capacity of 64,800 gallons a day and supplies over 4,000 people in 782 farmsteads, four villages and five schools. Every farmstead has a hundred-gallon concrete reservoir inside the compound.

Perhaps the most satisfactory point in this scheme was the sustained voluntary co-operation of all the people in the district. They dug all the trenches for the pipelines and the work in the schools was done by the pupils. There was excellent co-operation between the different government departments, UNICEF and WHO. The water supply for Zaina is the result of the combined efforts of the Ministry of Public Health, the Ministry of Agriculture (through the technical branch of ALDEV), the authorities of the African District Council of Nyeri, and the willing co-operation of the people themselves. The scheme will be invaluable to the health and economic improvement of the population.
In the period under review there has been further orderly increase in the health programme for the Region of the Americas. That programme is planned as a balanced whole, and is financed from the regular budget of the World Health Organization, the Expanded Programme of Technical Assistance, the regular budget of the Pan American Health Organization and voluntary contributions for specified programmes. The most important voluntary funds are the PAHO Special Malaria Fund, the PAHO Community Water Supply Fund, and contributions by the countries of Central America and Panama for the support of their nutrition institute (INCAP). The Government of Argentina contributes to the Pan American Zoonoses Center in Azul, and PAHO operates, with technical assistance funds from the Organization of American States, the Pan American Foot-and-Mouth Disease Center, in Brazil, whose work is an important element in the programmes to increase animal protein.

Inter-country activities, particularly seminars and training projects, have been maintained, and there has been a considerable expansion of direct assistance to individual governments.

The most noteworthy single event of the year was the special meeting in August of the Inter-American Economic and Social Council in Punta del Este, Uruguay. This meeting carried further the statement of the place of health in economic and social development which had been drawn up, in Bogotá, Colombia, in September 1960, by the Special Committee set up by the Organization of American States to study the formulation of new measures for economic cooperation. The Act of Bogotá, which summarized the decisions of that meeting, related social progress to different aspects of development — rural living and land use, housing and community facilities, educational systems and training facilities, public health, and mobilization of domestic resources. The Special Meeting of the Inter-American Economic and Social Council in 1961 emphasized further the role of health in the movement to accelerate economic and social development, and laid down in the Charter of Punta del Este objectives for a ten-year public health programme. This formal public acceptance of the importance of health in the economic development of countries may well mark the beginning of a new era for the development of public health services in the Region. Countries are now preparing their long-range plans for health as part of their national plans for social and economic development.

As in previous reports, it is convenient to group the work done under four main heads: (i) strengthening of national health services; (ii) education and training of professional and technical personnel; (iii) eradication or control of communicable diseases; and (iv) research.

**Strengthening of National Health Services**

In the development of national health services there is a distinct trend towards the integration of limited specific projects into broad and comprehensive health services. The Organization has provided assistance with eighteen integrated health projects in sixteen countries, at the national, regional and local levels. Provision for maternal and child care is included in all these projects, and the training of professional and auxiliary staff has been considered of first importance (see also page 71).

The need for evaluating health services and programmes has been given due consideration. An evaluation study was made in Paraguay (see page 75). Studies to evaluate the health services of three areas in Venezuela have been begun, and a comprehensive evaluation has been started in the Central American countries and Panama.

An adviser has been appointed to direct the regional programme of assistance to governments in administrative methods for public health establishments. He has started work on a bibliography of public administration, to be used for in-service training courses and for general distribution.

The nutrition programme has been expanded. In the past year, programmes of applied nutrition were started in ten countries in association with FAO and UNICEF, and thirty-one fellowships were awarded. Two international seminars were held, one in Puerto Rico to discuss the problems and programmes of the Caribbean area, and the other in Guanajuato, Mexico, with special reference to nutrition education. The vegetable protein mixture prepared by INCAP is being manufactured commercially in El Salvador and Guatemala.
The integration of curative and preventive medicine has been encouraged and a comprehensive survey was started on the needs and resources for medical care. The findings to date show considerable deficiencies in medical care programmes, which clearly need re-orientation in order to ensure that valuable resources are used more efficiently to serve more people. In Argentina and El Salvador programmes have been started to improve the provision of medical care within the structure of the basic health services.

A study of the needs and resources for mental health work was begun, and visits were made to various countries for that purpose. At the end of November 1960 a seminar on alcoholism was held in Viña del Mar, Chile, with participants from fifteen countries of the Region. The epidemiology of alcoholism and methods for control activities at the health centres were thoroughly analysed.

The work on dental health has been concentrated on the training programme for public health dentists and on preparation for seminars on teaching in dental schools.

The application of public health measures in the field of applied nuclear energy has been stressed, as has the inclusion of radiation protection in medical practice and in medical teaching.

Health education as a component of every health programme has been promoted at all levels, and advisory nursing services have continued, especially in the integrated health projects, for which fourteen public health nurses have been provided. The first seminar on public health nursing services was held in El Salvador during the year: twenty-nine nurses from Mexico, Panama and countries of Central America discussed priorities for public health nursing services.

In environmental sanitation there has been considerable activity. As in the past two years, high priority was given to a continental programme of water supply and to the administrative and financing problems involved. At the meetings already mentioned at Bogotá and Punta del Este great importance was attached to this subject, and the Charter of Punta del Este provides for a programme to bring in the next ten years adequate water supplies and sewerage to seventy per cent. of the urban population and to fifty per cent. of the rural population of Latin America. This great endeavour will demand from PAHO/WHO and from governments much planning, organization, personnel and use of local funds.

The Inter-American Development Bank has had a substantial effect during 1961 on the water supply programme in the Americas. In February 1961 its first loan was approved, for the expansion of the water supply of the city of Arequipa, Peru, a project assisted by PAHO/WHO. Since that time a total of nearly $70 million has been approved for loans of water and sewage projects. Other projects for water improvements which, it is estimated, will benefit some 7 290 000 people, are under consideration or have been approved by the Export-Import Bank, the Development Loan Fund and the International Development Association. At the same time governments will invest approximately $59 million, including amortization of capital.

A regional advisory committee on classification of diseases met in Washington, D.C., in January 1961 to consider recommendations for the Eighth Revision of the International Classification of Diseases. Proposed changes in the revised International Classification are being tried out in selected countries of the Region, in relation to the medical terminology used in Spanish-speaking countries. During 1961 Clasificación Internacional de Enfermedades adaptada para Índice de Diagnóstico de Hospitales y Clasificación de Operaciones was published. This diagnostic index in Spanish was adapted from the English publication of the United States Public Health Service.

During 1961 statistical advisers were stationed in three individual countries and in four of the six zone offices of the Region.

Education and Training of Professional and Technical Personnel

In the Organization's assistance to medical schools, special attention was given to organization and administration, the selection of students, the teaching of the basic sciences and the integration of the department of preventive medicine and its programme into each school.

The Organization has assisted eight schools of public health in Latin America — two in Brazil, two in Argentina, one in Mexico, one in Chile, one in Venezuela, and one in Colombia. Senior faculty members of these schools received travel grants to visit the countries from which their students come and to visit other schools to discuss their methods of teaching. The Organization has also provided schools with advisers and visiting professors and has supplied books and training material.

Directors of the schools of public health mentioned in the preceding paragraph and the school in Puerto Rico took part in a conference at Puerto Azul, Caracas, Venezuela, at which various matters of importance to the schools were discussed. The second part of the Conference, which was attended by the deans and the professors of biostatistics, dealt with the teaching of biostatistics in schools of public health in Latin America.
In the Organization's assistance to nursing education, the emphasis began to shift in 1961 from basic nursing education to the preparation of nurse instructors. It was found in the survey of schools of nursing in Latin America that roughly two-thirds of the instructors had not completed high school or had any special training for teaching. Better preparation of present and future instructors should strengthen the schools of nursing more quickly than any other single measure.

Fellowships are still the backbone of the programme for education and training of health personnel in the Americas. The total number of fellowships awarded from all sources in 1961, including those financed by PAHO, was 517, as compared with 516 in 1960. Many fellows from other Regions come to study in the Americas—about 140 in 1961.

In all integrated health projects a prominent place has been given to the education and training of professional and auxiliary staff, by the award of fellowships and by regular training courses within the country. In 1961, 229 professional and 968 auxiliary health workers attended in-service training courses.

Member governments have been urged to strengthen collaboration between their ministries of health and of education and to bring them into closer relation with university authorities in order to increase and improve the training of personnel for the health services. The need for adequate salary scales for specialized health workers has also been stressed. The Regional Director has been asked to expand, so far as the budget permits, work for the education and training of all categories of health staff and to continue his efforts to obtain extra-budgetary funds that will permit the expansion of programmes for this purpose.

A seminar was held at Lima, Peru, in July 1961, to study and review the teaching of sanitary engineering at schools of engineering. In addition, with assistance from PAHO/WHO, three universities are preparing projects to be submitted to the United Nations Special Fund, for assistance in training more engineers in sanitary engineering. A three-month course on water-supply design was sponsored by the Organization at the University of Mexico for engineers of the Central American and Caribbean area. The Third Seminar on Sanitary Engineering, for Central America and Panama, was held in Tegucigalpa, Honduras, with assistance from the Organization, primarily to discuss the planning of water supplies and the participation of Health Ministries in national water programmes.

Two courses in the administration and financing of urban water supplies were held in Mexico, D.F., and São Paulo, Brazil, the first attended by fifty-five and the second by sixty leading water engineers and officials from all Latin American countries.

International training for the improvement of health statistics continued at the Latin American Center for the Classification of Diseases, in Venezuela, and at the School of Public Health in Chile. At the school in Chile new courses have been started to give additional training to professors of health statistics and to personnel who are to direct statistical services in health departments or serve as statistical advisers for the planning and development of health programmes. Training in hospital statistics has also been included in the curriculum of the school. A medical records adviser has been assigned to Argentina to develop demonstration and training centres in hospital records and statistics.

In Brazil, a special course in the application of statistics to medical sciences was given at the University of São Paulo, through the collaboration of the School of Hygiene and Public Health of the University, the National Institutes of Health of the United States Public Health Service, and the Pan American Health Organization. It was attended by fifty-two students from the medical and allied professions.

**Eradication or Control of Communicable Diseases**

The end of 1960 and early part of 1961 was a turning point in the malaria eradication programme of the Americas. The remaining two countries, Cuba and Haiti, entered the preparatory phase, and the area of consolidation was increased in several other countries.

In June 1961, Mexico extended consolidation to 75 per cent. of the original malarious area, in which 82 per cent. of the total population lives at risk (see also page 74). During 1961 Jamaica reduced the attack phase to about one-third of its original malarious area. Surinam was able to suspend spraying in the coastal area. At the end of the year there was evidence that the entire islands of Jamaica and Trinidad, and also British Guiana, should be classed as being in the consolidation phase at the beginning of 1962.

In Brazil, which contains 35 per cent. of the population of the still malarious area of the Americas, a Presidential Decree of 7 July 1961 provided for a complete reorganization of the antimalaria campaign. The administrative and financial improvements made in this programme during 1961 should permit it to cover the whole malarious area by 1 January 1964.

As was expected, as the attack phase advanced, transmission was found to persist in relatively small areas in several countries. In such areas, resistance to
insecticides, outdoor biting, poor shelters, migration of population, etc., required special attention. In some, complementary means of attack had to be used, such as mass drug treatment and larvicides.

In accordance with resolution XXXII of the XI meeting of the Directing Council of the Pan American Health Organization (Regional Committee of WHO), held in September 1959, a register of areas where malaria is eradicated was opened in the Pan American Health Organization. During 1960 and 1961, an evaluation made at the request of the Venezuelan Government showed that an area of over 385,000 square kilometres of that country, with a population of over three million, could be entered in the register.

In the period under review, the trend of the public health work in the countries, and consequently of the programme of the Organization, has been away from single disease campaigns and towards broad programmes in which the control of communicable disease forms part of the integrated health services. Projects such as those for the eradication of Aedes aegypti are entering the final stage, and national projects are being developed for the control of tuberculosis and of leprosy in which the local health services take an increasing part.

Training received a major part of the Organization's assistance, and increasing attention is being devoted to the improvement and expansion of basic services such as public health and food and drug laboratories.

The wide regional programmes, based on the latest methods of prevention and treatment, for yaws, tuberculosis and leprosy control, have returned many people to productive capacity and so have benefited social and economic development. The programme of the Pan American Zoonoses Center, which gives special attention to tuberculosis, brucellosis, rabies and hydatidosis, and the veterinary public health services of the Organization have not only contributed to improving the health of the public, but have had a favourable effect on agriculture, which is the main constituent of the national economy in most countries of the Region.

Research

In recognition of the growing importance of research in any comprehensive public health programme, a unit has been established for the planning of the intensified research activities of PAHO, in close co-ordination with WHO.

The United States Public Health Service has provided a planning grant to assist the Organization in assessing, for the Region, the needs for research in the biomedical sciences—defining problems and priorities, estimating facilities and financial resources, and indicating existing opportunities for research. Proposals for a programme will be based on the information collected.

There are disease problems unique to the Americas, such as Chagas' disease. The large population groups living at high altitudes along the Andes Range, which stretches the whole length of South America, provide unusual opportunities for physiological, behavioural and infectious disease studies in the special ecological conditions of that area. The research programme will be particularly concerned with planning for and assisting research that calls for collaboration by more than one country, and with projects that will permit a fuller application of existing knowledge to the special health problems of each country.

PAHO received from the National Institutes of Health of the United States Public Health Service a grant for the regional development of epidemiological studies, the first grant to be made to the Organization for collaborative research. A planning conference was held in May of staff members of the National Institutes of Health, PAHO, WHO and other organizations. A proposal was made for a study in ten cities of the Americas which should provide comparable mortality statistics for further epidemiological studies on the geographical distribution of cancer and cardiovascular and other diseases.

At the Institute of Nutrition of Central America and Panama (INCAP), in Guatemala, studies were continued on protein malnutrition and its prevention, the assessment of nutritional status, nutritional requirements, the inter-relation of acute infections and nutritional status, and the relation of diet to cardiovascular diseases.

The Regional Committee

The XIII Meeting of the Directing Council of the Pan American Health Organization, which was also the thirteenth session of the WHO Regional Committee for the Americas, was held in Washington, D.C., from 3 to 13 October 1961.

Representatives of twenty-one Member governments in the Region, and of France, the Netherlands and the United Kingdom, attended the session of the Regional Committee. Representatives of the United Nations, UNICEF, FAO, the Organization of American States, the Inter-American Development Bank, the International Committee of Military Medicine and Pharmacy, and of twenty non-governmental organizations and other institutions, were also present.

In the discussions on the annual report of the Director of the Pan American Sanitary Bureau, Regional Director of WHO, close attention was given to the importance of public health programmes to economic
development in Latin America, and in particular to the ten-year public health programme as laid down in the Charter of Punta del Este.

For the regular budget of PAHO for 1962 the Directing Council approved the amount of $5 240 000, an increase of $440 000 over 1961. In addition, there is also available for health work in the Region the sums allocated to it in the WHO regular budget, the funds administered by WHO under the Expanded Programme of Technical Assistance, and certain other funds for specific purposes. The total available for 1962 will amount to about $13 179 000.

The proposed WHO programme and budget for the Region of the Americas for 1963 was transmitted to the Director-General for consideration in his preparation of the WHO budget for that year. The Council took note of the provisional draft programme and budget of PAHO for 1963, totalling $5 740 000, on which will be based the 1963 proposed budget that will be presented to the governing bodies in 1962.

The Council examined the ninth report on malaria eradication in the Americas, and satisfaction was expressed with the progress made in some of the eradication programmes and with the continuing interest shown in dealing with the technical and administrative problems encountered. It thanked the governments that have contributed to the PAHO Special Malaria Fund, and UNICEF, and the United States International Co-operation Administration, for their collaboration. Special resolutions were adopted on the estimated requirements for the PAHO Special Malaria Fund and on the register of areas where malaria is eradicated in the Americas.

The Council declared the territories of Chile and Costa Rica free of Aedes aegypti. It also recommended that countries and areas that are still infested accelerate their work so as to complete the campaign within five years and be able to report the eradication of Aedes aegypti to the XVII Pan American Sanitary Conference in 1966.

The proposed criteria for smallpox eradication were approved. Satisfaction was expressed with the success of various Member governments in eradicating smallpox from their territories, and those that have not eliminated it were urged to accelerate, or undertake, programmes of eradication. Governments were asked to produce smallpox vaccine in amounts sufficient to meet their own needs and to maintain a reserve for meeting emergency situations and for assisting other countries. So long as smallpox remained an international problem, countries were recommended to maintain adequate levels of immunity in the population, and ensure strict application of the International Sanitary Regulations, especially Article 3, on the notification of cases.

The great importance of a combined programme for community water supply and sewage disposal was stressed, and the need to stimulate investment from all possible sources of funds in such projects. Member governments were urged to include in their national long-range plans estimates of the staff required for water supply and sewage disposal programmes, and to provide for recruitment and training. Appreciation was expressed to the Member governments that had contributed to the PAHO Special Community Water Supply Fund.

As regards the regional programme against tuberculosis, the Council recommended that Member governments undertake studies of the incidence and prevalence of tuberculosis and of the cost of specific control measures, their efficacy and the country's financial possibilities of undertaking them. It further recommended that in the next ten years an effort should be made to reduce by at least one half the present mortality from tuberculosis in each country; to reduce morbidity by 33 per cent; and to reduce tuberculosis primary infection to below 2 per cent. in children under five years of age, 10 per cent. in children between five and ten years, and 20 per cent. in those between ten and fifteen years.

Member governments were urged to give priority to nutrition; plan agricultural policies that will take into account the basic nutritional needs of the population; promote the production of protein-rich, low-cost mixtures from sources not at present used for human diet; carry out salt-iodization programmes against endemic goitre; and take into account the importance of raising the level of education in nutrition.

Two resolutions were passed on mortality statistics. One urged Member governments to support the research programme on mortality statistics, for which, as stated earlier, the United States Public Health Service has provided a grant. The other recommended Member governments to adopt a standard form of death certificate in accordance with the international form of medical certificate of cause of death prescribed in WHO Regulations No. 1 (Nomenclature Regulations), adopted in 1948, and to promote the wider use and better quality of medical certificates of cause of death. It was also recommended that deaths whose cause has not been medically certified should be presented separately in the tabulation of mortality statistics.

Other subjects discussed included education and training, the economic aspects of health activities,
national health plans, housing programmes and the advertising of medicinal products.

With regard to the new headquarters building for the Pan American Health Organization and WHO Regional Office in Washington, it was agreed that it was advisable to expand the proposed building to provide for a greater increase in staff than had been originally planned, and satisfaction was expressed with the results of the architectural competition and the design selected by the jury.

The Council thanked the W. K. Kellogg Foundation for its generous grant of $3,750,000, to permit progress in certain fields of health work. With the approval of the Foundation, this grant will be used initially to finance the construction of the new headquarters building; and the Director was authorized to set up a Special Fund for Health Promotion, to serve the original purpose of the grant, to which not less than $187,500 a year is to be appropriated from the PAHO regular budget until the full amount of $3,750,000 has been committed for the expansion of the health programme.

A number of resolutions of the Fourteenth World Health Assembly and the twenty-sixth, twenty-seventh and twenty-eighth sessions of the WHO Executive Board, which had been referred to the Regional Committees, were also examined. The general programme of work for the period 1962 to 1965 was discussed and the priorities outlined in that programme of work were reaffirmed with the understanding that they would be adapted as necessary to conform to national health plans and the requests of Member governments.

Member governments were urged to make voluntary contributions to the WHO Malaria Eradication Special Account, and those that had not yet done so were invited to issue a special postage stamp commemorating the world-wide malaria eradication programme.

The Expanded Programme of Technical Assistance was discussed, and the Council recommended that Member governments, when formulating requests for Technical Assistance for the two years 1963-1964, should give full weight to the importance of health projects in social and economic development.

A full day was devoted to the technical discussions on "Methods of Evaluation of the Contribution of Health Programmes to Economic Development", and the "Present Status of Medical Care in the Americas in Relation to its Incorporation as a Basic Service in Integrated Health Programmes" was chosen as the subject of technical discussions in 1962.

Nicaragua, Peru and Uruguay were elected to the Executive Committee (Working Party of the Regional Committee) to replace Brazil, Honduras and the United States of America, whose periods of office had expired.

Some Aspects of Work in the Region

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

Malaria Eradication, Mexico

In 1955 the Government of Mexico asked for assistance with a plan to eradicate malaria from the country.

By the end of that year a plan of operations had been agreed on by the Government, UNICEF and PAHO/WHO, with three main phases: first, to set up a pilot project to determine the most effective procedures; secondly, to train locally and abroad the professional and auxiliary staff necessary for the work; and thirdly, to organize eradication operations.

Since 1955 a PAHO/WHO team has been working in Mexico, WHO having provided a malariologist as team leader, a medical officer, a sanitary engineer and a sanitarian. UNICEF provided supplies and equipment, and in the early years of the project the United States International Co-operation Administration also gave assistance.

The pilot project developed well and at the beginning of 1957 an eradication programme covering the whole country was started. In spite of the setbacks that are to be expected in a pioneer programme, it is believed that the eradication of malaria is now in sight. By the middle of 1961 the malarious area of Mexico had been reduced from the original 978,185 square kilometres, with nearly 18 million inhabitants, to about 244,500 square kilometres with a population of less than one and a half million. The rest of the original malarious area is at present in the consolidation phase. The Government's contribution to the cost of the campaign, originally estimated at 30,000,000 Mexican pesos a year, had by 1961 increased to 60,500,000 pesos a year.

In most areas the simple technique of indoor spraying of houses proved effective in halting malaria transmission, but in some districts it is not enough. Special investigations are being made into the reasons for the persistence of transmission in the remaining...
twenty-five per cent. of the original malarious area. In one area, for example, it was discovered that bed-bugs had become resistant to DDT, and that the effect of each spraying was to make them attack with more vigour than before. The families therefore washed and plastered the walls to get rid of the bed-bugs and so destroyed the anti-mosquito effect of the spraying. An insecticide mixture is now used which attacks the mosquitoes and kills most of the bed-bugs; preliminary inquiries suggest that sprayed walls are now left untouched so that the spraying remains effective for six months.

In other areas, there is much migration of agricultural workers, some of whom live for a time in shelters that are difficult to spray effectively. The appropriate solution is being found for each such special difficulty: mass drug treatment and larvicides are used in suitable cases.

As a result of the campaign, the Mexican Government is expanding its agricultural programme, distributing land, and undertaking irrigation and hydro-electric schemes. (The Yucatán Peninsula is practically free of malaria, and the chicleros can work and produce more than formerly.) Some of those developments complicate the interruption of transmission, because they bring migration of workers and produce new breeding places for mosquitoes, but the difficulties so caused are only minor.

The eradication programme has progressed so well that the Government has agreed to organize and maintain, with financial support from the PAHO Special Malaria Fund, an international centre to train workers for eradication schemes in other countries of the continent. At this centre sixty-six physicians, fifty-one sanitary engineers and 137 sanitarians, mostly from Latin America, have received basic training in methods of malaria eradication.

WHO assigned a project engineer to work with the city community engineer, and draughtsmen and assistants were recruited and paid by the city. During 1960, as the project developed, WHO sent a consultant on water-rates and one on financing to advise on the procedures to be followed. Studies on the technical, organizational and financial aspects of the project were completed during 1961, and the city authorities presented a report to the central government for transmission, together with a request for loan funds, to the Inter-American Development Bank. The WHO liaison engineer at the Inter-American Development Bank found that certain modifications were necessary in the proposals submitted in order to meet the interest and repayment schedule proposed by the Bank. The Cúcuta city engineer then visited Washington and with assistance from WHO redrafted the report to incorporate the necessary changes.

The Bank subsequently approved a loan of $5.9 million for this project. The local contribution will amount to $1 160,000, and it is estimated that some 168,000 people will benefit from it.

The WHO project engineer is now assisting in the final work of designing and in the construction. In the meantime Colombian sanitary engineers have been trained in the administration, operation and financing of water supply systems. Studies on water supply systems for the other communities have been undertaken and are nearing completion. At the request of the Government additional communities have now been included in the project.

**Evaluation of National Health Programmes**

An important recent development in the Region's programme is the assistance to governments in evaluating their national health services.

In 1960 the Ministry of Health and Welfare of Paraguay undertook, with guidance from WHO, a thorough appraisal of all aspects of the country's health services in order to ascertain as exactly as possible the real health needs of the population and the actual and potential resources available or necessary to meet such needs. At the same time an assessment was made of the development of the national health services over the last ten years, with, in particular, an analysis of the way in which resources have been augmented and used during this period.

In this type of undertaking the work follows three phases: (a) the collection and tabulation of data, including all relevant statistics, if any; (b) the evaluation proper (evaluation in the field, assessing services and needs, at the same time checking the validity of the data collected); and (c) the final evaluation of the current state of public health in
the country and the degree of health protection and promotion achieved during the period under consideration. A report on these findings is then submitted to and studied by the government.

In addition to the systematic assessment of the needs and resources and basic data available, this type of evaluation has two aims. Firstly, it serves to orientate future planning of both the national health programme and the various operations forming component parts of that programme. Secondly, the evaluation itself establishes a firm basis on which all future progress can be judged. The establishment of the general relationship between progress in health work and the social and economic development of the country presents a more difficult task. An ancillary though important aspect of such evaluation programmes is the opportunity which they provide for WHO to gauge the value of its own technical assistance and to plan its future activities.

In Paraguay the evaluation team covered the whole country making assessments in numerous health centres, sanitary posts and units, and many private and public institutions, as well as the Ministry of Public Health. It trained health personnel in evaluation techniques, and demonstrated practical methods of evaluation which could be used as part of health service routine.

The success of the evaluation carried out in Paraguay has shown that this new approach is an effective means of assessing rapidly and economically all aspects of a national health programme. The five Central American Republics and Panama have asked WHO for guidance with similar evaluations. WHO assistance with this series of appraisals started in 1961 and is expected to end in 1962.
CHAPTER 15

SOUTH-EAST ASIA REGION

In South-East Asia, despite the general limitation of the resources at the disposal of governments for public health development, the year's progress has not been unsatisfactory, especially in the two vital matters of training of personnel and control of communicable disease. There is, however, a paramount need for more extensive health services and for a better organization that will provide a proper integration of the curative, preventive and promotional aspects, particularly in rural areas. Such an organization is, clearly, required to serve as the nucleus into which control and eradication programmes against communicable diseases, such as malaria, tuberculosis, smallpox, leprosy, yaws or trachoma, may be integrated.

In close collaboration with UNICEF and the United States International Co-operation Administration (ICA), WHO has continued to assist Member governments with their malaria eradication programmes. In several countries there has been a good deal of reorganization and strengthening of the eradication services; supervision and training has remained an essential feature.

The work of the Tuberculosis Chemotherapy Centre in Madras has yielded further results of great interest. Numerous papers have already been published, thirteen in the WHO Bulletin\(^1\) and others in national medical journals. Fifteen others have been approved for publication, most of them in the WHO Bulletin. These studies have attracted world-wide attention, and their continuation is of primary importance, as they may well provide the answer to some vital problems of tuberculosis control in countries with limited resources.

Much assistance has been given to the national tuberculosis control programme in India and to a national pilot scheme for tuberculosis control in Thailand; a start has been made with a similar project in Indonesia. The BCG vaccination programmes in Burma, Ceylon, India, Indonesia and Thailand again received substantial aid from UNICEF and technical advice from WHO. The availability of freeze-dried vaccine is of great interest for these programmes, and the Government of India has started some trials with locally produced freeze-dried vaccine.

In nearly all countries of the Region, leprosy control programmes are under way; they are still not adequate and must be expanded by more funds and proper field organization. The programmes rely largely on extensive case-finding and treatment provided by domiciliary and outpatient services.

Progress in trachoma control has been very slow, but it is hoped that programmes, particularly in India, will be speeded up. A project assisted by UNICEF and WHO is being started in Thailand.

Throughout the Region smallpox vaccination programmes are developing steadily. In Indonesia an epidemic outbreak in central Java was successfully brought under control towards the end of 1960. In India the sixteen pilot projects have given useful results, and it is planned to follow this pilot phase with a full eradication campaign in 1962-1963; but progress towards eradication in the Region as a whole is still likely to be hampered by organizational difficulties. The Regional Committee, at its meeting in 1961, urged all countries to start on eradication programmes, preferably within the next five years.

Cholera continues to be a major problem. Improvements in environmental sanitation will do more to control it than any other measure, but unfortunately the vast funds required exceed the national resources at present available.

The reappearance of plague in certain parts of India and Indonesia has caused concern, and illustrates the need for effective surveillance services, with particular attention to the effect that the termination of spraying in malaria eradication campaigns may have on plague vectors.

Attention has several times been drawn to the serious problem of filariasis; current control measures are not fully effective and further research is needed. Consultant services on filariasis have been provided for Ceylon and Burma.

Assistance has been continued for the development of national or state epidemiological units and of health statistical services, which are indispensable to comprehensive and efficient programmes for the control of communicable and other diseases.

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At the same time, attempts have been made to stimulate the development of public health laboratories, and to this end WHO consultants have visited Burma, India and Indonesia. These services are still very inadequate and much more assistance will no doubt be needed with their organization and expansion and with the training of laboratory technicians. The school established in Ceylon for this purpose, with WHO's help, has attained a good standard of training.

Assistance in strengthening national health services and particularly in the development of rural health services (mostly as part of community development schemes) has again been an essential feature of WHO's work. This is a long-term programme, for many difficulties have to be solved and progress is slow. Shortage of staff—and the reluctance of staff to serve in rural areas—in-sufficient training in public health, shortage of accommodation, and the great lack of proper supervision and co-ordination are some of the stumbling blocks. It has become clear that WHO's assistance can most usefully take the form of training.

In maternal and child health, WHO's attention has been focused on such work as part of general community health services, and on assistance to paediatric teaching departments, particularly in preventive and promotional care. Such departments are being steadily expanded, particularly in Ceylon and India, to cover provincial and district hospitals and to develop them into referral and consultation units on child health for the peripheral services.

Satisfactory progress has been made in nursing administration and education; but nursing staff is still insufficient and the need for adequate nursing care in hospitals makes a heavy demand on the limited resources. Sound basic training, into which public health is fully integrated, the training of nurse auxiliaries and post-basic courses for nurse administrators and nurse teachers are receiving special attention, with assistance from WHO.

Although the need for improved environmental sanitation is generally accepted, the high morbidity and mortality that follow defective environmental conditions continue undiminished. Pilot projects have pointed to the solutions to most of the problems of water supply and excreta disposal, but energetic and well-supported schemes are still to be developed. The financing of such schemes, in both rural and urban areas, remains the main problem; governments are most reluctant to draw on long-term loans from international sources, as these are more urgently needed for agricultural and industrial development.

Together with lack of sanitation, malnutrition is responsible for the major burden of sickness in South-East Asia. The creation of nutritional advisory committees is a promising advance if they can be made effective in guiding national policy on food production and pricing. WHO, in close collaboration with FAO and UNICEF, has assisted expanded nutrition programmes in India and Thailand. Nutrition was the subject of the technical discussions at the Regional Committee in 1961.

Reference has already been made to education and training in various subjects. In addition, a number of conferences and other meetings were held during the period under review to assist governments by providing for interchange of knowledge and experience and for the exploration of common problems. They included: a scientific meeting on rehabilitation in leprosy (November 1960); an inter-regional smallpox conference (November 1960); a conference on auxiliary personnel in sanitation (December 1960); an inter-regional yaws conference and inter-country co-ordination meeting (October and November 1961); a medical education study tour in Indonesia, Singapore and India (November and December 1961); and a regional conference on nursing administration, at Kandy (November and December 1961). To help medical education, direct assistance was given to undergraduate and post-graduate educational institutions, and 151 fellowships were awarded during the period 1 December 1960 to 30 November 1961. During the preceding twelve-month period 107 fellowships were awarded. WHO visiting professors were assigned in 1961 to medical colleges in Afghanistan, Burma, India and Thailand.

Although WHO's share in work on social and occupational health in the South-East Asia Region has so far been limited—largely because of the demands of more urgent work—more will have to be done in this field in the future. Rapidly growing urbanization and industrialization are producing social and occupational problems that call for more attention in the interests of health. The shortage of housing, for example, is becoming so acute that vast slums are likely to result, unless effective measures can be taken.

Countries in the Region are showing much interest in radiation protection. WHO has assisted with courses on the subject and has provided advisers on effective protection against hazards of radiological installations.

Finally, WHO's widening interest in medical research is reflected in the broad range of questions now being studied in various parts of the Region. Tuberculosis, malaria, leprosy, treponematoses, diarrhoeal diseases,
FOURTEENTH WORLD HEALTH ASSEMBLY

At the invitation of the Government of India, the Fourteenth World Health Assembly was held in New Delhi in February 1961.

(1) The Vigyan Bhavan, where the Assembly was held.

(2) Delegates arrive for the opening meeting on 7 February.

(3) The Honourable Jawaharlal Nehru, Prime Minister of India, who inaugurated the Assembly, is greeted on his arrival by Dr H. B. Turbott (New Zealand), outgoing President of the Assembly, Dr M. G. Candau, Director-General, and other senior officials of WHO.

(4) Dr A. Mudaliar, head of the Indian delegation, who was elected President of the Assembly.
During 1961 WHO has continued its overall direction of international assistance to the Republic of the Congo (Leopoldville) in the field of health. Two essential aspects of the work, illustrated here, are the restoration of disrupted health services and the training of Congolese personnel to take them over.
(1) A Red Cross sanitarian demonstrates to "assistants médicaux" in Stanleyville the technique of dissecting rats, in the course of investigations for plague.

(2) At Bunia, in Stanleyville Province, the WHO medical officer shows a bacteria culture to an Ethiopian physician (himself trained on a WHO fellowship) and a nurse, who were attached to the Ethiopian troops serving with the United Nations.

(3) A Red Cross sanitary engineer inspects fish at the market in Bunia.

(4) The sanitary engineer explains to a Congolese technician how to vary the amount of chlorine in Bunia's water plant as the source of the supply changes.

(5) The graduation ceremony at Leopoldville, on 22 July 1961, of the first two Congolese ever to qualify as doctors.

(6) Under a WHO-sponsored scheme "assistants médicaux" have been enabled to complete their medical studies abroad. One of the "assistants médicaux" at the University of Lyons, France.
Since 1957 WHO has been assisting the Government of Afghanistan in a comprehensive training programme for all categories of nursing staff. The pictures, taken at the rural clinic at Chaurassiah, show some of the varied duties of a seventeen-year-old girl from Kabul, who recently graduated as an auxiliary nurse-midwife.

(1) Taking down a case history at the clinic.

(2) Checking a patient's blood pressure.

(3) Tending a new-born baby in the village.

(4) Keeping an eye on the children in the kindergarten attached to the clinic.
anaemias and the role of migratory birds as disseminators of arthropod-borne disease are the main subjects of research for which the Organization’s help has been provided.

The Regional Committee

The fourteenth session of the Regional Committee was held in Ootacamund, South India, from 19 to 25 September 1961. Representatives of Afghanistan, Burma, Ceylon, India, Indonesia, Nepal, Thailand and the United Kingdom were present. The United Nations, UNICEF, FAO, the International Committee of Military Medicine and Pharmacy, and eight non-governmental organizations sent representatives also. Dr. F. Grundy, Assistant Director-General, attended the meeting as representative of the Director-General.

In the course of its discussion on the annual report of the Regional Director, the Committee made a number of recommendations on various aspects of the programme, of which the more important were on: the assessment of malaria eradication programmes; more attention to smallpox eradication; the improvement of environmental sanitation; health services in community development; food hygiene; the greater use of auxiliaries to relieve doctors in rural areas; health education for nutrition; and simple preventive dental care.

A Sub-Committee on Programme and Budget made a comprehensive review of the proposals. The Regional Committee, with this assistance, reviewed in detail and endorsed the proposed programme and budget estimates for the South-East Asia Region for 1963 and proposals under the Expanded Programme of Technical Assistance for 1963-1964, for transmission to the Director-General. Education and training received special consideration.

Following a recommendation made at the previous session, governments had submitted some evaluations of selected internationally assisted projects. A summary of those evaluations was presented to the Regional Committee, which found this type of evaluation by governments most useful and hoped that it could be continued. WHO offered to assist any independent assessment of such projects that governments might desire to have made.

Resolution WHA14.39 of the Fourteenth World Health Assembly on priorities in programme was discussed. It was felt that adequate guidance was already being given to the Regional Director, in accordance with the basic needs of the Region, and that it was not practicable to lay down any strict order of priorities. The Committee was of the opinion that the programme was well suited to the special needs of the Region and fell within WHO’s third general programme of work for a specific period, covering the years 1962 to 1965.

The Committee thanked the Government of India for its generosity in providing a new building for the Regional Office and noted with satisfaction the progress being made in its construction.

Finally, the Committee confirmed that its 1962 session would be held at the Regional Office in New Delhi in September of that year, and accepted with appreciation the invitation to hold its 1963 session in Thailand.

“The Role of Public Health Departments in the Improvement of Nutrition” was the subject of the technical discussions. “Community Water Supplies” was chosen for the Committee’s technical discussions in 1962.

Administrative and Organizational Developments in the Regional Office

The administrative work of the Regional Office continues to grow with the expansion of the technical programme. During the Fourteenth World Health Assembly, which was held in New Delhi, the Regional Office was called upon to provide staff to assist in the preparations for and running of the meetings. This provided a valuable experience for members of the staff.

Contacts with the United Nations, its various agencies and other organizations have, as usual, been close; numerous technical consultations were held and meetings called by those agencies were attended by WHO. The Regional Office, being the largest office in New Delhi of the United Nations and its agencies, is responsible for collecting data and making recommendations for salary scales of locally recruited staff and for cost-of-living surveys for all the United Nations offices in the country. Regular meetings were held with UNICEF; and some thirty projects in public health, community development, malaria eradication, maternal and child health, communicable disease control, vaccine production and environmental sanitation have been jointly assisted by UNICEF and WHO.

Close relations have been maintained with non-governmental and other bilateral agencies working on health or related subjects. Collaboration is maintained also at the country level, through the WHO area representatives, chiefly with the Technical Assistance resident representatives and directors of Special Fund programmes.

By November the main structure of the new permanent accommodation for the Regional Office had been completed, and work on interior decoration and installations was in progress.
Some Aspects of Work in the Region

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

National Tuberculosis Programme, India

Tuberculosis is one of the major public health problems that face India. The national sample survey, conducted between 1955 and 1958, has suggested that there are in India about five million tuberculosis cases, and that a considerable proportion of them are actively infectious. It has shown also that the problem is not confined to towns, but is almost equally acute in rural areas.

Until recently, the generally accepted methods of tuberculosis control were limited to treatment in hospitals. Such treatment affords little hope of controlling tuberculosis in India during the next fifty years. For one thing, it would require half a million beds at least, possibly a million, and there are at present only about 30,000 beds. With the methods now available, treatment will, in future, be mainly in the homes of the patients, directed from a clinic or tuberculosis centre. The national plan is to have at least one clinic or centre for each of the 380 districts in the country during the next Plan period.

To meet the need for training such a large number of public health workers and for research, and to provide technical direction and epidemiological information for the national tuberculosis control programme, a National Tuberculosis Institute was established in Bangalore in 1959. The Institute has an epidemiological section which gathers and analyses information on the extent and nature of the tuberculosis problem. It also has field tuberculosis control pilot projects in urban and rural areas whose purpose is to find the methods best suited to the conditions in India, where the problem is large and resources meagre. The Institute has sociological, statistical and bacteriological sections to aid the research programmes and to participate in the training.

The training programme is planned to provide teaching and experience for workers of various categories. Teams of doctors, public health nurses, laboratory technicians and BCG technicians receive training at the Institute and in its subsidiaries in the field before returning to their own districts to organize tuberculosis control programmes. The greater part of the programme of work associated with the Institute is in the field, where the teachers and trainees work practically all the year round, mainly in rural areas and in improvised quarters.

WHO supports the national tuberculosis programme by co-operating with the Indian Council of Medical Research (whose studies are of the first importance for the control of tuberculosis in countries with limited resources) and through the National Tuberculosis Institute at Bangalore, in which at present eight WHO staff members are working. The total number of WHO staff working with the national tuberculosis programme has been ten from 1959 to 1961, and will be reduced to eight in 1962. The Bangalore programme is strongly supported by UNICEF also.

Strengthening of Environmental Sanitation, Burma

WHO's assistance to this project began in 1956. The aims were to establish a pilot demonstration area in which to test methods for the improvement of rural water supplies and excreta disposal, and to devise simple, cheap and practical means of sanitary construction suitable for use in rural areas. A sample survey carried out at the start of the project showed a high rate of intestinal parasitism in the area selected.

WHO provided a sanitarian, and some supplies, equipment and transport; UNICEF contributed sanitation material and well-boring machinery. The work was co-ordinated with that of a related project for creating an environmental sanitation division in the Ministry of Health. A health assistant posted to the project was appointed as national counterpart to the WHO sanitarian.

Constructional work in the project was slow at first, because there was no adequate sanitary engineering organization, and because of administrative difficulties and shortage of labour. However, the pace improved later. Health education, under the guidance of the Health Education Bureau, improved the public's acceptance of the programme.

Throughout the project, training of personnel received much attention. The project staff trained health workers in the pilot area and assisted with the practical training of student health-Assistants and with the training in the Aung San Myo Health Demonstration Centre. Regular courses were arranged for medical students, all types of public health workers
and village leaders. More than five hundred attended such courses in the past year.

The scope of the work has been extended to such aspects of rural sanitation as village cleanliness and the disposal of refuse, of surface and sullage water. Plans have been made to extend the project beyond the pilot area, in co-operation with the Rural Water Supplies and Sanitation Board. A programme has been started for providing piped water systems in certain schools, health centres, other institutions and some villages.

**Nursing Education, Nepal**

Before this project was undertaken, nursing education in Nepal was almost wholly limited to practical in-service training of apprentices; a few girls only had received full-scale training in nursing and midwifery in India. The aim of the project was therefore to develop a sound national programme of nursing education, with which nurses might be trained for institutional, domiciliary and public health work.

To assist the work, WHO provided in 1954 a nurse tutor and a midwifery tutor, a public health nurse from 1956 to 1958, and a ward instructor from 1958.

In 1955 accommodation was provided for a school and a students' hostel, and WHO supplied equipment, teaching aids and transport. The Nursing School was opened in May 1956, with a broad curriculum, which included public health teaching throughout the course. The School had facilities to take twelve to sixteen students annually.

Ten students from the first class received WHO fellowships in 1959 for midwifery training in India and one for operating theatre experience. Since then the Kathmandu Maternity Hospital, which was opened in 1960, has been providing students with midwifery practice. The original three-year course in general nursing was recently extended to three and a half years.

The first class graduated in 1960, and several of the graduates have since been appointed as staff nurses in the Bir Hospital.

A Nepalese nurse, after a year's study in the United States, was appointed matron of the maternity hospital in 1960; and three Nepalese nurses who had been trained in nurse-midwifery in India were appointed as counterparts to the international staff, and were awarded fellowships to study teaching.

Two of the Nepalese tutors now take a fair share of the teaching, and the number of WHO tutors was reduced from three to two in August 1961.

By the end of 1961 Nepal had twenty-five fully qualified nurse-midwives from the school and forty students in training. Recruitment for the school is not yet easy, because of the general level of women's education and traditional objections to the idea of young women working away from home.

The medical staff have fully supported the programme, and voluntary women's groups have given useful assistance.

**Paediatric Education and Services, India**

WHO assistance to paediatric education in India developed from state maternal and child health and nursing programmes. The first project was started in 1954 in Hyderabad, and was followed by others in Uttar Pradesh and Madhya Pradesh.

In the course of these programmes, it was found that one of the main obstacles to effective child health services was the inadequate training of medical students in all aspects of child health. This called for immediate attention to the teaching of paediatrics in the medical colleges of these three states (at Hyderabad, Lucknow and Nagpur), and the WHO team leaders—all qualified paediatricians—therefore gave much of their time to the expansion and improvement of paediatric training.

A rapid survey of paediatric education was made in 1955 and 1956 to assess the size of the problem and make plans to deal with it. After this study, a number of projects in paediatric education were prepared: one in 1956 at Andhra Medical College, Visakhapatnam; one in 1957 at Madras Medical College; one in 1958 at Trivandrum Medical College; one in 1959 at all three medical colleges of Bombay city; and one in 1960 at the Medical College, Agra.

Undergraduate teaching improved considerably in all these projects, and in some places post-graduate teaching is now given. Several universities now award a Diploma in Child Health.

To improve nursing techniques in paediatric teaching units, paediatric nurses were included in the WHO teams assigned to paediatric education projects, paediatrics was given a more important place in the basic nursing curriculum, ward techniques were im-
proved, and short-term post-basic courses were given in paediatric nursing.

In 1961 it was decided to combine all assistance for paediatrics under a single national project, for strengthening, in the first place, twelve medical colleges. UNICEF is providing equipment.

Paediatric teaching in India has now made considerable progress: facilities have improved, and preventive and promotional child care has been stressed. By the end of 1961 there were in India sixteen full professors of paediatrics and eighteen other independent department heads, as compared with two full professors and nine independent department heads five years before.
CHAPTER 16
EUROPEAN REGION

The tenth anniversary of the establishment of the Regional Organization for Europe fell during the year 1961 and provided an opportunity for a general review of activities in the Region over the decade.

The strengthening of national health administrations has always been an important objective in the Region. National public health training institutes have received sustained assistance, which was continued during the year. Further training courses were held in rural public health (continuing the series given alternately in French and English) and in hospital and medical services administration (see description on page 86). Steady progress was made with the large-scale projects, jointly assisted by UNICEF and WHO, that are providing local training for all categories of health personnel in Greece and in Morocco. A symposium on health education, held at the end of 1961 in cooperation with UNESCO, dealt with the preparation of teachers. This was the latest of a number of meetings and conferences on aspects of health education. The training of the doctor for his work in the community was the subject of a conference held also during 1961.

The great demand for nursing staff of all grades, including auxiliaries, and also the need to train staff at the post-graduate level for teaching and administration, has given rise to an extensive programme of conferences, training courses and fellowship awards. Due attention has also been paid to the nursing aspect of other activities—maternal and child health, mental health, and occupational health and rehabilitation. The most recent of these conferences, held in November 1961, concerned the role of the nurse in mental health practice. Mental health is itself another example of a co-ordinated activity: apart from the specialized aspects that have been dealt with in various seminars and epidemiological research projects, the aim has always been to achieve the fullest possible integration with other public health services at the local, national and international levels.

A symposium was held in 1961 to assess present maternal and child health needs in Europe. This is another very broad field, for conditions in the individual countries of the Region vary greatly. Activities range from the building-up of essential national services to studies on perinatal mortality, accidents in childhood, school health and dental health.

In so highly industrialized a region, much attention is naturally paid to occupational health and rehabilitation, in collaboration as a rule with other international organizations, particularly ILO. A seminar held during 1961 dealt with the problem of health services in small factories. During the year rehabilitation programmes were under way in several countries of the Region, the most notable being the programme of emergency aid to the Government of Morocco for the rehabilitation of over ten thousand cases of paralysis caused by contamination of food with mineral oil (see description on page 86).

Two fields in which activities have recently expanded in the Region are that of chronic diseases and gerontology, where the main concern has so far been with cardiovascular diseases and cancer, and that of epidemiology and health statistics. A European technical conference on mortality statistics (described on page 86) was held during 1961.

Meanwhile the traditional problems of communicable diseases have not been neglected. There are still many country and inter-country activities in the field of tuberculosis control. The mass trachoma-control programmes carried out in Algeria, Morocco, Spain and Turkey have made it possible to develop techniques applicable to other regions. Last, but not least, Europe looks forward to being, by the end of 1962, the first continent of the world to have completely eliminated the transmission of malaria. At the same time, action against newer scourges such as the virus diseases is expanding, and the development of public health laboratories remains a high-priority objective.

The Seventh European Seminar for Sanitary Engineers was held at the end of 1960 and was followed in 1961 by a European symposium on planning and administration of national environmental sanitation programmes. These meetings, the latest of the many held during the decade, illustrate the continuity of the regional programme in promoting the training of specialized environmental sanitation personnel, which began with such traditional subjects as provision of potable water and waste disposal and now extends to such wide and varied fields as housing, atmospheric pollution and protection against ionizing radiation.

The education and training programme has always been the core of WHO's work in Europe, and the
results obtained in the various activities may be considered as a measure of the Organization's achievements. In just under ten years, 1436 participants attended 137 training courses in the Region and 4844 fellowships were awarded: 488 were awarded in the period 1 December 1960 to 30 November 1961, as compared with 608 during the previous twelve months. Moreover, a large proportion of the fellows from other regions come to Europe both for individual study and to attend courses for which WHO has provided assistance—such as the courses on medical rehabilitation in Copenhagen and London and those on anaesthesiology (see also page 85) in Copenhagen.

The reports and working papers produced at European conferences, symposia and seminars are also widely circulated in other regions.

The gradual introduction of Russian as a third working language will increase still further the scope for work in the fields of education and exchange of information.

There was a further increase in co-operation with other organizations—with the other specialized agencies and UNICEF, and with a growing number of international and regional non-governmental organizations. This trend reflects the Organization's constant endeavour to relate its activities to the social, economic and cultural context in which they are carried on and to participate to the fullest in co-ordinated development programmes.

The Regional Committee

The eleventh session of the Regional Committee for Europe was held in Luxembourg from 12 to 15 September 1961. The session was attended by representatives of twenty-seven Member States. The Economic Commission for Europe, UNICEF, four intergovernmental organizations, thirteen non-governmental organizations in official relations with WHO, and the International Children's Centre were represented. The Director-General attended the session.

The Committee reviewed the annual report presented by the Regional Director, which outlined the past year's activities and also the achievements of the ten-year period 1951-1961. Modifications in the 1962 programme and budget were endorsed, and the proposed programme and budget for 1963 was approved, with some amendments, for transmission to the Director-General.

A number of representatives emphasized the need to intensify activities in such fields as virus diseases, chronic and degenerative diseases (especially the public health aspects of chronic rheumatism), morbidity statistics, occupational hazards in rural areas, and organization of accident and resuscitation services.

The Committee considered matters arising out of decisions of the Fourteenth World Health Assembly and the twenty-sixth and twenty-seventh sessions of the Executive Board. It adopted resolutions on the new procedures in the Expanded Programme of Technical Assistance and on the financing of the Malaria Eradication Programme. On the question of priorities in the programme of the Organization, the feeling was that the present position was in general satisfactory and that no recommendation need be made.

Turning to matters arising out of its last session, the Regional Committee studied a document on the co-ordinated plan for achieving eradication of malaria in continental Europe by 1962, and, in the resolution adopted, stressed the importance of measures against reintroduction of malaria into countries freed from it.

The Committee discussed two technical reports, on "Education and training of sanitary engineers and sanitaruans " and "Accidents as a health problem ". On the first item, a resolution was adopted requesting the Regional Director to study ways and means of improving facilities in Europe for the training of sanitary engineers and other sanitation personnel where deficiencies remained. The resolution on accidents recommended narrowing the field of studies to be undertaken, giving priority to accidents in the home.

The Committee recommended to the Executive Board the extension of the term of office of Dr Paul J. J. van de Calseyde as Regional Director.

The Committee welcomed the measures taken by the Government of Denmark to provide the Regional Office in Copenhagen with additional accommodation.

The subject of the technical discussions was "Cancer as a Public Health Problem ". The discussion showed that the structure of cancer services took various forms in different parts of Europe and that possibilities existed for their improvement.

The Committee agreed that subjects for technical discussions at future sessions should be selected two years in advance. It decided that the topic for the twelfth session should be "Specialization and Postgraduate Training of Doctors with reference to Public Health Requirements" and, for the thirteenth session, "The Organization of Resuscitation and Casualty Services ".

The Committee confirmed that the twelfth session should be held in Warsaw in 1962. It accepted the invitation of the Government of Sweden to hold the thirteenth session in Stockholm in 1963, and decided that the session should not exceed four days.
Administrative and Organizational Developments in the Regional Office

The accommodation available for the Regional Office barely sufficed during 1961 and left no latitude for expansion. Important progress towards the long-term solution of this problem was made during the summer through the generous action of the Danish Government in purchasing an additional piece of land adjacent to the existing premises; this will be put at WHO's disposal early in 1962. At the end of 1961 the joint Danish Government/WHO Committee on Accommodation for the WHO Regional Office for Europe was drawing up plans for the permanent utilization of the enlarged property. The Regional Committee adopted a resolution thanking the Danish Government for this renewed proof of its interest in the work of WHO in the Region.

Some Aspects of Work in the Region

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

Anaesthesiology Training Courses, Copenhagen

The courses at the Anaesthesiology Training Centre in Copenhagen were started in 1950 under the joint sponsorship of the Danish Government, the University of Copenhagen, and WHO, and have been continued regularly since that date. They are open to fellows from all six regions, the aim being to stimulate the development and improve the standards of national anaesthesiology services. For the last three courses an evaluation has been made: each fellow was interviewed at the end of the course and given a questionnaire to fill in and return. Their criticisms and comments have helped greatly to improve the course.

In 1960 one of the experts who were concerned in the original planning and organization of the courses was asked to undertake an evaluation of the series as a whole. His general conclusion was that the course was being run on the right lines, and that the trainees received considerable benefit from it. He made certain suggestions for improvements, some of which have already been adopted.

In 1961 a two-week refresher course was given for fellows from the first five courses, of whom twenty-one attended. The objects were to discuss advances made in anaesthesiology since the fellows took the course, and—perhaps more important—to assess the impact of the Centre on the practice of anaesthesiology in the fellows' countries. Special evaluation sessions were held for this latter purpose, and at the end of the year a report was expected shortly. This evaluation will be continued: it is possible that visits may be made to the countries concerned, beginning with the European or Eastern Mediterranean Regions, to inspect anaesthesiology services and training there. A second refresher course will be held in 1962 for those who attended a course in the second five of the series.

Child Dental Health, Poland

The aim of the project, which is receiving assistance from UNICEF and WHO, is to develop dental health services for schoolchildren, particularly in rural areas.

By November 1960, when WHO advisory assistance was provided, the Government had already established 500 centres for school dental health in cities, while 135 teams consisting of a dentist and a dental assistant were operating in rural areas. In 1961, 200 urban centres and 37 rural teams were added.

Apart from emergency treatment, school dental care services have hitherto been limited to primary schoolchildren in their first and last years. Under the scheme worked out between the Government and WHO, the aim is to provide for complete, systematic dental care throughout the primary school period, starting with the school entrants, who would then be followed up throughout their school life. It is expected that, when the scheme has been operating for some years, each dentist will be able to give complete dental treatment to between 800 and 1000 children a year. During the first years the older children will be able to receive emergency treatment only.

To operate the scheme in scattered communities, only mobile teams can be used. In 1961 UNICEF provided thirty vehicles and equipment for forty-four teams.

The project also provides for the improvement of dental health education in maternal and child health centres and teacher colleges, the instruction of parents on the importance of dental health, and studies on the local application of fluorides by brushing the teeth with a fluoride solution. Research on the effect of fluoridation of water supplies is being intensified.

The project is expected to continue until the end of 1963.
Courses in Hospital and Medical Services Administration

In December 1958, after a planning meeting in Copenhagen, it was agreed that the University of Edinburgh should establish a diploma course in medical services administration, beginning in October 1959, and that WHO should provide support for the first three years. At that time facilities for training in this subject were limited in Europe and most of the trainees who required an academic course had to go to one of the schools in the United States of America.

WHO assistance took the form of visiting lecturers, fellowships for study abroad by regular lecturers, fellowships for attendance at the course, and medical literature. Students attending on WHO fellowships came from Belgium, Denmark, Finland, the Federal Republic of Germany, the Netherlands, Norway, Pakistan, Poland, Portugal, Sweden and the United Kingdom. In addition, the Nuffield Foundation has provided six scholarships for students from the United Kingdom, and the United Kingdom Government has agreed to second from their posts hospital administrators who wish to take the course. It is becoming widely recognized in Europe as one of the openings to a full-time career in hospital administration.

In October 1961 the first course in French was started at the University of Brussels under an agreement whereby WHO is to provide assistance for a minimum of three years. Fellows attended from France, Romania, Turkey, Yugoslavia and Tunisia; fellowships for teaching staff and medical literature were also provided.

Outbreak of TOCP Poisoning, Morocco

On 23 September 1959 the Moroccan Ministry of Health asked for WHO's help in connexion with a widespread outbreak of paralysis of unknown origin. WHO immediately sent two neurologists to help in establishing the cause, which was found to be adulteration of cooking oil with mineral oil containing tri-ortho-cresylphosphate, a strong and specific nervous poison. At the Government's request, WHO sent another expert to assess the extent of the problems of rehabilitating the victims, who by then were known to number over 10,000. WHO then convened a meeting in Geneva, attended by representatives of the Moroccan Government, the United Nations, UNICEF, ILO and the League of Red Cross Societies, to discuss the contribution each organization could make towards the solution of the acute medical and social problems resulting from the outbreak.

Thanks to the generous collaboration of many national Red Cross and Red Crescent societies, the League of Red Cross Societies was able to provide medical and paramedical personnel and much of the equipment for establishing a number of rehabilitation centres. A considerable amount of supplies and equipment was provided by UNICEF.

WHO assisted with the overall planning of the rehabilitation programme and with the organization of training programmes for national physiotherapy and other staff to take over from the Red Cross, which continued its aid until the end of June 1961. A fellowship was also provided to enable a Moroccan doctor to take a rehabilitation course in France.

ILO contributed the services of an expert on vocational rehabilitation, who went to Morocco in October 1960.

By the middle of 1961 it was estimated that, of the 10,000 persons originally affected by the outbreak, there remained some 1,500 with some degree of paralysis that could be improved by an appliance or an operation.

The training given to the Moroccan physiotherapists by the WHO staff proved useful in dealing with an outbreak of poliomyelitis in Casablanca during the second quarter of 1961. The rehabilitation centres at Fez and Meknès now deal regularly with poliomyelitis and accident cases, as well as with the victims of TOCP poisoning. At the end of 1961 two new centres were about to be opened at Casablanca and Tangiers, and another was under construction at Salé. The Government has expressed its intention of developing the original emergency programme into a permanent programme for general rehabilitation of the physically handicapped.

European Technical Conference on Mortality Statistics

Although statistics of causes of death give an incomplete picture of the health status of a population, they provide continuous data on the frequency of certain diseases and, except in the most highly developed countries, cover the population more completely than other forms of health statistics. They are therefore an important part of the total epidemiological information available for public health planning. Their value depends on the completeness and accuracy of the basic data and on the uniform application of the procedures for compiling and presenting the statistics.

In October 1961 WHO organized the European Technical Conference on Mortality Statistics to stimulate interest in the epidemiological use of mortality statistics by cause and to discuss how their accuracy and comparability might be improved. It was attended by experienced health statisticians,
with or without medical qualifications, from twenty-four countries in the European Region. The Statistical Office of the United Nations was represented, and the International Statistical Institute sent an observer.

From the answers to a questionnaire that had been distributed in advance of the meeting, a review was prepared of the organization and administration of national health statistical services in Europe. The documentation also included a working paper on national practices in the compilation of statistics of causes of death, showing the present differences in statistical procedure, form of death certificate, and methods of classification. The Statistical Office of the United Nations had prepared for the Conference a paper on European practices in the registration and reporting of death.

The Conference discussed the factors that affect the completeness, accuracy and comparability of statistics on causes of death. Emphasis was put on WHO Regulations No. 1 regarding nomenclature with respect to causes of death and to the obligations of Member countries under those Regulations, especially in regard to the use of the International Certificate and the International Classification of Diseases. At its final meeting the Conference considered the use of mortality statistics in public health administration and in studies of the etiology and natural history of disease.
The progress made in health work in the Eastern Mediterranean Region in the period covered by this Report has been generally satisfactory. Many of the national health budgets have increased and most of the countries in the Region have expanded their health programmes.

WHO’s programme of assistance to governments has again been directed mainly to the promotion of education and training, communicable disease control, and the strengthening of health services. An increasing proportion of regional and inter-regional projects is leading to closer cooperation between countries on health matters and should facilitate better inter-country co-ordination of health programmes.

The work in education and training has ranged from assistance with the establishment of medical faculties to the vocational training of young people for health work. There has been a steady increase in training activities, particularly those related to medical education. For example, medical education missions visited two countries in the Region, to advise on the establishment of a medical school in Tunisia, and on the further development of medical schools in Iraq. In Israel, the Hadassah Medical School, to which WHO has given assistance over a number of years (see page 91), is, in turn, in a position to provide undergraduate medical education for students from other countries.

In the field of education and training, the adoption of long-term programmes makes it possible to assess the types and numbers of personnel needed and to ensure their employment after training.

Fellowships for advanced training abroad and some for basic professional studies are of first importance in the regional programme. Each year shows an increase in the number of awards. For example, 365 were awarded between 1 December 1960 and 30 November 1961, as compared with 253 in the preceding twelve months. Where possible, training is arranged in countries of the Region so that fellows may study under conditions similar to those of their own countries, where they will work after graduation.

Special attention is given to the training of auxiliaries, as a speedy means of providing for the operation of new services. In newly independent countries the need for auxiliary health personnel is particularly acute, as they are required to undertake some of the work of health services after the departure of foreign professional health workers, until enough fully trained national replacements are available.

An inter-regional seminar on the training of health auxiliary personnel was held in Khartoum, Sudan, late in 1961, in order to enable experts from countries in the African and Eastern Mediterranean Regions to discuss the best ways of training, and of using, the different categories of auxiliary personnel—assistants médicaux, assistant nurses, midwives and sanitarians.

In addition to this work in general education, training forms an important part of WHO’s assistance to governments in communicable disease control, as is shown in the following review of the regional programme on those subjects.

Malaria eradication projects are now being undertaken by almost all countries of the Region, and good progress has been made. Programmes are under way in Iran, Iraq, Israel, Jordan, Lebanon, Libya and Syria. Pakistan, which has the largest population under risk in the Region, started an eradication programme early in 1961. Pre-eradication surveys are under way in Saudi Arabia, Somalia and Sudan. Eradication programmes are being planned for Tunisia and the United Arab Republic. WHO has helped to formulate comprehensive and effective plans of operation and to co-ordinate programmes in neighbouring countries and regions. For example, it convened a meeting in Abadan to discuss the reappearance of *A. stephensi* on both sides of the border between Iran and Iraq. WHO field staff from projects in the two countries took part, and agreement was reached on the action to be taken.

Facilities for training in malaria eradication procedures and methods are being expanded. More than two hundred trainees from the Eastern Mediterranean, African and South-East Asia Regions have attended junior and senior courses at the Regional Malaria Eradication Training Centre in Cairo since it was opened in 1959. The centre also gives specialized courses for entomologists and sanitarians. In addition, key personnel have been trained at national centres in Ethiopia, Iran and Pakistan.

Modern methods of tuberculosis control are being applied in preparations for effective programmes.
The regional prevalence survey was completed during the year. The chemotherapy pilot project in Tunisia, which finished in December 1960, has produced preliminary information on the effects of single-drug therapy, but further studies using combined drug schedules are necessary. Work in a pilot area in Tunisia has demonstrated how to combine the mass techniques of mobile teams with the use of static clinics. A tuberculosis training centre for the Region is being set up in Tunisia.

Smallpox is endemic in several countries of the Region, and WHO has increased its assistance to governments in smallpox control and eradication campaigns, particularly for the production of freeze-dried vaccine. A pilot mass vaccination campaign was undertaken in East Pakistan, and late in 1961 WHO assisted in launching one in two provinces of Sudan. Programmes are still hampered, however, by lack of proper border control and by difficulties in enforcing legislation.

After the outbreak of yellow fever in south-west Ethiopia, an epidemiological survey was made early in 1961 and a mass vaccination campaign was begun. In view of the importance of the question, WHO helped the Government with a scientific survey, combined with mass vaccination, in south-west Ethiopia. Detailed plans for the survey were made in October, at a meeting held at WHO headquarters, attended by experts from Ethiopia, France, Senegal, Sudan, the United Kingdom and the United States of America.

Bilharziasis, which causes much sickness and death in the heavily affected valleys of the Nile, the Euphrates and the Tigris, and is increasing with the development of irrigation schemes, still calls for intensive field research. In the pilot projects in Iran and Iraq the transmission of infection is being studied and molluscicides and drugs are being tested. Further research is to be undertaken at the bilharziasis control pilot project and training centre that was started in 1961 with the assistance of UNICEF, in the United Arab Republic.

Control of quarantinable diseases during the Pilgrimage season in 1961 reached a high degree of efficiency. Research is being undertaken on heat diseases and sunstroke, with particular reference to the Pilgrimage season in Saudi Arabia.

The expansion of health services, often as part of schemes for social and economic development, is being planned or put into effect in many countries in the Region. Rural health services are being developed and the number of decentralized rural health centres is increasing. WHO is contributing to this expansion by direct advice to central health authorities and other assistance to national programmes, and by a wide range of inter-country projects. Examples of inter-country projects are the first WHO nursing seminar in the Region, organized in Lahore, Pakistan, at the end of 1960 to discuss comprehensive nursing care (see page 92) and the joint ILO/WHO inter-regional training course on occupational health, held in Alexandria in 1961 (see page 36). A large group of senior public health administrators from the Region took part in the travelling seminar on public health administration that visited the Union of Soviet Socialist Republics.

The rapid social changes in many countries are increasing the importance of mental health work. At a meeting in December 1960, experts from eight countries of the Region discussed a co-ordinated approach to common problems and the planning and appraisal of mental health programmes.

At the second inter-regional seminar on community water supply, held in November 1960, experts from countries in the African and Eastern Mediterranean Regions studied up-to-date information on the organization, management and financing of community water supply schemes (see also page 20). A WHO team of consultants on community water supplies began a series of visits to countries of the Region to advise on national programmes. WHO-sponsored training activities for all types of sanitation personnel have continued, and have included, for the first time in this Region, a course for waterworks engineers—held in Lahore, Pakistan. The importance of sanitation has been emphasized by WHO in inter-agency community development programmes.

Part of the high mortality among young children, particularly in rural areas, is due to malnutrition. The regional nutrition programme is therefore being intensified, with particular emphasis on the needs of mothers and children. WHO has given assistance with national nutrition surveys and with the training of health personnel in nutrition, and has encouraged research into the better use of locally produced foodstuffs for child feeding. It also gave assistance to Somalia during the emergency caused by extensive flooding (see also page 57). Goitre is prevalent in some areas of the Region and WHO has carried out surveys to assess the situation and recommended the measures to be taken. Most of the work in nutrition has been undertaken in co-operation with FAO and UNICEF.

The Regional Committee

Sub-Committee A of the Regional Committee met in Chotaura, Lebanon, from 28 August to 1 September, and Sub-Committee B met in Geneva on 21 and 22 August 1961. Sub-Committee A was attended by representatives of the following seventeen Member States: Cyprus, Ethiopia, France, Iraq,
Jordan, Kuwait, Lebanon, Libya, Pakistan, Saudi Arabia, Somalia, Sudan, Tunisia, United Arab Republic, United Kingdom of Great Britain and Northern Ireland, and Yemen. Representatives of Cyprus, Ethiopia, France, Iran, Israel and the United Kingdom of Great Britain and Northern Ireland attended Sub-Committee B.

The United Nations, the United Nations Relief and Works Agency for Palestine Refugees, UNICEF, the International Committee of Military Medicine and Pharmacy, the League of Arab States, and ten non-governmental organizations were represented at Sub-Committee A. Observers attended from the American University of Beirut, the International Statistical Education Centre, Beirut, the Lebanese Red Cross and United States Naval Medical Research Unit No. 3.

Sub-Committee B was attended by representatives of the International Committee of Military Medicine and Pharmacy and of four non-governmental organizations, and by an observer for the International Children’s Centre.

In pursuance of resolution WHA7.33 the two sub-committees each designated a representative to meet with the Regional Director to harmonize the decisions and prepare the final report on the session. The resolutions adopted by the sub-committees on subjects common to the two agendas were either identical or the same in substance. Sub-Committee A adopted three additional resolutions.

The chief points mentioned in the discussions on the annual report of the Regional Director included the need for continued assistance for communicable disease control, for research on communicable diseases, virology and radiation protection, and, above all, the need for training programmes to provide the personnel of all kinds that are required for the expanding health services. The continuous evaluation of all projects and programmes was also recognized as being of great value, enabling technical and administrative difficulties to be overcome.

The proposed programme and budget estimates for the Region for 1963 were considered and were endorsed for transmission to the Director-General. Appreciation was expressed of the important place given to education and training and of the increased provision made for projects in a number of fields such as virology, radiation protection and mental health, and also in community water supply. Member States were urged to accelerate the preparation of national programmes for radiation protection and to promote inter-country co-ordination on all health matters.

Technical papers were discussed on malaria eradication, smallpox control and eradication, cancer, hospital administration, rural health, khat, and the management of medical stores and pharmacies as part of public health administration.

Resolution WHA14.39 of the Fourteenth World Health Assembly was considered, and it was concluded that there was no need to modify the current procedure for determining programme priorities.

The subject of the technical discussions was “Poliomyelitis”, on which papers were submitted from experts in the Region and from countries outside it. Sub-Committee A chose “Hospital Administration” as the subject for its technical discussions in 1963. (Both sub-committees had already decided that the subject for the technical discussions at the twelfth session, in 1962, should be “Solar Radiation and its Related Heat Effects on the Human Organism”.)

Sub-Committee A accepted invitations from the Governments of Kuwait and Ethiopia to meet in those countries in 1964 and 1965 respectively. Its 1962 session will be in Saudi Arabia and that of 1963 at the Regional Office.

The Regional Committee nominated Dr A. H. Taba to the Executive Board for reappointment as Regional Director on the expiry of his present term of office in September 1962.

**Trends and Developments**

Requests received from governments continue to exceed the resources available, and each year many must be postponed in favour of those that are more urgent.

Further assistance from WHO has been requested for research on communicable diseases—particularly in connexion with the control of bilharziasis, cholera, eye diseases, favus, smallpox, tuberculosis and the venereal diseases—and in such fields as virology, radiation protection and mental health.

WHO has also been asked to help with the organization of medical stores and pharmacies and with training staff to manage them. Nine governments have made use of the Organization’s services to purchase supplies against repayment.

The demand for fellowships for training in statistics increases as governments recognize the need for statistics in public health administration.

Member States, while allocating a greater portion of their budgets to the development of their basic health services, are also giving attention to the need for co-ordinating or integrating the curative and the preventive branches of those services, but owing to deficiencies in administrative organization this prin-
principle is not always given its full practical effect. In many projects the training objective cannot be fully attained for lack of adequate national counterparts to work with the WHO staff.

These deficiencies are being more widely appreciated, improvements are gradually being made and it is becoming recognized that area and country representatives can help to remedy them. The need to evaluate national programmes before undertaking any reorganization is gaining acceptance, and the trend towards decentralization and integration of health work in the provinces is increasingly recognized as the most efficient form of organization for most countries in the Region.

Some Aspects of Work in the Region

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

Hadassah Medical School, Jerusalem, Israel

The assistance provided by WHO to improve training facilities at the Hadassah Medical School of the Hebrew University, Jerusalem, started in 1957 with, in the first place, the aim of strengthening the Department of Anatomy.

A visiting professor of anatomy was provided by WHO for two years. In addition to his work in teaching and on the school's curriculum, he helped to co-ordinate work in the various basic sciences and to promote research in experimental medicine, and advised on the planning of the physical facilities of the school and its scientific equipment. The training of technical staff was undertaken, and teaching of the pre-clinical and of the clinical sciences was correlated.

An interest in research was encouraged. Inter-departmental seminars were arranged on advanced topics in biological research. The use of radio-isotopes was demonstrated. Medical graduates were introduced to new techniques, and took part in several research projects, which resulted in the publication by the school of a number of research papers.

To follow up this work, the Government asked WHO to continue the services of the visiting professor, at the expense of the Government. As a result of this project, the Department of Anatomy has been organized on a sound basis, medical research has been promoted and post-graduate research workers have been trained and familiarized with new research techniques.

Since 1959 WHO has provided further assistance to the school—to promote the teaching of preventive medicine and public health, including post-graduate training in those subjects. The contribution of this project will be reviewed at its completion. An interesting development in the last year is that the school has extended its educational services to students from other countries, particularly from those in course of development. For example, seventeen under-graduates mainly from countries in Africa are taking a special medical course given in English at the school, which makes arrangements for the systematic tuition of the foreign students.

Malaria Eradication, Jordan

In 1948 large numbers of Palestine refugees settled in the highly malarious Jordan valley. To protect them, the United Nations Relief and Works Agency for Palestine Refugees (UNRWA) started some anti-malaria measures in and around the refugee camps.

In 1950 a campaign of residual spraying with DDT was started in the valley and protected 85,000 persons, mainly refugees. Indoor spraying was found not to be fully effective, and the spraying was therefore reinforced by a larviciding campaign: the malaria incidence was drastically reduced and there ensued a rural colonization of the valley and the formation of several villages.

With the assistance of UNICEF, the United States Operations Mission (Jordan), and WHO, the Government began an eradication programme in 1958. A national eradication service was organized in the Ministry of Health to carry out the programme for the whole country, under a director responsible to the Minister. A malaria eradication board, under the chairmanship of the Minister of Health, was also set up to make a periodical review of the progress of the programme, to supervise and approve plans of operation and to recommend operational and administrative measures as necessary.

The first year of country-wide operations was 1959. A variety of eradication measures was used—a combination of surveillance with localized spraying and larviciding in West Jordan, blanket larviciding and total coverage spraying in the Jordan valley and lowland areas of the Dead Sea, and spraying and larviciding or spraying alone in East Jordan. The population protected rose to 760,000 in the rural areas.

In 1960, the second year, better coverage was obtained, with a higher standard of technical efficiency. During that year, epidemiological investigations, supported by the entomological findings, showed that
transmission had been completely interrupted in West Jordan and in part of the Jordan valley; the attack phase was therefore suspended and the area entered the consolidation phase.

In 1961, the third year, consolidation work was strengthened in West Jordan. A broad programme of health education was undertaken, with lectures at training institutions, and frequent radio broadcasts and distribution of visual information material, to invite the co-operation of the public. There was close contact with all governmental and other health establishments and with agricultural and community development organizations.

By 1962, 92 per cent. of the 950,000 persons under risk of malaria in the country will be in areas where malaria transmission has been eliminated, and only 77,000 will still need protection by attack measures. At present, the whole of West Jordan, the Jordan valley, and the northern area of East Jordan are free from malaria and only consolidation work is being done there.

Land reclamation and agricultural schemes are rapidly developing. In the lowland areas, which are being drained, new settlers are taking over the reclaimed lands, and are maintaining the existing drainage system as a part of their agricultural practices. The maintenance phase will be reached within a year or two in West Jordan and a year later for the rest of the country.

Health Training Institute, Benghazi, Libya

The main objects of this project, which was started in Benghazi in December 1955, are to train health assistants and sanitarians and to provide in-service training and refresher courses for untrained health auxiliaries already in the government service. WHO has provided whole-time teaching staff, and UNICEF has supplied teaching and demonstration equipment.

Since April 1957, when training started, twenty-four health assistants have completed a three-year course, and sixty-one sanitarians a year’s course. At the time of reporting, sixteen sanitarians and a first group of thirteen laboratory assistants were being trained at the institute.

All the health assistants who have graduated have been employed in the health administrations of their provinces, in various kinds of preventive work, such as school health, the quarantine services, health education of the public and communicable disease control. Some are in rural dispensaries and ambulatoria, where they attend to minor ailments and do first aid and simple medical work, under various degrees of professional supervision. The health assistant corresponds in many respects to the auxiliary type of medical personnel which has been used in many countries, to fill rapidly the gaps in the health services and to cover the population more widely than is possible while the number of fully qualified medical personnel is limited for social or economic reasons.

The sanitarian has an important part in improving environmental conditions in his district, and assists particularly in the fight against diseases due to microorganisms, such as enteric fevers and diarrhoeal diseases of infancy and childhood, which are a principal cause of the high infant mortality rate. He is responsible for the control of garbage disposal, the sanitation of schools, food establishments and water supplies, and for rodent control, etc.

A course for laboratory assistants was started in October 1960, and the first group of thirteen students will complete their training at the end of January 1962. At least one more group will then be trained. They will work in government hospitals, carrying out various laboratory tests under technical supervision.

It is proposed also in this project to train male auxiliary nurses.

The extension of training to different types of auxiliaries is a natural consequence of the expansion of the health services, as part of the rapid development of Libya in the past few years. It will enable the few fully qualified medical personnel to extend the range of their services by the use of trained health auxiliaries, medical and paramedical.

Nursing Seminar, Lahore, West Pakistan

The first nursing seminar of the Eastern Mediterranean Region was held in Lahore, Pakistan, in November and December 1960. Twenty-eight nurses and nurse administrators from eleven countries and nine observers from UNICEF, UNRWA and other agencies and international organizations attended the ten-day session.

The theme of the seminar was “Comprehensive nursing care”; the topics discussed ranged from the preparation of nurses to give such care, to the appropriate organization of nursing services. The discussions brought out the importance of the participation of professional nurses in the administration of nursing affairs and of their contributions to the planning and development of national health services.

The five main heads of the discussion were: “The scope and trends in nursing”, “The function and role of the nurse as a member of the health team”, “Nursing education and its implications for nursing services”, “Administration of nursing services” and “Policy-making on a national level affecting nursing education and nursing services”.

28 nurses from eleven countries attended the seminar in Lahore, Pakistan in November and December 1960. The seminar topics included the preparation of nurses to give comprehensive nursing care, the appropriate organization of nursing services, and the contributions of professional nurses to the planning and development of national health services. The seminar also highlighted the importance of the participation of professional nurses in the administration of nursing affairs. The seminar was held as part of the rapid development of Libya in the past few years.
A number of other topics were discussed, including basic nursing education; post-basic studies; the effective use of fellowships for study abroad; nursing legislation and its importance for the development of nursing services, and the formation of national nursing associations.

Visits were organized to hospital schools of nursing in Lahore and Multan, and to the public health nursing school in Lahore.

To enhance the effect of the seminar, the participants decided to arrange meetings with nurses in their countries, to publish information in their nursing journals and to report on the seminar to their health authorities.

**Typhus Control, United Arab Republic**

In this century, Egypt has experienced four sizable waves of typhus: an epidemic during each of the two world wars and two periods of high incidence, one in 1932-1935 and one from 1956 onwards. The considerable fall of incidence after the Second World War was certainly due to the use of insecticides, particularly DDT. The increasing incidence of typhus since 1956 needs further investigation; it may reflect resistance to insecticides.

The main reservoir of typhus in the country is in the rural areas of the western provinces of Beheira and Gharbiya. In the cities and in Upper Egypt it occurs as an exceptional excursion beyond its usual endemic areas in the lower Delta. Although mainly of the classical louse-borne (epidemic) type, the murine type is found fairly often. Sampling surveys of the human population have shown that about 30 per cent. of the typhus cases in the Nile Delta are of the murine type, usually sporadic. The geographical distribution of the two types of the disease presents an interesting problem which needs further investigation.

WHO, on a request from the Government for help in studying this problem, in developing its rickettsial laboratory, and in planning a large vaccination campaign against the disease, provided an expert on typhus for three months early in 1961, to work as an adviser and to train national staff. Working closely with national staff at the Agouza Laboratories near Cairo, he was able to develop the scope of the rickettsial laboratory for the isolation and identification of strains, the serological diagnosis of rickettsial diseases, and the preparation of rickettsial antigens. His report contains suggestions and recommendations, now under study by the Government, for the future development of the laboratory; the training of national staff in bacteriology, serology, etc.; the proposed production of vaccine, and for further epidemiological studies of typhus.

**The United Nations Relief and Works Agency for Palestine Refugees (UNRWA)**

WHO has continued to be responsible for the technical direction of the UNRWA health service and provides a Director of Health and some other senior staff. In July 1961 the former Health Division of UNRWA was replaced by a Department of Health, with a total staff, professional, semi-professional and lay, of about 3500.

The aim of the health programme is to provide a well-balanced preventive and curative health service for the refugees in Lebanon, Syria, Jordan and Gaza, consistent with the national health programmes.

On the preventive side, special attention has been given to maternal and child health and particularly to the nutritional status of the younger age groups. A study was made of weights and ages of healthy children in the four countries, in order to arrive at a standard table of weight for age applicable to the general child population. In one of the camp clinic centres, the provision of facilities for the rehydration of infants suffering from gastro-enteritis has been studied. UNRWA also helped with a wide nutritional survey in Lebanon, which included the Lebanese civil population and army as well as refugees.

Curative services have been maintained; clinic buildings and equipment and the distribution of medical supplies have been improved. In Jordan and Syria a better distribution of hospital beds has been obtained for refugees, and the provision of beds for refugees in local government hospitals has made it possible to close one of the UNRWA hospitals.

Water supplies also have been improved in Lebanon, Syria and Jordan, and other improvements are planned. The construction of family latrines is encouraged wherever possible.

The health education programme is being modified to cover all UNRWA's fields of activity and to make more use of organized groups and means of mass communication. Health committees for this purpose are being organized in each camp and in nearly all schools.
CHAPTER 18
WESTERN PACIFIC REGION

Experience has shown that the combined efforts of governments and of international and bilateral agencies can achieve little unless efficient national health administrations have been established and programmes are planned on a long-term basis.

A wider awareness of the need for an organization sensitive to local problems is now being shown in various schemes for decentralizing health administrations, creating specialized units to give advisory services in the field and setting up reference centres to support local health workers with technical services of a high standard.

The increasing acceptance of long-range programmes is of good promise for health organization in the future. It is widely accepted also that health schemes should form part of national schemes for economic and social development: in many countries the long-range health programme is embodied in the national general five-year plan covering all aspects of the development of the country. WHO advisers in public health administration are now helping the governments of three countries in the Region to work out long-range health plans, and two other countries have asked for similar assistance in 1963.

The execution of broad social and economic programmes, including community development, implies the interdependence of functional departments—health, agriculture, education, etc. Health planning and administration at various levels have therefore increasingly made use of consultation and co-ordination with such other departments.

The gradual strengthening of the central health administrations has been favourable to the organization and expansion of rural health services. In Laos, Malaya, the Philippines and Viet-Nam, the expansion of rural health services forms part of a general plan of rural development. The conversion of a specialized disease-control programme into one for the establishment of integrated local health services is contemplated in North Borneo and Sarawak, where the administrations concerned are planning to set up rural health services before the terminal stage of malaria eradication. The personnel at present engaged on malaria eradication will be trained and used for rural health work, but will maintain their functions of surveillance against the resurgence of malaria. In Netherlands New Guinea, special control work against yaws and malaria had considerable success in most of the administered areas, and in Papua the territorial health department is intensifying the training of Papuan health personnel for health stations in the districts, where all health work will be consolidated under their responsibility. With WHO assistance, a pilot project in rural health administration is being planned with a view to setting up an integrated local health service with provision for technical assistance from professional staff at intermediate and higher levels.

A similar trend is noticeable in the maternal and child health project in Viet-Nam, for which UNICEF and WHO have provided assistance since 1954. The programme is now being modified by the extension of the activities to the rural areas, by assistance to training units in Huế and the development of a model training school and courses for midwives for work in rural health services. Maternal and child health services have been integrated into the local health services, subject only to technical supervision from the maternal and child health section at the Ministry.

The establishment of rural health services is one of the components of a community development programme for the rural areas of Laos. This is a many-sided project in which the United Nations, ILO, FAO, UNESCO, UNICEF and WHO are co-operating with the Government. Planning started in 1960 and the health part of the programme was put into operation early in 1961. WHO has provided a nurse/midwife and a sanitarian, and the WHO public health adviser both assists the Ministry in central planning and co-ordinates the health work of the project.

In nursing, the main assistance to governments has been in the planning, organizing and conducting of basic educational programmes for professional and auxiliary personnel and in the improvement of standards of service in institutions and community services. Surveys are needed to determine the nursing services required and to evaluate existing programmes for nursing and midwifery education services, so that they may be revised as necessary. Towards the end of the year a seminar was organized on nursing administration.

In maternal and child health, many needs have still to be met; more well trained paediatricians are urgently required and more administrative units at national
DEVELOPMENT OF HEALTH SERVICES IN SOMALIA

In Mogadishu, Somalia, WHO is assisting, jointly with UNICEF, in two important projects: the school for auxiliary health personnel, which is training health officers, nurse-midwives and sanitarians for the country's health services, and the newly established tuberculosis centre.

(1) The tuberculosis centre, which was completed in August 1960.

(2) A nurse makes a tuberculin test under the watchful eye of the WHO medical officer.

(3) Up to fifty patients a day are X-rayed at the tuberculosis centre.

(4) A new intake of student health officers on their first day at the training school for auxiliaries.

(5) A first-year nursing class at the training school.
Since 1954 WHO has been assisting the Government of Ethiopia to establish a network of health centres based on the main centre in the city of Gondar. Training is given to auxiliary health workers of all categories.

1. The senior WHO adviser at the Gondar centre with two student nurses.

2. In the maternity ward at Gondar a student nurse demonstrates infant hygiene to a young mother.

3. Student health officers from Gondar handle cases at the centre in Kolladuba under the supervision of the WHO rural health adviser.

4. A young patient awaits her turn at the Kolladuba centre.

5. Young mothers at the maternal and child health health clinic of the Gorgora health centre.

6. The WHO rural health adviser and a student health officer visit a smallpox case in Kolladuba village.

7. A nursing instructor (centre), trained on a WHO fellowship, with a student nurse (right) on a home visit in Kolladuba.
LEPROSY CONTROL

In Paraguay, a doctor of the Leprosy Control Service makes a biopsy in the course of the country-wide case-finding and treatment programme being conducted with assistance from UNICEF and WHO.

INTER-REGIONAL CONFERENCE ON YAWS

The Minister of Health of Indonesia opened the Second Asian Yaws Conference, which was held in Bandung in November 1961. Twenty participants from nine countries of the South-East Asia and Western Pacific Regions discussed the epidemiological problems in the later stages of yaws mass campaigns and the required surveillance and inter-country co-ordination.

HEALTH EDUCATION IN INDIA

Courses in health education have been organized, with assistance from WHO, at the All-India Institute of Hygiene and Public Health, Calcutta. The picture shows a health education session, attended by the headman and other community leaders, in a village in the area of the Singur rural health centre, which provides field practice for the public health students.

ZOONOSES RESEARCH

Staff of the Pan American Zoonoses Center in Argentina, which receives assistance from FAO, WHO and other organizations, examine sheep raised for research purposes.
level, staffed by qualified maternal and child health officers. However, steady—but slow—progress is being made in many countries, frequently with WHO and UNICEF aid, to solve some of the chief problems.

In nutrition, the broad objective of WHO in the Region is to encourage departments of health to take concerted action with other agencies to safeguard or improve nutritional standards. In spite of other pressing problems during the past year, health departments in the Region have shown much interest in nutrition programmes, and WHO is being increasingly called on for general and detailed technical advice.

The main regional development in environmental sanitation has been the increased concern with community water supply, stimulated by the WHO global programme.

WHO continued to assist educational and training institutions in the Region by providing lecturers, short-term consultants, fellowships for national counterparts or other members of the teaching staff, and a modicum of essential supplies and equipment. Much, however, remains to be done in providing sufficient facilities for basic education and post-graduate training to supply the different categories of health personnel of a standard and in numbers commensurate with the needs of each country.

During the period 1 December 1960 to 30 November 1961, 177 fellowships were awarded, as compared with 102 during the preceding twelve-month period. When better facilities have been provided and the possibilities for post-graduate public health training in institutions in the Region have been increased, a higher proportion of the fellowships given will be for academic studies within the Region.

In 1961 malaria eradication programmes were in operation in China (Taiwan), North Borneo, Philippines, the Ryukyu Islands, and Sarawak. In Taiwan the programme reached the last stage of consolidation and will shortly be evaluated. WHO continued to provide assistance to other countries in the planning of eradication or with projects preparatory to malaria eradication programmes.

During the past year, BCG vaccination programmes continued in eight countries in the Region with assistance from WHO and UNICEF. The Organization also helped with the development of national tuberculosis control programmes in Viet-Nam and in Western Samoa. Public health programmes for tuberculosis control are being planned in a number of other countries and territories in the Region.

During the past ten years, WHO has assisted with projects for the control and later eradication of yaws in all but two of the areas of the Region where yaws is known to be endemic (see also page 96). The exceptions are Tonga, where a yaws project will start in April 1962, and Portuguese Timor, which is believed to be an area of low endemicity. All the governments have pursued their projects with vigour and have succeeded in reducing the prevalence of yaws to a low level; it has been nearly eradicated in Laos, the Gilbert and Ellice Islands and Western Samoa, and in parts of most of the countries where yaws is endemic. The yaws projects have given national medical and auxiliary personnel useful training and experience in field work, and have taught the people to appreciate the value of the health services and to co-operate with the health personnel. In many areas the yaws projects were the first modern health services to reach some of the population, and they have done much to stimulate the development of rural health services.

Particular attention has been paid to the evaluation of projects to determine the extent to which they have achieved their original objective and also strengthened the relevant parts of the national health services. The information derived from such evaluation gives a practical basis for the planning and operation of future programmes.

The Regional Committee

The twelfth session of the Regional Committee for the Western Pacific was held in Wellington, New Zealand, from 31 August to 5 September 1961.

The meeting was attended by representatives of all Members in the Region, except Laos, and of the Member States responsible for territories in the Region, except Portugal. Representatives of the United Nations, UNICEF, the South Pacific Commission and fifteen non-governmental organizations in official relations with WHO were also present. Dr P. M. Kaul, Assistant Director-General, attended the meeting as representative of the Director-General.

The Committee examined in detail the eleventh annual report of the Regional Director, which, besides covering the work from 1 July 1960 to 30 June 1961, summarized the main health developments in the Region during its first ten years.

In its discussion of the report, the Committee reiterated the importance of a flexible approach to programme planning, because of the great differences in the social and economic development of the countries in the Region. Particular attention was given to the development of rural public health services as part of a comprehensive health programme.
The programme and budget proposals for the Western Pacific Region in 1963 were discussed by the Sub-Committee on Programme and Budget and approved in plenary session for transmission to the Director-General.

The attention of all governments operating or planning malaria eradication programmes was drawn to the importance of critical evaluation at all stages of the programmes, and to the need for a well organized and well staffed malaria service and for full and continuing support from the government and the people until eradication is achieved.

The Committee reviewed the position of contributions to the Malaria Eradication Special Account and the proposal for the issue of malaria eradication postage stamps, and recommended that all Member States should participate in the scheme.

In accordance with the request of the Fourteenth World Health Assembly, the Committee considered the question of programme priorities and reviewed the priorities established at its ninth session in relation to the proposed programme and budget, and decided that no change was required in the present flexible procedure in the Region.

The Committee was given a report of the work being done on trachoma in Taiwan by the United States Naval Medical Research Unit No. 2 (see page 15).

The subject of the technical discussions was “Dental Health” (see also page 33), and “The Role of Health Services in the Improvement of Community Water Supplies” was selected as the topic for the discussions in 1962.

The Committee confirmed its decision to hold its fourteenth session in Port Moresby, Papua, and accepted the invitation of the Government of Korea to hold its sixteenth session in Seoul in 1965. The thirteenth session will be held in Manila.

Some Aspects of Work in the Region

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

Inter-country Yaws Control, Fiji, Western Samoa, British Solomon Islands Protectorate, Gilbert and Ellice Islands, New Hebrides, Cook Islands

Before the start of the project in 1954, yaws was endemic in the island territories of the South Pacific in spite of the continued efforts of the several governments to control it. The objectives of the project were to train the national personnel in yaws control, to help set up projects for the control and eventual eradication of yaws in the territories, and to promote the development of adequate rural health services.

WHO provided a team consisting of a medical officer, a serologist and a nurse, and UNICEF supplied drugs and equipment and some of the transport. In each territory the WHO team discussed with the Government the planning and preparation of the work, assisted in organizing a pilot project in which the national personnel received field training in yaws control, and set on foot studies of the local epidemiology and control of yaws. The mass initial treatment survey was then started and, when this was satisfactorily under way, the national teams continued the work and the WHO team went to the next territory to repeat the process. Later the WHO team returned to each territory to help the Government to complete the initial treatment survey, organize resurveys and integrate the work into the established health services.

The work was started in Fiji in November 1954, in Western Samoa in 1955, in the British Solomon Islands Protectorate in 1956, in the Gilbert and Ellice Islands in 1957, in the New Hebrides in 1958 and in the Cook Islands in 1960. The first phase of the work was completed by September 1960.

In the initial treatment surveys of Fiji, Western Samoa, the British Solomon Islands Protectorate, the Gilbert and Ellice Islands and the New Hebrides, a total of 443,533 persons, or over 90 per cent. of the combined populations, was examined, and 78,146 cases of active yaws were found (i.e. 17.6 per cent. of the total number examined), including 18,566 cases of infectious yaws (4.1 per cent.). Mass penicillin treatment was carried out and there was shortly afterwards a marked fall in the prevalence of yaws.

In spite of limitations of funds and personnel, the Governments have made resurveys and continued the surveillance. In some areas, Western Samoa and Fiji, for example, the work has been integrated into the established health services, and in others, such as the British Solomon Islands Protectorate, the follow-up work of the field teams has been combined with other work, such as case-finding of leprosy and the treatment of common skin infections. In others, field teams have been organized to resurvey samples of the population,
particularly in the areas where yaws used to be highly endemic.

At the last resurveys reported from the various territories, which were carried out from two to four years after the initial treatment surveys, a total of sixty-six cases of infectious yaws was found, and the prevalence of infectious yaws ranged from zero in the Gilbert and Ellice Islands to 0.09 per cent. in the New Hebrides. The fall in the prevalence of yaws has been maintained and the disease is well under control in all areas and nearly eradicated in some.

Although they are separated by vast expanses of ocean, there is a great deal of travel between the Pacific island territories, and they must therefore be regarded as one epidemiological unit for yaws control. It is therefore essential that the yaws problem should be tackled in all endemic areas simultaneously, or within a reasonable space of time, to prevent the re-infection of areas already cleared.

This matter was taken up with the Governments of the territories that had not undertaken yaws control projects with international assistance. It was concluded that in American Samoa, French Oceania and Niue there was no need for specific yaws projects. On the other hand, Tonga, although probably an area of relatively low endemicity, has planned to start a yaws project in April 1962 with the assistance of WHO and UNICEF. WHO made a survey in the Cook Islands in 1960 to assess the effectiveness of the anti-yaws work carried out during the past six years. A large sample of the population was examined and a prevalence of 0.11 per cent. of infectious yaws was reported, indicating that yaws was well under control and that eradication should be possible in the near future.

Apart from its main object of reducing yaws, the project has given health staff in the islands a valuable training in health work and has shown the people what can be done by modern methods of public health (this was the first field project assisted by WHO in the South Pacific). In several islands this work has led to the development of other programmes, especially in rural health.

**Malaria Eradication, North Borneo**

Malaria is probably the most serious epidemic disease in North Borneo. From 1956 to 1959, when malaria control work was going on in parts of the country, the number of malaria cases diagnosed annually in all government hospitals and dispensaries ranged from about 36,000 to more than 45,000—from 8 to 10 per cent. of the total population of 450,000. Malaria was responsible for 12 to 19 per cent. of all illness diagnosed, and for 10 to 17 per cent. of deaths from all causes in the hospitals and dispensaries. Those figures are of course not a complete record of all sickness and death from malaria. In general, about four-ninths of the population of North Borneo live in areas where the spleen rate is twenty per cent. or over, four-ninths in areas where it varies between zero and twenty per cent., and one-ninth only in the Jesselton and Sandakan urban areas, which are free from malaria. To free North Borneo from malaria will bring a great improvement in the health and productivity of the people, and consequently do much to accelerate the social and economic development of the country.

Plans for a pilot scheme of malaria control were begun in 1954 and field operations started in 1956 in two districts, one of which was sprayed with DDT and the other with dieldrin. The areas covered were gradually extended and spraying was increased to two cycles a year. In 1957 the incidence of malaria was substantially less but transmission had not been interrupted. Action was therefore taken to ensure thorough spraying, and the people in the sprayed areas were given single doses of combined chloroquine and pyrimethamine at each time of spraying. In 1960 the project was expanded to cover all the areas in which the spleen rate was twenty per cent. or more, and active surveillance was started in areas where the attack phase had reached an advanced stage.

During the period of the pilot project the malarious areas of the country and their various degrees of endemicity were defined, the relevant epidemiological questions were studied, the structure of the anti-malaria service was determined, and staff for it were trained.

Epidemiological evaluation has been continuous since the start of the project, and in 1960 it was demonstrated that twice-yearly spraying of premises, supplemented by single doses of antimalarial drugs at each time of spraying, could interrupt transmission, if the spraying was thorough and the coverage complete.

When it had been shown that it was technically feasible to interrupt transmission, and the necessary preparations had been made for an antimalaria scheme covering the whole country, it was decided to convert the programme into one of eradication. The Government has prepared a plan of operations and has made provision for carrying on the work until the end of the programme, to which it has given a high priority. With the WHO staff, it is making frequent periodical evaluations, so that the field operations may have the fullest support. UNICEF has assisted the work from the start and has provided insecticides, sprayers and spare parts, drugs, micro-
scopes, motor vehicles and spares, and outboard engines.

**Venereal Disease Control, Taiwan**

This project was started in 1953 to provide a service of venereal disease control for children and pregnant women in Taiwan in the first place, and ultimately to build up a comprehensive programme of venereal disease control for the whole island. The first phase was completed and the WHO staff withdrawn in July 1959, but UNICEF assistance will be maintained on a decreasing scale until the end of 1965. The second phase, for which WHO provided an adviser, began in November 1960 and finished at the end of February 1961.

The objects of the second phase were to review the project, assess its effectiveness, and make recommendations for improving it and for eliminating any weaknesses.

The survey was jointly planned by the WHO adviser, the national director of the project, the regional adviser on communicable diseases and the former WHO medical officer of the project (now area representative in Ceylon). It was decided to survey a random sample from 360 health stations, taking a third of the rural stations and about half the urban ones, and to review the work in the six month period from March to September 1960.

The WHO adviser visited 141 health stations, 31 in the municipalities and 110 in the prefectures, serving respectively 1.6 and 3.6 million people. He reviewed and screened the venereal disease clinical records for the period, the records of venereal disease control work and the blood test records, interviewed the health staffs, and other persons who could give relevant information, and studied the environments and the social and economic conditions in which the venereal diseases most often occur.

The results of the survey can be summarized as follows. Before 1953 the control of venereal disease was practically limited to the treatment of patent cases and the control of legalized prostitution; now Taiwan has a comprehensive programme of control, fully integrated in the general public health work.

There are 360 health stations and twenty-two health centres at which free examination and treatment for venereal disease are available to the general public of the whole islands; the hospitals also provide for examination and treatment. A serological laboratory service of high standard is available without charge to all health institutions and to private practitioners. The service can make about 600,000 tests a year.

The venereal disease demonstration clinic in Taipei has a good reputation throughout the island. In all, 66,083 patients attended it in the period from 1954 to 1960; 3383 patients with syphilis, 1658 with gonorrhea and 165 with other venereal diseases were treated. The clinic is also an important centre for training.

The field work of the programme is directed and co-ordinated by a well-organized central unit in Taipei, which is also responsible for a wide programme of training.

As planned, an extensive programme of blood examinations has been carried out. A cumulative total of 3.3 million initial examinations had been made in the mass campaigns by the end of 1960. Five per cent. were reactors, 3.6 per cent. of them were found to require treatment, and 2.7 per cent. were treated.

Since the WHO medical officer left in the middle of 1959, the number of new examinations and the training of health staff have continued to be satisfactory. This is a good record, but the review of the work done from March to September 1960 showed a few weaknesses. Treatment was given to 78 per cent. of those requiring it; the maternal and child health venereal disease control work did not cover its whole field; contact investigation was generally limited to part of the family contacts; and record-keeping, the clinical examination of patients and supervision in the field could be improved. The remaining manifest reservoirs of infection should be dealt with, and there should be epidemiological investigation, particularly of the infectious cases.

The conclusion is that a comprehensive and well-organized programme of venereal disease control, for the whole island, has been introduced and integrated into the general public health services. The weaknesses of the programme have been pointed out and recommendations have been made for correcting them.

**Survey of Public Health Administration and Education and Training, Federation of Malaya**

The purpose of this project was to help with a review of the present organization of the Ministry of Health and Social Welfare and health services generally. This is a type of project that may be particularly useful to countries entering a new phase of development. The information collected and the advice given provide a good practical basis for planning the first long-term health programme, which itself can be fitted into the country's plan for general social and economic development.

WHO provided an adviser on public health administration and education and training. He consulted the Minister of Health and Social Welfare, the Director...
of Medical Services, other officers and staff of government health and medical institutions and services, and officers with related duties. The adviser visited each state of the Federation and the chief health and medical institutions in their areas. His report, which is now being studied by the Government, gave detailed information on the organization of the health and medical services; the resources of manpower, present and potential, that could serve the national health programme; and the personnel that would be required for the programme. It showed the distribution of the different kinds of health staff in relation to the population and contained suggestions on the numbers to be provided in the next few years.

Recommendations were made on such subjects as the staffing of rural health services, the organization of hospital laboratories, and a review of public health laws and regulations. The report also dealt at length with the training of staff, including undergraduate and graduate education, the training of sub-professional staff, and the facilities for pre-service and in-service training, and for refresher courses.
PART III

CO-OPERATION WITH OTHER ORGANIZATIONS
CHAPTER 19

CO-ORDINATION OF WORK WITH OTHER ORGANIZATIONS

Co-ordination derives its importance from two facts: that health is an integral part of socio-economic development, and that the resources available for international action at any one time are limited. There must therefore be co-ordination with the United Nations and specialized agencies, and with regional inter-governmental organizations and bilateral programmes of assistance, and co-operation with non-governmental organizations working in the health, social and related fields. The current trend in the United Nations family of agencies is to lay greater emphasis on assisting governments to formulate national plans in the various technical fields and integrate them into balanced development programmes, and this makes the need for co-ordination among the agencies involved even greater than before. While machinery like the Administrative Committee on Co-ordination (ACC) can ensure the central agreement on policies for concerted action, co-ordination at the country level is essential for the practical execution of the programmes.

"Co-ordination with the United Nations and the Specialized Agencies" was the subject of the organizational study carried out by the Executive Board during the year. Preliminary papers were discussed at the Board’s twenty-seventh and twenty-eighth sessions, in January and May 1961, and a full report was prepared for the twenty-ninth session in January 1962.¹

The increase in co-operation with other agencies during the year is evident from earlier chapters of this Report; here it will be enough to summarize the main points.

United Nations and its Agencies

United Nations

Under the auspices of the ACC, WHO collaborated in programmes related to the development of water resources, education and training, industrialization, urbanization, community development, housing, social services for children, and rehabilitation of the handicapped.

WHO also prepared technical reports and studies for the Trusteeship Council and the Committee on Information from Non-Self-Governing Territories. It took part in the work of the Commission on Narcotic Drugs, the Statistical Commission, the Population Commission and the Social Commission, as well as of the various regional economic commissions.

The Organization continued its co-operation with the United Nations Special Fund in assistance to the Central Public Health Engineering Research Institute at Nagpur, India, and in the survey of requirements for the installation of water supply and sewerage systems in greater Calcutta. WHO was frequently called on to advise the Special Fund on health aspects of various requests from governments.

WHO continued to collaborate with UNICEF in various health programmes and particularly in four specific fields, those of communicable diseases—especially malaria eradication—maternal and child health and welfare, nutrition, and, more recently, social services. Most of the assistance given to governments in maternal and child health is still provided jointly by UNICEF and WHO, UNICEF providing equipment, supplies, transport and stipends for local training, while WHO is responsible for providing professional staff, technical guidance and fellowships. During the year, WHO prepared, for consideration by the UNICEF Executive Board, a study on the maternal and child health training programmes jointly assisted by the two organizations, and a report on all jointly assisted malaria eradication programmes, including a comprehensive review of the principles and methods adopted. In addition, it participated in a general survey of the needs of children, contributing the part on health and, jointly with FAO, the part on nutrition.

Since the General Assembly of the United Nations at its fifteenth session made financial provision for the award of prizes for cancer research, the Fourteenth World Health Assembly requested the Director-General to put into effect the procedures already approved for the selection of candidates. Governments of Member States, the International Union against Cancer, members of the WHO expert advisory panels on cancer and related subjects, and medical research organizations and universities selected in

consultation with Member States were invited to suggest candidates. At the end of the year their nominations were reviewed by an expert committee whose recommendations were submitted to the Executive Board at its session in January 1962 and are to be considered by the Fifteenth World Health Assembly; the Health Assembly’s proposals will be transmitted to the United Nations General Assembly at its seventeenth session.

Specialized Agencies and IAEA

Collaboration with ILO continued in the field of occupational health and safety, and included a joint committee meeting on the hygiene of seafarers, a jointly organized training course on occupational health, and participation of both organizations in the inter-agency programmes on housing and on rural and community development. WHO continued to take part in the joint field mission on indigenous populations of the Andean Highlands.

Co-operation was maintained with FAO in the fields of nutrition, food standards, milk hygiene, radioactivity in relation to food and agriculture, the zoonoses, and the control of certain communicable diseases which are affected by agricultural development.

The collaboration of WHO and UNESCO during the year centred mainly on the development of education and training programmes for the newly independent States in Africa, but other spheres of co-ordination included those of arid zone research, laboratory animals, cell biology and growth inhibition, radioisotopes, and teacher preparation for health education.

In the field of radiation, collaboration with IAEA has been a particularly prominent feature, and numerous examples of joint work are given in Chapter 5, in the section on radiation health (see pages 37-39).

Collaboration with other agencies included assistance received from the Universal Postal Union for the issue of malaria eradication postage stamps, participation of WHO experts in survey missions sponsored by the International Bank for Reconstruction and Development, co-operation with the International Civil Aviation Organization on the sanitation of airports and quarantine questions concerning air transport, collaboration with the World Meteorological Organization on matters related to ground water under the concerted programme for the development of water resources, and work with the Intergovernmental Maritime Consultative Organization on safety measures connected with the disposal of radioactive waste in the sea and with nuclear ship propulsion.

Co-ordination on Administrative and Financial Questions

From April 1961 WHO put into effect the revisions to the Joint Staff Pension Fund Regulations which were approved by the United Nations General Assembly at its fifteenth session. These revisions resulted from the conclusions of a group of experts appointed by ACC pursuant to the recommendations made by the Salary Review Committee in 1956.

The secretariat study on the adequacy of salary levels of the professional category, completed early in 1961, was transmitted by ACC to the International Civil Service Advisory Board, which endorsed the findings and made a number of recommendations for increases in the salary scales. The ACC accepted these recommendations and transmitted them to the Secretary-General for consideration by the General Assembly of the United Nations at its sixteenth session.

WHO put into effect the agreement reached through ACC in October on special leave conditions for tours of duty in certain African countries.

In accordance with the established procedure, the United Nations Advisory Committee on Administrative and Budgetary Questions reviewed WHO’s administrative budget for 1962, with the participation of WHO’s representatives, and reported thereon to the General Assembly.

Intergovernmental Organizations

The Fourteenth World Health Assembly approved an agreement with the International Office of Epizootics, constituted by an exchange of letters,1 and the proposed agreement with the League of Arab States, which was signed by the Director-General of WHO and the Secretary-General of the League on 22 August.2

Collaboration with the International Office of Epizootics was strengthened in the reporting and control of zoonoses and in veterinary education. Regular contacts were maintained, as in the past, with the International Organization for Standardization.

Co-operation with regional intergovernmental organizations was pursued as usual through the WHO regional offices. It included frequent contacts with the Commission for Technical Co-operation in Africa South of the Sahara (CCTA) on malaria eradication, joint assistance to governments with the South Pacific Commission, joint technical meetings with both these organizations, and consultations with the Health

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Department of the League of Arab States, the Caribbean Commission and the Colombo Plan.

WHO continued its collaboration with the Organization for European Economic Co-operation (now the Organization for Economic Co-operation and Development) by taking part in the work of the European Productivity Agency on the questions of water pollution and radiological protection (the latter in co-operation with the European Nuclear Energy Agency); its association with the European Economic Community through work with the European Coal and Steel Community on various aspects of occupational health, and with EURATOM on radiological protection; and its co-operation with the Council of Europe on questions of air and water pollution, exchange of blood products and sera, fellowships, and the preparation of a compendium of technical assistance projects.

Non-governmental Organizations

In February 1961 the Executive Board, at its twenty-seventh session, admitted two non-governmental organizations into official relationship with WHO: the Permanent Commission and International Association on Occupational Health, and the International Association for Child Psychiatry and Allied Professions. A list of the fifty-six non-governmental organizations in official relationship with WHO at the end of 1961 is given in Annex 6.

Co-operation between WHO and non-governmental organizations becomes more effective and wider in scope every year. The growing number of representatives of non-governmental organizations who visit the secretariat to discuss problems of common interest shows the value of their relationship with WHO. As in past years, many non-governmental organizations were represented at WHO meetings, and attendance at regional committees, in particular, increased markedly. In this connexion mention may be made of the resolution of the Board of Governors of the League of Red Cross Societies regarding more effective representation at WHO regional committees and calling on national Red Cross Societies to co-operate more fully with WHO in the field.

Exchange of information and technical publications was maintained, and non-governmental organizations continued to assist WHO's work by making its activities more widely known. Many organizations maintained or established liaison offices with WHO.

Considerations of space preclude a list of individual instances of co-operation with non-governmental organizations. Some examples of the valuable assistance received from these bodies during the year are mentioned in the appropriate chapters of this Report.
CHAPTER 20

EXPANDED PROGRAMME OF TECHNICAL ASSISTANCE
FOR ECONOMIC DEVELOPMENT

In December 1960, the Economic and Social Council, noting that technical assistance had become an interchange of experience among nations, adopted the collective name of “United Nations Programmes of Technical Co-operation” for the work with the United Nations in the field of technical assistance, and invited the specialized agencies to consider using it to cover their own technical assistance activities.

The Technical Assistance Committee decided to delete from the legislation of the Expanded Programme the provision that “the amount allocated to each of the participating organizations for the coming year shall not be less than 85 per cent. of the amount allocated to them under the current year’s programme”. It was noted that this safeguard for the agencies had never in fact been invoked, and it was expected that project programming would help to prevent sharp fluctuations from one programming period to the next in the shares of the participating organizations from the resources of the Special Account.

The experiment of a two-year programming cycle for 1961-1962 is to be continued for the biennium 1963-1964. For this purpose, projects started and completed within two calendar years will be considered as “short-term” and all those of longer duration will be regarded as “long-term” projects. The latter are to be requested by the governments for their entire duration, though the Technical Assistance Committee will approve them initially for not more than four years.

The continuing commitments of long-term projects already authorized by the Technical Assistance Committee will be the most important element in fixing country targets, but due consideration will also be given to per capita income, the size of population, the amount of assistance available from all sources, and the capacity for absorbing it.

With the adoption of project programming, the resident representative of the Technical Assistance Board will have a more important role than hitherto in co-ordinating the total programme requested by a government in the fields of the various participating organizations. It will be recalled that resident representatives are also acting on behalf of the United Nations Special Fund. The Economic and Social Council has requested the Administrative Committee on Co-ordination to propose ways by which resident representatives, for purposes of co-ordination, may be kept informed or associated with negotiations concerning programmes of technical co-operation activities undertaken or contemplated by the United Nations and its agencies.

The Council has also decided that a study should be made of ways and means of bringing about closer co-ordination amongst the United Nations family of agencies. An ad hoc Committee of Eight was appointed to study the matter, with the help of the Executive Chairman of the Technical Assistance Board and the Managing Director of the Special Fund—particularly the question of closer co-ordination of the activities of the Expanded Programme and the Special Fund. The participating organizations are giving their views on all the above matters to the Committee of Eight, whose report will be considered by the Economic and Social Council at the 1962 summer session.

To meet the many pressing needs of the newly independent and emerging countries, a Technical Assistance Supplementary Programme estimated to cost about $9 million was approved by the Technical Assistance Committee in December 1960 for twenty-one countries on the African continent.

The share of WHO for the biennium was $12,022 million, or 16.93 per cent. of the total. The total earmarkings of funds to WHO for the year 1961 amounted to the equivalent of $7,264,452, including $683,000 for administrative and operational services costs.

Because of the two-year programme procedure, the allocation of funds to the participating organizations for 1962 was made in November 1961 in proportion to their share in the programme for 1961-

1 They were Cameroun, Central African Republic, Chad, Congo (Brazzaville), Dahomey, Gabon, Guinea, Ivory Coast, Madagascar, Mali, Mauritania, Niger, Nigeria, Ruandi-Urundi, Senegal, Sierra Leone, Somalia, South Cameroons, Tanganyika, Togo, Upper Volta.
1962 as approved by the Technical Assistance Committee in November 1960. The allocation for WHO amounted to $6,435,048, including $642,000 for administrative and operational services costs.

Contingency allocations in 1961 for WHO projects amounted to $145,386, of which $69,200 were for African countries. Projects financed under the Expanded Programme, including those in the supplementary programme and financed under contingency authorizations, are listed in Part IV.
PART IV

PROJECT LIST
PROJECTS IN OPERATION IN 1961

This part of the Report contains a list of the projects—country, inter-country and inter-regional—that were in operation during the whole or part of the period from 1 September 1960 to 30 November 1961. Continuing projects for which the only assistance given during the period was technical advice from headquarters or regional offices are not normally shown.

In country projects, the purpose for which the government or governments undertook the project is stated. Details of the assistance provided by WHO and work done are given for completed projects and refer to the whole period over which the project was assisted by WHO. Such details are not given for continuing projects.

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 has succeeded in the purposes for which it was undertaken. It has not been possible to do this for all completed projects; there has not been time, for example, to assess those that ended late in the period covered.

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 of the countries. Inter-regional projects are given at the end of the list.

Under the heading “Fellowships” are shown those fellowships awarded during the period 1 September 1960 to 30 November 1961, that do not form part of assistance to a larger project. A table showing all the fellowships awarded during the period from 1 September 1960 to 30 November 1961, by subject of study, is given in Annex 11.

The starting and finishing dates are shown in parenthesis after the project title; where the finishing date is not definite it is printed in italics. Names of other co-operating agencies, whether or not they have contributed funds, are given in parenthesis after the source of funds.

The abbreviations used include the following: R—regular budget; MESA—Malaria Eradication Special Account; TA—Expanded Programme of Technical Assistance; ICA—United States International Co-operation Administration. Other abbreviations are explained in the list on page ii.
AFRICA

AFRO 17 Tuberculosis Seminar, Nairobi
(16-22 Nov. 1960) R (CCTA)
A seminar to discuss the principles that should govern the development of tuberculosis control programmes undertaken as part of the public health services. WHO provided costs and per diem for twenty-one of the participants from Basutoland, Bechuanaland, Cameroun, Central African Republic, Congo (Brazzaville), Congo (Leopoldville), Federation of Rhodesia and Nyasaland, Ghana, Ivory Coast, Madagascar, Mauritania, Mauritius, Niger, Nigeria, Portugal (Angola), Senegal, South Africa, Tanganyika, Uganda and Zanzibar, a short-term consultant and six staff members.

AFRO 26 Maternal and Child Health: International Children's Centre Training Courses, France and Senegal R: Fellowships for attendance of trainees from Cameroun, Madagascar (four), Mali (two), Ruanda-Urundi and Togo.

AFRO 36 Seminar on Veterinary Public Health, Nairobi
(24 Nov. - 3 Dec. 1960) R (FAO CCTA)
The purpose of the seminar was to identify the main veterinary public health problems in Africa and discuss current methods of dealing with them, to draw up guiding lines for programmes and to consider possible assistance from bilateral and international agencies. It was attended by twenty-two participants (medical and veterinary workers) and thirteen observers. The agenda included meat and milk hygiene, comparative medicine, zoonoses and administration of veterinary public health practice. It was reported that the most important milk- and meat-borne diseases in the Region are taeniasis and salmonellosis and that bovine tuberculosis, anthrax, hydatidosis and other parasitic diseases are common in some areas, contributed by the home slaughter of sick animals and consumption of raw (fermented) milk and insufficiently cooked meat. The seminar also discussed rabies, which is a problem in a large part of the Region.

WHO provided travel costs and subsistence allowances for fifteen participants from Cameroun, the Federation of Rhodesia and Nyasaland, Ifni, the Ivory Coast, Madagascar, Mauritius, Nigeria, Sierra Leone, South Africa, Tanganyika, Uganda and the Upper Volta, a short-term consultant, and two discussion leaders. There were also two discussion leaders from Kenya and two provided by FAO.

AFRO 51 Treponematoses Advisory Services
(1960 - May 1961) R
A WHO consultant went to Dahomey, Mali, Mauritius, Senegal and the Upper Volta to study with the Governments the problem of endemic treponematoses, and advise on the continuation of control programmes.

AFRO 53 Regional Epidemiological Centre, Nairobi
(June 1960 - 1962) R
To undertake the technical planning, evaluation and reporting of tuberculosis prevalence surveys and national pilot area projects; to carry out methodological studies; and to train public health personnel for the national pilot area projects.

AFRO 56 Second Conference on Onchocerciasis in Africa, Brazzaville (12-17 June 1961) R
See page 66.

AFRO 61 African Conference on Ancylostomiasis, Brazzaville
(22-29 Aug. 1961) R (CCTA)
A conference to review the situation as regards ancylostomiasis, advise on control measures and suggest field or laboratory investigations that might be undertaken by WHO or by national institutes in Africa. It was preceded by a two-month survey in seven countries of West Africa, in three of which up to 90 per cent. incidence was found in some rural areas.

The conference, in which twenty-two specialists participated, discussed survey methods, techniques for diagnosis and determination of degree of anaemia, ecological factors conditioning the geographical distribution of ancylostomiasis, physiopathology, therapy and control, and emphasized the importance of improving environmental sanitation.

WHO provided two short-term consultants to carry out the survey, a temporary adviser, four other staff members and conference personnel.

AFRO 82 Malaria Eradication: Advisory Pool of Administrative Officers (1961 - 1963) MESA
To assist governments in the administrative aspects of planning and execution of pre-eradication and eradication programmes.

AFRO 84 Advisory Team, Malaria Eradication (1960 - 1963) R
AFRO 89 Advisory Team, Malaria Eradication
(July 1961 - 1962) MESA
To assess current malaria eradication projects and to determine the requirements for eradication in countries where no programme has yet started.
AFRO 90   Technical Publications (Malaria)  
(1961 - 1963) MESA  

To meet the increasing need for publication of technical documents (the malaria year-book, technical manuals on entomological techniques and spraying organization, detailed reports, with maps, from the advisory teams, etc.) in connexion with the malaria eradication programme.

AFRO 108   Antimalaria Co-ordination Board for South-East Africa (1961 - 1963) MESA  

To promote and assist inter-country co-operation in the developing malaria eradication programme in the south-east of Africa.

AFRO 109   Antimalaria Co-ordination Board for Western Africa (1961 - 1965) MESA  

To promote and assist inter-country co-operation in the developing malaria eradication programme in western Africa.

AFRO 122   Meeting on Maternal and Child Health, Ibadan  
(22-25 Nov. 1961) R  

A meeting of professors of obstetrics from African universities discussed ways of improving training for maternal and child care and of promoting co-operation between scientific and professional groups working at university level in maternal and child health.

AFRO 202   Malaria Fellowships MESA: Ghana — five months; Liberia — three for six months; Madagascar — six months; Nigeria — one for four months, two for five months; Ruanda-Urundi — five weeks; Uganda — six months; Zanzibar — two months.


The aim of the project was to determine the incidence of deficiency diseases in Basutoland, so that appropriate measures for diagnosis, prevention and control might be planned. WHO provided a medical nutritionist, a non-medical nutritionist and supplies. Dietary surveys, clinical studies of general nutrition and special studies on endemic goitre, pellagra, kwashiorkor and nutritional marasmus were made. The work has enabled a good idea to be gained of what are the main deficiency diseases and of what measures might be taken to improve the situation.

Basutoland 2   Tuberculosis Control (Oct. 1961 - ) TA  

A pilot area project to develop tuberculosis control methods that can be applied under local conditions and to train personnel for the expanding control programme.

Basutoland 200   Fellowships R: Health education (four months).

Basutoland 201   Fellowships TA: Medical undergraduate studies (two years), nutrition (thirteen months).

Bechuanaland 2   Tsetse Fly Control  
(June 1955 - end of 1961) TA  

To control tsetse fly in Ngamiland.

Bechuanaland 3   Tuberculosis Control (Sept. 1961 - 1963) TA  

To investigate in a pilot area the acceptability and practicability of a mass BCG campaign; to train personnel in techniques of tuberculin testing and BCG vaccination; and to set up the administrative organization for continuing the campaign after termination of direct assistance from WHO.

British East Africa 1   East Africa Institute of Malaria and Vector-borne Diseases, Amani (Nov. 1954 - April 1961) TA  

A project to control hyperendemic malaria in the Paré district of Tanganyika, the Taveta sub-district of Kenya and the inhabited lowland areas in the Lushoto district; to demonstrate the efficacy of residual spraying, especially where *Anopheles gambiae* is the vector, and to study the effects on the habits and distribution of the vector species, so as to find ways of reducing the cost of continual control; to assess the effect of the elimination of hyperendemic malaria on the health and general well-being of the population; to determine the biological and economic feasibility of controlling, by residual spraying, hyperendemic malaria in comparable areas of tropical Africa, to assess the cost and find the best methods; and to train local supervisory staff. WHO provided an entomologist from November 1954 until 1956, a chemist from November 1954 until 1958, a sanitarian and a technical assistant in 1955 and 1956, a malaria engineer in 1958, a sanitary engineer and a training consultant in 1959, and a biologist in 1960. Various fellowships and supplies and equipment were also provided. From January to April 1961 a consultant was provided to assist in determining whether "salt-water" *A. gambiae* was a species separate from the type *A. gambiae*, as a first step to assessing the importance of the salt-water form for malaria transmission in East Africa. This work did not furnish conclusive evidence and further studies are being carried out.

Cameroun 2   Malaria Pre-eradication Survey  
(1958 - end of 1963) MESA TA UNICEF  

To train staff for a national malaria service and to undertake the necessary surveys and so develop the programme that the minimum requirements for malaria eradication can eventually be fulfilled.

Cameroun 6   Malaria Eradication Pilot Project  
(1960 - 1961) MESA TA  

This project, for which WHO provided a malarialogist, salaries of local entomological personnel, and supplies and equipment, had as its aim to interrupt the transmission of malaria in an area in the north of the country and to prepare
a plan for malaria eradication. It was terminated after two cycles of spraying and a full evaluation in January 1961 had shown that residual spraying had failed to interrupt transmission.

The project was well executed, with careful geographical reconnaissance, two cycles of spraying, in which total coverage was achieved, and adequate evaluation throughout. However, the DDT water-dispersible powder remained effective for only a short time on the local thatch; this, combined with the irritant and repellent effect of the insecticide on Anopheles gambiae, reduced the duration of contact of the mosquito with the sprayed surfaces. For this and other technical reasons it became apparent early in the project that the intervals at which spraying would have to be repeated were too frequent to be practicable. The project has, however, shown the need for further pilot projects in savannah conditions, using other methods and recently developed insecticides.

Cameroun 10 Health Services (Oct. 1961 - ) TA
To organize the health services.

Cameroun 12 Nursing Advisory Services (1961 - ) TA
To develop the nursing services and improve nursing education.

Cameroun 13 Government Hospital, Victoria, Western Province (1960 - 1961) TA
WHO provided X-ray equipment to the General Hospital, Victoria.

Cameroun 14 Yaws Control, Western Province (1961 - 1963) TA UNICEF
To continue the mass campaign against yaws and the training of local personnel for the purpose.

Cameroun 201 Fellowships TA: Basic sanitary engineering (two years), maternal and child health (two for twelve months), medical undergraduate studies (thirteen for twelve months), nursing (twelve months).

Central African Republic 201 Fellowships TA: Medical undergraduate studies (one for twelve months, one for twenty-one months, three for two years).

Chad 200 Fellowships R: MPH course (twelve months).

Chad 201 Fellowships TA: Laboratory techniques (six for twelve months, three for fifteen months), medical undergraduate studies (two for two years, one for three years), tuberculosis (five months), X-ray techniques (six for eighteen months).

Comoro Archipelago 1 Tuberculosis Control (Oct. 1960 - 1963) TA
To develop a tuberculosis control programme for the whole country, beginning with a mass BCG vaccination campaign.

A WHO consultant carried out investigations to determine the origin of ulcerous lesions and osteitis and to assess the prevalence of yaws. A comprehensive report on treponematoses in the Archipelago has been sent to the Government.

Congo (Brazzaville) 11 Poliomyelitis Emergency Vaccination Programme (March - Dec. 1961) R
WHO provided a short-term consultant to investigate the poliomyelitis situation in the Congo, and supplies of vaccine for an emergency vaccination programme following an outbreak of poliomyelitis in the first quarter of 1961.

Congo (Leopoldville) 200 Fellowships R: Medical undergraduate studies (fifteen months).

Dahomey 1 Malaria Pre-eradication Survey (Nov. 1958 - end of 1962) MESA UNICEF
To train staff for a national malaria service and to undertake the necessary surveys and so develop the programme that the minimum requirements for malaria eradication can eventually be fulfilled.

Dahomey 7 Environmental Sanitation (Sept. 1961 - 1962) TA UNICEF
To organize the environmental sanitation services.

Federation of Rhodesia and Nyasaland 8 Malaria Eradication and Malaria Pre-eradication Survey (Sept. 1957 - end of 1963) MESA
To eradicate malaria from the southern part of Southern Rhodesia, as part of a co-ordinated inter-country programme in south-east Africa; to train staff for a national malaria service, undertake the necessary surveys and develop the programme in the rest of the Federation so that the minimum requirements for malaria eradication can eventually be fulfilled.

Federation of Rhodesia and Nyasaland 200 Fellowships R: Health education (ten months).

To develop maternal and child health services, particularly in rural areas, and to draw up training programmes for professional and auxiliary nurses, midwives and public health nurses.

Gabon 10 Trypanosomiasis Control (1960 - 1961) TA
WHO provided a truck and a motor boat for the Government's trypanosomiasis control programme.

Gabon 11 Tuberculosis Control (July - Sept. 1961) R
A WHO consultant assessed the tuberculosis problems and the measures taken by the Government, and made recommendations for future action.

Ghana 1 Malaria Eradication Pilot Project (1958 - 1963) MESA TA
To train staff for a national malaria service and to undertake the necessary surveys and so develop the programme that the minimum requirements for malaria eradication can eventually be fulfilled.
Ghana 3  Maternal and Child Health  
(Jan. 1960 - end of 1965) R UNICEF

To expand maternal and child health services and to improve facilities for training staff, as part of the programme for developing local health services.


A short-term consultant was provided by WHO to assist in evaluating the UNICEF-assisted yaws control programme.

Ghana 5  Bilharziasis Control  
(Nov. - Dec. 1957; May 1959 - 1962) TA

To study the snail intermediate hosts of bilharziasis and to set up a pilot control project.

Ghana 7  Nursing Advisory Services (March - May 1961) R

A WHO consultant made a survey of nursing needs and resources. The recommendations in her report form the basis of a post-basic nursing education project, scheduled to start in 1962.

Ghana 10  Environmental Sanitation Survey  
(Nov. 1958 - end of 1961) TA

To survey general problems of environmental sanitation and to plan a comprehensive programme for gradual improvement.

Ghana 13  Public Health Administration (April 1958 - 1962) R

To plan a long-term national health programme and to draft health legislation; to train health personnel; to establish machinery for notification of statistical data and to improve their processing; and to provide advice on the collection of statistics on special projects.

Ghana 18  Medicated Salt Trial (June 1959 - 1963) MESA

To demonstrate the feasibility and the advantages of the medicated salt method for interrupting malaria transmission in an area of Africa.

Ghana 20  Maternal and Child Health  

To expand the basic maternal and child health services and increase the facilities for training personnel.

Ghana 8  Environmental Sanitation  
(Sept. 1960 - 1963) TA UNICEF

To studyenvironmental sanitation problems throughout the country, including drinking-water supplies, excreta and waste disposal, the campaign against carriers of disease, and health education.

Ivory Coast 14  Smallpox Eradication (1961 - 1963) R

To provide vaccine for the campaign against smallpox.

Ivory Coast 201  Fellowships TA: Social paediatrics (six months), virus diseases (three months).

Kenya 2  Environmental Sanitation  
(Sept. 1960 - 1963) R UNICEF

To improve rural water supplies and to provide new supplies of potable water and rural excreta disposal systems; to instruct the population on the nature of filth-borne diseases and how to prevent their spread. See page 67.

Kenya 4  Tuberculosis Survey and Control  
(Nov. 1957 - June 1963) TA UNICEF

To assess the tuberculosis problem in an urban area and in the surrounding rural area by case-finding and tracing contacts; to carry out a control programme including chemotherapy, chemoprophylaxis and home visiting; to train public health personnel for the national pilot area projects in other countries of the Region.


To carry out an extensive nutrition survey and to investigate family food consumption and diets so as to determine how the nutritional status of the population can be improved.

Kenya 20  Virus Diagnostic Laboratory (Oct. 1960) R

A WHO consultant visited Kenya to advise on the setting up of a virus diagnostic laboratory. His report has been submitted to the Government.

Kenya 200  Fellowships R: Leishmaniasis (nine weeks), nutrition (five months).

Kenya 201  Fellowships TA: MPH course (twelve months).
Liberia 3 Yaws Control (Aug. 1953 - 1962) TA

To carry out a yaws control programme and eventually to eradicate the disease.

Liberia 15 Fly Investigation and Control (July 1958 - 1962) R

To investigate the effects of the development of resistance to dieldrin on the biotic potential of houseflies in Liberia, and to carry out an environmental sanitation programme for permanent control of insect vectors of disease.


A pilot project—the continuation of a control project assisted by WHO since 1953—to study the possibility of interrupting malaria transmission by residual spraying in the central province of Liberia. WHO provided a malariologist, an entomologist, an administrative officer, two sanitarians, a laboratory technician, a maintenance mechanic, and supplies and equipment.

Conditions in the project area are among the most difficult in Africa. Absence of communications, the problems caused by temporary crop huts and widely scattered hamlets in thick tropical forest, and other factors, had led to failure of previous attempts to eliminate malaria. The pilot project, however, has shown that a single heavy treatment with insecticide (3.0 grams of DDT technical per square metre) per year can interrupt transmission of malaria, provided that total coverage is obtained. Moreover, Anopheles gambiae, which appeared to be well established in the Liberian forest, was reduced to below detection level. Owing to the difficult conditions, the cost of residual spraying is very high. A malaria eradication programme now appears technically feasible in Liberia, but the malaria service will need to be developed and the requirements for an eradication programme fulfilled.

Liberia 200 Fellowships R: Medical undergraduate studies (two for twelve months, one for two years), statistics (three months).

Liberia 201 Fellowships TA: Medical undergraduate studies (two for two years).

Madagascar 7 Tuberculosis Control (Oct. - Dec. 1960) R

A WHO consultant assessed the tuberculosis situation and advised on further action. His report has been submitted to the Government.

Madagascar 8 Malaria Pre-eradication Survey (Nov. 1960 - 1963) MESA

To study all aspects of the malaria situation and the organization of antimalarial work, on the high plateau and in the more malarious coastal districts, so as to be able to plan an eradication programme, to be carried out in stages, for the whole island.

Madagascar 9 Community Water Supplies (Feb. - April 1961) Special Account for Community Water Supply

Three experts (on engineering, administration and management, and finance) provided by WHO advised on planning, organization, administration and financing methods for a long-range community water supply programme for the whole island. Their report has been submitted to the Government.

Madagascar 12 Nursing Advisory Services (1961 - ) TA

To develop the nursing services.

Madagascar 201 Fellowships TA: Medical undergraduate studies (six for three years).


WHO provided a short-term consultant to advise the Government on a smallpox eradication campaign.

Mali 13 Public Health Administration (Nov. 1961- ) TA

To reorganize the national health services.

Mali 201 Fellowships TA: Medical undergraduate studies (three for twelve months), nursing and midwifery (seven for twelve months).

Mauritius 2 Tuberculosis Control (June 1956 - Dec. 1959; Aug. 1960 - end of 1962) TA

To build up a comprehensive tuberculosis control service and to train local professional staff in all types of tuberculosis work, including domiciliary visits.

Mauritius 6 Nursing Education (Jan. 1957 - June 1961) R UNICEF

To assist in establishing a school of nursing and midwifery that would give training in the public health aspects of both subjects, WHO provided a senior nurse educator for over two years and a public health nurse educator for just over a year, followed by a midwifery tutor for about the same time. Ward sisters and midwives were trained, and some midwives were given training as rural health nurses. Particular attention was paid to training qualified nurse midwives for home visiting. There was a lack of suitable candidates for training in midwifery; nevertheless progress was made with the programme and the maternity services improved. When the project ended a Mauritian nurse with general nursing and some midwifery training had assumed responsibility for clinical teaching. There are still not enough midwives for the new rural and community centres.

Mauritius 7 Malaria Eradication (Jan. 1960 - end of 1963) MESA

To eradicate malaria from the island.

Mauritius 200 Fellowships R: DPH course (two for twelve months), food inspection and rodent control (four months), leprosy control (eight weeks), public health administration (six months).

Niger 9 Mental Health (1961 - 1963) TA

To investigate problems of mental health and of training personnel in mental health and psychiatry.
Niger 201 Fellowships TA: Medical undergraduate studies (two, renewable yearly for six years).

Nigeria 1 Yaws Control (July 1954 - end of 1962) TA UNICEF
To control yaws by mass treatment with procaine penicillin, train personnel and demonstrate the value of a sound public health service.

Nigeria 2 Malaria Eradication Pilot Project
(April 1954 - end of 1961) R UNICEF
To interrupt transmission of malaria under local conditions, and to devise a plan for malaria eradication on the basis of the experience gained.

Nigeria 9 Schools of Hygiene (Jan. 1956 - 1962) TA UNICEF
To review and improve the training of auxiliary health personnel at the Ibadan Training School.

Nigeria 10 Rural Health Services, Eastern Nigeria
(Nov. 1957 - 1962) TA UNICEF
To improve rural health services—particularly maternal and child health services—in Eastern Nigeria.

Nigeria 14 Tuberculosis Chemotherapy Pilot Project, Ibadan
(Sept. 1961 - 1963) R UNICEF
To set up a pilot area project in Ibadan, in order to develop tuberculosis control methods applicable to urban areas of Nigeria and methods for epidemiological assessment of control; and to train personnel.

Nigeria 24 Improvement of Laboratory Services
(1961 - ) TA
To improve laboratory services and develop virology.

Nigeria 31 Community Water Supplies, Eastern Nigeria
(Oct.- Nov. 1961) Special Account for Community Water Supply
Three short-term consultants were provided by WHO to make a complete survey of the water supply situation in Eastern Nigeria and to recommend a long-range plan for a community water supply programme covering the entire region, including administrative, financial and engineering aspects.

Portugal - Angola 200 Fellowships R: Public health administration (twelve months).

Portugal - Mozambique 1 Malaria Pre-eradication Survey
(July 1960 - end of 1963) MESA
To train staff for a national malaria service and to undertake the necessary surveys and so develop the programme that the minimum requirements for malaria eradication can eventually be fulfilled.

Portugal - Mozambique 200 Fellowships R: Mental health (twelve months), social paediatrics (five months).

Senegal 9 Health Education (1961 - ) TA
To introduce health education methods into the health services.

Senegal 200 Fellowships R: Nutrition (twelve months).

Senegal 201 Fellowships TA: Paediatrics (twelve months).

Sierra Leone 1 Yaws Control (Jan. 1956 - 1963) TA UNICEF
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; to investigate as far as possible other diseases (particularly leprosy) and to organize treatment and preventive measures in co-operation with local authorities.

Sierra Leone 7 Nursing Education (March 1961 - 1963) R
To establish a central school of nursing and midwifery.

Sierra Leone 11 Technological Assistance to Laboratories
(1961 - 1963) R
To organize laboratory services, especially for serology, and to train technicians.

Sierra Leone 14 Environmental Sanitation
(Oct. 1961 - 1963) R UNICEF
To organize a training school for health inspectors.

Sierra Leone 200 Fellowships R: Nursing administration (five months).

Sierra Leone 201 Fellowships TA: DPH course (twelve months), medical undergraduate studies (two for two years).

South Africa 200 Fellowships R: Disposal of effluents into the sea (three months), epidemiology (six months), mental health (four months), public health administration (five months), tuberculosis control (four months).

Swaziland 5 Malaria Eradication
(Nov. 1960 - April 1961) MESA
Two short-term consultants were provided by WHO—one to give a training course for microscopists, and the other to carry out an investigation on the entomological situation where Anopheles gambiae had apparently reverted from zoophilic to anthropophilic.

Tanganyika 200 Fellowships R: Surgery (two years).

Tanganyika 201 Fellowships TA: Surgery (twelve months).

Togo 1 Treponematoses Control (Nov. 1961 - ) R
To continue the treponematoses control programme and the training of local personnel in the control of other communicable diseases.
Togo 2 Leprosy Control (1961 - ) TA
To organize a leprosy control campaign.

Togo 3 Malaria Pre-eradication Survey
(Sept. 1959 - 1965) MESA TA UNICEF
To train staff for a national malaria service and to undertake the necessary surveys and so develop the programme that the minimum requirements for malaria eradication can eventually be fulfilled.

Togo 5 Maternal and Child Health Services (1961 - ) R
To provide training in maternal and child health.

Togo 8 Public Health Administration (June 1960 - 1962) TA
See page 66.

Togo 17 Public Health Laboratories (1961 - 1962) TA
To strengthen public health laboratory services.

Togo 200 Fellowships R: Laboratory techniques (six for two years).

Togo 201 Fellowships TA: Environmental sanitation (three for nine months), laboratory techniques (four for twelve months), medical undergraduate studies (four for two years), nursing (two for six months, two for nine months, one for fifteen months), sanitary engineering course (twelve months):

Uganda 3 Department of Paediatrics and Child Health, Makerere College, Kampala (1958 - 1966) R UNICEF
To develop the department of paediatrics and child health, Makerere College. See page 67.

Uganda 7 Maternal and Child Health
(1954 - July 1964) R UNICEF
To develop health services in rural areas; to train local personnel in maternal and child health services and to develop health education facilities.

Uganda 12 Malaria Eradication Pilot Project (1957 - 1961) R
The aim was to investigate the methods of interrupting the transmission of malaria in tropical Africa by a combination of total coverage spraying operations and distribution of anti-malarial drugs. WHO provided a malariologist, an entomologist and a sanitarian, and supplies and equipment.

Results showed that transmission had been interrupted in the project area.

Uganda 23 Hospital Records (July - Dec. 1961) R
A short-term consultant was provided by WHO to assist the Government in work connected with hospital records.

Uganda 200 Fellowships R: Health education (two for six months), hospital administration (three months).

Upper Volta 1 Malaria Eradication Pilot Project
(1958 - June 1961) MESA TA UNICEF
The aim was to carry out detailed entomological investigations in connexion with a malaria control scheme. The work was undertaken by the Government, WHO providing supplies and contributing to the salaries of local personnel.

Spraying with DDT was carried out regularly throughout the project area but the extensive population movements and the fact that total coverage was not achieved have made it impossible to assess the extent to which the failure to interrupt transmission of malaria is attributable to technical factors. From the entomological point of view, a number of useful studies have been made, especially on the use of bioassay and on the effect of rise and fall in humidity on the insecticide residues on treated walls.

Upper Volta 8 Public Health Administration (1961 - ) TA
To develop the health services and set up a vital and health statistics unit in the Ministry of Health.

Upper Volta 201 Fellowships TA: Anaesthesiology and reanimation (two for two years), laboratory techniques (two for twelve months), medical undergraduate studies (twelve months), public health administration (twelve months), X-ray techniques (two for eighteen months).

Zanzibar 3 Training of Medical Auxiliary Personnel
(June 1957 - end of 1961) TA UNICEF
To train rural health workers and health inspectors.

Zanzibar 4 Malaria Eradication
(June 1957 - end of 1963) MESA TA UNICEF
To eradicate malaria from Zanzibar and Pemba. This project is the extension of the malaria control project started (under the same project number) in 1957.
THE AMERICAS

AMRO 8 Aëdes aegypti Eradication, Caribbean Area (1952 - 1966) TA

To eradicate Aëdes aegypti, the urban vector of yellow fever, from Venezuela and the British, French and Netherlands areas in the Caribbean.

AMRO 9.3 Seminar on Mental Health (Alcoholism), Viña del Mar, Chile (21-26 Nov. 1960) R

The seminar reviewed present knowledge on alcoholism and discussed how programmes of treatment and prevention can be integrated into overall health plans.

WHO provided a consultant and cost of attendance of the participants—from Argentina, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Mexico, Panama, Paraguay, Peru, Uruguay and Venezuela.

AMRO 10 Programme for Biostatistics Education (Oct. 1952 - ) TA

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.

AMRO 13.3 Third Seminar on Sanitary Engineering (Central America and Panama), Tegucigalpa (26 Nov. - 2 Dec. 1961) R (Inter-American Association of Sanitary Engineering)

The seminar, attended by representatives of public health and public works agencies from all Central American countries and from Panama, discussed water supply programmes and the part to be taken in them by Ministries of Health.

WHO provided costs of attendance of ten participants; the zone engineer and the engineer attached to project Honduras 4 helped to organize and conduct the seminar.

AMRO 18 Medical Education (March 1953 - ) R

To improve standards of medical education.

AMRO 28 Advanced Nursing Education (Jan. 1955 - ) R

To prepare graduate nurses for supervisory, teaching and administrative posts in schools of nursing, hospitals and public health services.

AMRO 45 Laboratory Services (Feb. 1955 - ) R

To improve and reorganize public health laboratory services, and assist with the development of animal colonies and of departments of virology and of biological production control.

AMRO 46.6 Seminar on Nursing Education, Lima (3-19 Nov. 1960) R

A seminar to prepare a guide for schools of nursing in Latin America. WHO provided travel costs and stipends for nineteen participants—from Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, Guatemala, Nicaragua, Paraguay, Peru, Uruguay and Venezuela—and some technical literature.

AMRO 46.7 Seminar on Nursing Education, Antigua, Guatemala (16-29 July 1961) R

A seminar to discuss revision of the curriculum of schools of nursing to meet the needs of the country they serve.

WHO provided travel costs and stipends for nineteen participants—from Bolivia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Mexico, Nicaragua, Panama and Venezuela—and some technical literature.

AMRO 47 Yaws Eradication and Syphilis Control, Caribbean Area (1954 - ) R TA UNICEF

To determine the extent of yaws in the project area and how to eradicate it; to organize services for venereal disease control and reduce the prevalence of syphilis and gonorrhoea; to reinforce laboratory services, particularly as regards facilities for serological examination.

AMRO 50 Water Fluoridation (March - April 1956; 1961 - 1964) R

To provide advisory services in fluoridation of water supplies, using fluorspar, in municipalities now using alum coagulation for water treatment.

AMRO 76 Vaccine Testing (July 1954 - ) R

To help vaccine-producing laboratories in the Americas to maintain high standards of potency and safety.

AMRO 81 Pan American Zoonoses Center, Azul, Argentina (Dec. 1956 - ) TA PAHO (FAO United States Public Health Service)

To promote and strengthen antizoonoses work in the Americas.

AMRO 85 Latin American Center for Classification of Diseases, Caracas, Venezuela (April 1955 - ) R

AMRO 85.7 Sixth Course on Classification of Diseases (3-23 Sept. 1961) R

WHO provided fellowships for fifteen trainees from Argentina, Bolivia, Brazil, Costa Rica, Guatemala, Honduras and Nicaragua to attend the sixth course on classification of diseases given by the Latin American Center for Classification of Diseases, Caracas, Venezuela.

AMRO 86 Health Statistics, Zone III (Jan. 1955 - ) R

To improve vital and health statistics by assistance with courses, seminars and workshops and with the selection and follow-up of fellowship students; to advise on the statistical aspects of projects and assist in the compilation of data for programme planning.

AMRO 92 Health Education, Zone II (Oct. 1955 - ) R

To provide advice on health education to Cuba, the Dominican Republic, Haiti and Mexico.

AMRO 95 Environmental Sanitation, Caribbean Area (May 1956 - ) TA PAHO UNICEF

To improve environmental sanitation in the Caribbean area.

AMRO 110 Tuberculosis Control (Dec. 1957 - ) R

To instruct public health personnel in new methods and techniques for tuberculosis control; to integrate tuberculosis control programmes into general public health work; to assist in making prevalence studies and in establishing pilot centres; and to study the problems of ambulant chemotherapy.

AMRO 112 Community Development Training Centre, Patzcuaro, Mexico (1951 - 1964) R (UN ILO FAO UNESCO Organization of American States)

To train community development workers in Latin America in co-ordinated activities in rural areas.

AMRO 141 Health Education, Zone III (May 1960 - ) R

To provide advice on health education to the countries of Central America, and to Panama and British Honduras. (Assistance will first be given mainly to Costa Rica but will later be extended to all the countries in Zone III.)

AMRO 142 Health Aspects of Radiation (Oct. 1958 - ) R PAHO

By means of lectures, demonstrations and teaching aids, to provide information to departments of health on protection against ionizing radiations.

AMRO 143 Health Statistics, Zone IV (1956 - ) R

AMRO 144 Health Statistics, Zone II (Jan. 1958 - ) R

To improve vital and health statistics by assistance with courses, seminars and workshops and with the selection and follow-up of fellows; to advise on the statistical aspects of projects, and assist in the compilation of data for programme planning.

AMRO 149 Leprosy Control (Feb. 1958 - ) R

To co-operate with countries of the Region in a study of leprosy, in organizing control programmes according to new methods and techniques, and in evaluating them.

AMRO 152.2 Second Conference of Directors of Schools of Public Health in Latin America, Puerto Azul, Caracas (1-11 Nov. 1961) R

A conference to discuss problems common to schools of public health in Latin America and to review the biostatistics curriculum.

WHO provided two consultants, travel costs of a special consultant to prepare working papers for the conference, and travel costs and stipends for twenty-one participants from Argentina, Brazil, Chile, Colombia, Mexico, Puerto Rico and Venezuela.

AMRO 188 Veterinary Public Health, Zone III (1959 - ) R

To provide advice on food hygiene, on prevention and control of zoonoses and on the planning, implementation and evaluation of veterinary public health work, and to assist in selecting and training public health veterinarians.

AMRO 204 Environmental Sanitation Training, Zone I (1960 - ) R

AMRO 205 Environmental Sanitation Training, Zone II (1960 - ) R

AMRO 206 Environmental Sanitation Training, Zone III (1960 - ) R

AMRO 207 Environmental Sanitation Training, Zone IV (1960 - ) R

AMRO 208 Environmental Sanitation Training, Zone V (1960 - ) R

AMRO 209 Environmental Sanitation Training, Zone VI (1960 - ) R

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.

From December 1952 to 1959 these projects were grouped in AMRO 1.


To determine priorities for public health nursing services, in order to evolve better nursing techniques and procedures. The seminar was attended by public health nurses and personnel collaborating with them in the administration and extension of public health nursing services, from Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua and Panama. WHO provided travel costs and stipends for the participants.

AMRO 235 Food Sanitation (Nov. 1961 - 1964) R

To provide consultant services for reviewing municipal food control practices and preparing a guide for use by Latin American countries in considering food control legislation and inspection programmes.
AMRO 236 Refuse and Garbage Disposal (Nov. 1961 - ) R
To advise municipalities on the collection and disposal of refuse and garbage and on the organization and administration of the relevant services.

AMRO 262 Nutrition Advisory Services, Zone IV (1961 - ) R
To assist the Governments of Bolivia, Colombia, Ecuador and Peru in improving and developing nutrition programmes. Such assistance was previously given under individual country projects.

AMRO 267 Sanitary Engineering, Zone VI (Oct. 1961 - ) R
To provide advisory services in sanitary engineering to Argentina, Chile, Paraguay and Uruguay.

AMRO 269 Nutrition Advisory Services, Zone I (Aug. 1961 - ) R
To advise the countries of Zone I on nutrition matters.

To provide advisory services in sanitary engineering to Bolivia, Colombia, Ecuador and Peru.

To evaluate the health services and programmes in the five countries of Central America and in Panama. See pages 75 and 76.

Argentina 3 Nursing Education, Córdoba and El Chaco (Jan. 1957 - 1966) TA
To strengthen the schools of nursing in the Provinces of Córdoba and El Chaco.

Argentina 4 National Institute of Microbiology (May 1959 - 1964) R
To develop the services of the national public health laboratory dealing with virology, diagnostic bacteriology, pharmacology, and manufacture and control of biological products.

Argentina 6 Fellowships R: Mental hygiene (twelve months), nutrition (four and a half months), public health administration (two months), sanitary engineering (eleven and a half months).

Argentina 7 Public Health Services, El Chaco (May 1957 - 1966) TA UNICEF
To set up for demonstration purposes an integrated health service in the Province of El Chaco.

Argentina 18 Medical Education (1958 - ) R
To strengthen medical education.

Argentina 20 Tuberculosis Control (March 1960 - 1965) R UNICEF
To determine the prevalence and the epidemiological characteristics of tuberculosis in the province of Santa Fé; to set up a national tuberculosis training and research centre which will train tuberculosis control physicians and other workers for Argentina and, later, for other Spanish-speaking countries; and to establish a pilot area project for the study of tuberculosis control.

Argentina 28 Leprosy Control (1960 - 1964) R UNICEF
To plan and carry out a leprosy control programme based on modern techniques.

Argentina 34 Environmental Sanitation (1961 - 1963) TA
To provide fellowships for study of pumping stations and treatment plants for water and sewage.

Bolivia 4 Malaria Eradication (1956 - 1966) TA PAHO (Special Malaria Fund) UNICEF (ICA)
To eradicate malaria from the whole country.

Bolivia 5 Nursing Education (Aug. 1953 - 1963) R
To strengthen the National School of Nursing by training a group of nurse instructors and broadening the curriculum to include public health nursing and the principles of teaching and supervision.

To promote the economic and social development of indigenous populations of the Andean Highlands, so as to facilitate their integration into their national communities.

Bolivia 16 Fellowships R: Health education (two for twelve months), veterinary public health (ten months).

Brazil 8 National Virus Laboratory Services (April 1959 - 1963) TA
To set up a virus diagnostic laboratory and develop research in enteroviruses and arthropod-borne viruses.

Brazil 16 Fellowships TA: Public health administration (three months).

Brazil 19 School of Public Health, Rio de Janeiro (Nov. 1957 - )
To organize basic courses in public health for professional and non-professional health workers at the National School of Public Health, Rio de Janeiro.

Brazil 26 Fellowships R: Zoonoses (fourteen weeks).
The aim was 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. WHO provided a medical officer who planned and helped with the training courses given by the centre, took part in its therapeutic work, and gave assistance with rehabilitation problems of social security agencies. He also visited other medical schools, to stimulate interest in the use of the training facilities of the centre. Ten two-year courses were organized—four for occupational therapists, four for physical therapists and two for prosthetics technicians—as well as a course in locomotion for the blind and a short part-time course to give doctors post-graduate practical experience in total rehabilitation. The centre admits about 500 new cases a year. Steps have been taken to co-ordinate its work with that of the Associação Brasileira Beneficente de Reabilitação in Rio de Janeiro, so that the two institutions may establish comparable criteria for admission and training. The project has served to bring together various groups concerned with rehabilitation in Brazil. The centre has obtained recognition as a national training centre and is now capable of serving as a regional training centre for Latin American countries.

**Brazil 31** Rehabilitation Training Centre, São Paulo  
(July 1958 - Dec. 1961) TA (UN ILO)

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. The project has served to bring together various groups concerned with rehabilitation in Brazil. The centre has obtained recognition as a national training centre and is now capable of serving as a regional training centre for Latin American countries.

**Brazil 35** School of Public Health, São Paulo  
(July 1958 - 1965) R

To strengthen the School of Public Health, São Paulo, so that it may be used also as an international training centre.

**Brazil 48** Leprosy Control  
(1960 - 1965) R PAHO UNICEF

To plan and carry out a leprosy control programme based on modern techniques.

**British Guiana and West Indies 1** Eradication of Aedes aegypti  
(1952 - 1957 under AMRO 8; 1958 - 1965) TA PAHO

To eradicate Aedes aegypti, the urban vector of yellow fever, from Bermuda, British Guiana and territories of the West Indies.

**British Guiana and West Indies 3** Nursing Services  
(Aug. 1959 - 1966) TA

To develop the public health nursing services in British Guiana and territories of the West Indies Federation.

**British Guiana and West Indies 5** Fellowships R:  
Trinidad — Mental health (five months), venereal disease serology (seven weeks);  
St Vincent — public health nursing (twelve months).

**British Guiana and West Indies 9** Fellowships TA:  
Antigua — Sewage disposal (two for two months);  
Grenada — Latrine sanitation (six weeks).

**British Guiana and West Indies** — See also West Indies.

**Canada 1** Fellowships R:  
Maternal and child health (nine months), nutrition (six months), periodontology (twelve months), public health administration (nine months).

**Chile 18** Fellowships TA:  
Organization of medical education (one for three months, one for five months), paediatrics (eleven months).

**Chile 20** Midwifery Education  
(Sept. 1956 - Dec. 1961) R

The aim was to prepare a training programme for graduate midwives, suited to the country's maternal and child health needs, strengthen the teaching of obstetrical personnel, and improve maternal and child care generally. WHO provided a nurse midwife educator for the duration of the project, seven fellowships, and teaching supplies and equipment. Midwife instructors were prepared for the schools in Santiago and Valparaiso and for the maternal and child health section of the National Health Service, which is carrying out programmes of in-service training for its personnel. A study of the functions of midwives in the National Health Service was completed and, on the basis of its findings, the curriculum of the schools of midwifery was revised to include the teaching of nursing, social and health aspects of maternal and child care and principles of teaching and supervision. The obstetrical nursing programme of the School of Nursing of the University of Chile was revised.

**Chile 21** Rehabilitation Centre  
(Dec. 1960 - 1966) TA

To organize a modern rehabilitation centre in Santiago to serve for training, and to broaden the rehabilitation work of the national health services.

**Chile 22** Institute of Occupational Health  
(1961 - ) TA

To set up an institute of occupational health to provide services and training facilities for Chile and for other countries.

**Chile 25** Fellowships R:  
Nursing education (three months).

**Chile 31** School of Public Health  
(1958 - 1965) R

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.

**Chile 41** Nursing Survey  
(July 1960 - 1963) R

To make a survey of nursing needs and resources and develop a nursing programme based on the findings.

**Chile 48** Emergency Health Services  
(May 1960 - ) TA

To provide basic services for the area devastated by the earthquake in May 1960. The project is being continued as an integrated health project (Chile 49) which covers the eleven provinces affected by the earthquake.
Colombia 4 Public Health Services
(Sept. 1951 - 1970) TA UNICEF

To strengthen the Ministry of Health, expand integrated health services throughout the country and train professional and auxiliary personnel.

Colombia 18 Fellowships R: Hospital administration (thirteen months), organization of medical education (four months), public health administration (one for six weeks, two for fourteen and a half months, one for fifteen months).

Colombia 19 Leprosy Control (1958 - 1968) TA UNICEF

To plan and carry out a programme of leprosy control based on modern techniques.

Colombia 24 School of Public Health (May 1959 - 1962) R

To reorganize and improve the standards of the School of Public Health, and to provide a nucleus of full-time faculty members.

Cuba 3 Public Health Services
(June 1959 - 1972) TA PAHO UNICEF

To reorganize the health services at the central, intermediate and local levels and to set up integrated health services in one province.

Cuba 4 Nursing Education (March 1961 - 1972) R TA

To organize the National School of Nursing to prepare nurses for teaching and supervisory posts in nursing schools and the health services.

Cuba 5 Malaria Eradication (1957 - 1968) MESA PAHO
(Special Malaria Fund)

To eradicate malaria from the whole country.

Cuba 7 Fellowships R: Public health administration (one for three months, one for ten months, one for ten and a half months), veterinary public health (eleven and a half months).

Dominican Republic 3 Nursing Education (Aug. 1958 - 1963) R

To strengthen the National School of Nursing by preparing nurses for 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.

Dominican Republic 8 Aedes aegypti Eradication
(1952 - 1964) TA PAHO

To eradicate Aedes aegypti, the urban vector of yellow fever.

Dominican Republic 9 Fellowships R: Venereal disease serology (two months).

Ecuador 4 Public Health Services
(Nov. 1953 - 1971) R TA UNICEF

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.

Ecuador 14 Malaria Eradication (Nov. 1956 - 1969) TA PAHO
(Special Malaria Fund) UNICEF (ICA)

To eradicate malaria from the whole country.

Ecuador 16 Nursing Education (May 1957 - 1963) R

To strengthen the School of Nursing at the University of Guayaquil by preparing nurses for 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.

El Salvador 5 Health Demonstration Area

The aim of the project was to demonstrate in one area local health services, including the co-ordination of health and medical services with health education and the training of health personnel, and later to extend the same type of services to other rural areas. It was co-ordinated with programmes of social and economic improvement (in agriculture, education and labour relations) assisted by ILO, FAO and UNESCO. WHO provided a medical officer, two public health nurses, a sanitary engineer and a statistician, a short-term consultant, and eight short-term and eight long-term fellowships.

The project was the first experiment in planning and developing an integrated health programme in the Americas. It has provided opportunities for practical experience and research, and for training a number of national personnel. It will be followed by assistance in strengthening and expanding health services throughout the country.

A full evaluation of the project is being made and will be reported on in the Annual Report for 1962.

El Salvador 11 National Public Health Nursing Services
(Jan. 1961 - 1965) TA

To strengthen the nursing services at all levels.

El Salvador 12 National Environmental Sanitation Services
(Jan. 1961 - Dec. 1962) TA

To improve environmental sanitation, and especially to provide adequate water supplies and sewage disposal facilities.

French Antilles and Guiana 2 Aedes aegypti Eradication
(1956 - 1957 under AMRO 8; 1958 - 1969) TA

To eradicate Aedes aegypti, the urban vector of yellow fever, from the French territories of the Caribbean.

French Antilles and Guiana 5 Fellowships R: Guadeloupe — Hospital administration (nine and a half weeks), psychiatry (eleven weeks).
Guatemala 6 Nursing Education (April 1955 - 1964) TA PAHO
To strengthen nursing education programmes, at the National School of Nursing and by preparing graduate nurses as instructors of auxiliary nursing personnel.

Guatemala 7 Fellowships TA: Veterinary public health (eleven and a half months).

Guatemala 8 Public Health Services
To build up the health services at the central and local levels, to demonstrate rural health services and to train professional and auxiliary personnel.

Guatemala 11 Tuberculosis Control
(June 1956 - 1965) TA UNICEF
To consolidate existing antituberculosis campaigns into a broad programme of tuberculosis control.

Haiti 1 Yaws Eradication (1950 - 1963) R UNICEF
To eradicate yaws from the country.

Haiti 15 Fellowships R: Sanitary engineering (three for ten and a half months, one for twelve and a half months).

Haiti 16 Public Health Services
(1957 - 1972) TA UNICEF (ICA)
To expand the basic organization of national, provincial and local health services.

Honduras 4 Public Health Services
To reorganize the health services and to extend work in rural areas; to set up a demonstration and training project in a rural area; and to prepare a national health plan.

Mexico 18 Fellowships R: Public health administration (nine weeks).

Mexico 22 Public Health Services
To organize comprehensive regional and local health services in nine states.

Mexico 29 Leprosy Control (1960 - 1965) R UNICEF
To plan and carry out a national leprosy control programme based on modern techniques.

Mexico 30 School of Public Health (July 1958 - 1965) R
To strengthen teaching in the School of Public Health of the University of Mexico.

Mexico 35 Environmental Sanitation Training (1955 - 1964) R
To provide post-graduate courses at the School of Sanitary Engineering of the Autonomous University of Mexico for engineers desiring specialization in sanitary engineering.

Mexico 38 Tuberculosis Control
(July 1960 - 1965) R TA UNICEF
To determine the prevalence and other epidemiological characteristics of tuberculosis, prepare a tuberculosis campaign for the whole country, using the data thus obtained, and train personnel in techniques of prevalence studies and tuberculosis control; for these purposes, to set up pilot centres.

Mexico 53 Malaria Eradication (1956 - 1965) TA PAHO
(Special Malaria Fund) UNICEF
See page 74.

Netherlands Antilles 7 Fellowships TA: Public health nursing (twelve months).

Netherlands Antilles — See also Surinam and Netherlands Antilles.

Nicaragua 5 Nursing Education (March 1955 - 1963) R
To strengthen the National School of Nursing by preparing nurses for 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.

Panama 1 Public Health Services
(Aug. 1952 - 1966) TA UNICEF
To strengthen the national health services and to expand regional and local integrated health services.

Paraguay 9 Leprosy Control (1956 - 1963) R UNICEF
To reduce the incidence of leprosy by ambulatory treatment of patients with diaminodiphenylsulfone (DDS) and a programme to localize cases by systematic examination of contacts and selected groups of the population.

Paraguay 10 Public Health Services
(Jan. 1955 - 1966) TA PAHO UNICEF
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. See also page 75.

Paraguay 12 Fellowships R: Health education (ten months), parasitology (four months), public health administration (one for ten and a half months, two for eleven months, three for eleven and a half months).
Peru 5 Malaria Eradication (June 1957 - 1967) TA PAHO
(Special Malaria Fund) UNICEF (ICA)
To eradicate malaria by stages from the whole country.

Peru 15 Advanced Nursing Education (April 1959 - 1963) R
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.

Peru 21 Fellowships R: Dental public health (eleven and a half months), hospital administration (one for ten months, one for thirteen months), public health administration (one for ten months, two for eleven and a half months), sanitary engineering (ten and a half months).

Peru 22 Public Health Services (Jan. 1956 - 1970) TA UNICEF
To strengthen the national health services and expand the regional and local health services.

Peru 23 Joint Field Mission on Indigenous Populations
(Jan. 1957 - 1970) TA UNICEF (UN ILO FAO UNESCO)
To promote the economic and social development of indigenous populations of the Andean highlands, so as to facilitate their integration into their national communities.

Peru 29 Tuberculosis Control (1960 - 1964) R UNICEF
To determine the prevalence and other epidemiological characteristics of tuberculosis, prepare a tuberculosis campaign for the whole country, using the data thus obtained, and train personnel in techniques of prevalence studies and tuberculosis control; for these purposes, to set up pilot centres.

Peru 30 Promotion of Water Supplies (July 1960 - ) TA PAHO
(Special Water Fund) (Inter-American Development Bank)
To plan and carry out, through the Ministry of Development and Public Works, a national plan for the design, construction and operation of public water supplies.

Surinam and Netherlands Antilles 1 Aëdes aegypti Eradication
(1952 - 1957 under AMRO 8; 1958 - 1964) TA PAHO
To eradicate Aëdes aegypti, the urban vector of yellow fever, from Surinam and the Netherlands Antilles.

Surinam and Netherlands Antilles — See also Netherlands Antilles.

United States 7 Fellowships R: Maternal and child health (eleven weeks), nursing education (three months), psychiatry (two months), public health administration (three months), public health nursing (two for two months).

United States 10 Consultants in Specialized Fields of Public Health (March 1958 - ) R
To provide advice on public health specialities (health care of the aged, occupational morbidity data, cardiovascular and respiratory diseases, biological aspects of water pollution).

United States 12 Medical and Public Health Training
(1961 - ) R
To enable officials of the United States Public Health Service Fellowships Programme to visit other countries to observe health programmes and discuss problems with former fellows.

Uruguay 5 Public Health Services
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 sub-centres; organizing community participation; training all categories of local public health personnel; supporting the work by a health education programme.

Uruguay 8 Fellowships R: Dental public health (five and a half months).

Uruguay 9 Chagas' Disease (1961 - 1962) R
To plan a programme for the control of Chagas' disease.

Uruguay 16 Chronic Diseases (Nov. 1961 - 1966) R
To study the epidemiology of chronic diseases with a view to implementing programmes through the official agencies concerned.

Venezuela 5 Onchocerciasis Investigation
(Sept. - Nov. 1959; March - July 1961) R
WHO provided a consultant in 1959 and another in 1961 to delineate the areas where onchocerciasis is present and identify the vectors. The project has provided information on local species of Simulium and their biology and has established the role of *Simulium metallicum* as the principal vector.

Venezuela 10 Fellowships R: Hospital administration (twenty-one months), industrial hygiene (two for twelve months).

Venezuela 14 Nursing Education (April 1959 - 1967) TA PAHO
To strengthen the National School of Nursing by preparing nurses for 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.
Venezuela 19  School of Public Health (Feb. 1959 - ) R
To strengthen teaching in the School of Public Health.

Venezuela 24  Consultant Services in Public Health
(July 1960 - ) R
To make an evaluation of the health services.

West Indies 11  Public Health Training Station, Jamaica
(June 1959 - 1963) R
To strengthen the training of public health nurses and sanitary inspectors in Jamaica.

West Indies — See also British Guiana and West Indies.
SEARO 3 BCG Assessment Team

To evaluate the national BCG vaccination campaign in India and if necessary to make suggestions for improvement; and to review the progress of the mass BCG vaccination campaigns in Burma and Indonesia, check technical procedures, and train a national assessment team in each country.

SEARO 7 Regional Assessment Team on Malaria Eradication
(May 1959 - end of 1963) R

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.

SEARO 38 Production of Freeze-dried Smallpox Vaccine

To advise on the production of freeze-dried smallpox vaccine a consultant provided by WHO visited Thailand, India and Indonesia in 1958. In Thailand the production centre in Bangkok started to function in April 1960. A WHO consultant gave further assistance to the centre in February 1961 and submitted a report with recommendations, including one for a change to a new strain now being used at the Lister Institute of Preventive Medicine. Sheep are being used instead of buffaloes, and the pulp collected from them on the fifth day after vaccination is used in the preparation of the elementary body suspension. The consultant demonstrated the simplified method of preparing this suspension adopted at the Lister Institute. At the end of 1961 the production was 1000 ampoules a week.

WHO provided a short-term consultant in November 1961 to visit freeze-dried smallpox vaccine production units established with assistance from UNICEF and WHO in Bandung, Indonesia, to help in the installation of the equipment needed for production. In November-December 1961 a short-term consultant visited the units set up in Guindy and Patwadanger, India, to advise and report on the progress achieved in production and to give any assistance which might be required.

Two bacteriologists and a mechanic from India and a laboratory technician from the Pasteur Institute, Bandung, completed their training on WHO fellowships.

SEARO 40 Malaria Eradication: Experimental Study on Surveillance, Ceylon and India (April 1959 - May 1961) MESA

Two projects, one in Ceylon and one in Mysore State, India, were carried out to study the most effective method of surveillance for malaria eradication. For the project in Ceylon WHO provided three malarialogists, six laboratory technicians and fifteen auxiliary personnel, and for India three malarialogists and six laboratory technicians; supplies and equipment were provided in both cases and reimbursement made to the Governments for the salaries and allowances of national personnel.

In Ceylon active and passive case-detection methods were tested by screening for malaria—by taking blood films—all fever cases in a population of about 125,000. The area under study for active case-detection was divided into three, in which visits were made at fortnightly, monthly and two-monthly intervals, so as to determine the optimum interval between visits. Monthly visits were considered to be most satisfactory. Findings indicated that neither active nor passive surveillance alone would reveal all fever cases and the team recommended that both should be used, although, in Ceylon, which has a network of hospitals and dispensaries and where public health consciousness in the population is quite well developed, passive detection methods gave the better results.

The final report of the Mysore team was still in preparation at the end of the year.

SEARO 41 Improvement of X-ray Services
(Feb. 1959 - end of 1963) TA

To train X-ray technicians from various countries in the Region in radiographic techniques and in the maintenance of X-ray equipment and to assist the School of Radiography, Ceylon, for this purpose.

SEARO 47 Medical Education Study Tour (Biochemistry)
(21 Nov. - 14 Dec. 1960) TA

Eight teachers of biochemistry, from Afghanistan, Burma, Ceylon, India and Thailand, took part in this study tour—the fourth of an annual series—whose object was to focus attention on the status of biochemistry in the medical curriculum. Under the guidance of a professor of biochemistry they visited medical colleges in Bangkok, Delhi, Lucknow, Bombay and Hyderabad, where they attended some of the meetings of the Indian Council of Medical Research. WHO provided the services of the professor and travel costs and stipends.

SEARO 49 Medical Education Study Tour (Pharmacology)
(13 Nov. - 10 Dec. 1961) TA

A study tour—the fifth of an annual series—to focus attention on the status of pharmacology in the undergraduate medical curriculum. Eight teachers of pharmacology, from Afghanistan, Burma, Ceylon, India, Indonesia and Thailand, visited medical colleges and research institutions in India, Indonesia and Singapore. WHO provided travel costs and stipends.

SEARO 50 Reorganization of Rural Health Records and Reports (Jan. 1961 - end of 1963) R

To organize in certain rural health centres a system of rural health service records and reports and to train personnel in the collection, processing and presentation of vital and health statistics at rural health centre level.
A conference to study the principles of nursing administration in relation to nursing services and education. The agenda included: the application of the principles of general administration to nursing administration, preparation for administrative posts, human aspects of management, the development of nursing as a profession, and the organization of nursing services to meet changing needs. The conference was attended by nineteen participants—from Afghanistan, Burma, Ceylon, India, Indonesia, Nepal and Thailand—and by representatives from the International Council of Nurses and the United States Technical Co-operation Mission in India. WHO provided a short-term consultant and costs of attendance of the participants.

**SEARO 55 Assistance to Public Health Laboratories**


To review the administrative and technical structure of laboratories and laboratory services in the Region; to evaluate the work being performed, the techniques and the type of equipment in use, the number of laboratory personnel employed and their standard of training; to work out a plan of organization and administration for a referral laboratory system and to draw up curricula for training.

**Afghanistan 6 Public Health Adviser (Nov. 1951 - ) R**

To improve public health administration and services, train medical and paramedical personnel, and co-ordinate national and internationally-assisted health programmes.

**Afghanistan 11 Malaria Eradication (Aug. 1956 - end of 1968) MESA UNICEF**

To eradicate malaria from the entire country.

**Afghanistan 13 Faculty of Medicine, Kabul University (Jan. - Aug. 1952; Sept. 1953 - end of 1964) R**

To build up the departments of anatomy, physiology, preventive medicine, internal medicine and paediatrics at the Faculty of Medicine and to train national counterparts to the visiting professors.

**Afghanistan 20 Vaccine Production, Kabul (Jan. 1955 - end of 1963) TA UNICEF**

To reorganize, expand and improve facilities for vaccine production for the national health programmes, and to train local personnel in the production of biological substances.

**Afghanistan 22 Environmental Sanitation, Kabul Municipality (Nov. 1955 - Sept. 1960) TA**

The aim was to develop a sanitation section in the Kabul Municipality; to plan and carry out a programme of sanitation, including the design, operation and maintenance of sanitary installations; and to train sanitation personnel. WHO provided a consultant in public health engineering in November and December 1955, a sanitary engineer from March 1956 to December 1957, a sanitarian from April to September 1960, two twelve-month fellowships, and supplies.

The consultant made a survey of sanitation and water supply in Kabul and recommended improvements. The sanitary engineer prepared a plan for a sanitation section in the Kabul Municipality. A short in-service training course in basic sanitation was given to ten district directors, each of whom was made responsible for an area of the city until personnel became available from the school for sanitarians (Afghanistan 28). Fellowships were awarded to one of the district directors and to the counterpart of the sanitary engineer, who took charge of the sanitation section on his return in August 1958. In April 1960 a sanitarian was assigned to help with the sanitation work already started in Kabul; after six months it was decided that assistance could best be given through the school for sanitarians, and he was transferred to that project.

The project has provided the Municipality with a basic pattern for the development of sanitation services in Kabul, to meet the growing public demand, but has not succeeded in solving the problems of water supply and sewage disposal. Further progress is contingent upon the availability of an adequate number of trained staff.

**Afghanistan 25 Public Health Laboratory, Kabul (May 1956 - Nov. 1960) TA**

A project to consolidate the work of the public health laboratory in Kabul and to give training to laboratory technicians. WHO provided a laboratory technician from May 1956 to April 1958 and another from February 1959 to November 1960, three fellowships, and supplies and equipment.

Assistance began in 1951 as part of a combined project for maternal and child health and venereal disease control, but was interrupted in 1954. From 1956 to 1958 progress was slow; however, in 1959 the bacteriology and serology sections of the laboratory were reorganized and by November 1960 fourteen laboratory technicians had obtained their diplomas, although the qualifications for admission had had to be lowered, since the number of candidates with the required background was insufficient. The laboratory technician carried out research on enteric pathogens and on chronic gonorrhoea related to sterility, and lectured at the school for sanitarians, the school for midwives and the school for dentists, and to several groups of medical students. He also gave assistance during the outbreak of cholera in 1960.

The courses given have produced capable technicians, of whom a number are now working in various laboratories in Afghanistan. The national staff are now capable of carrying on the current work of the laboratory, including theoretical teaching, but international assistance may be necessary in connexion with the expansion of the laboratory services and for practical teaching.

**Afghanistan 26 Rural Health (April 1956 - 1963) TA UNICEF**

To establish a rural health training unit; to develop a rural health and environmental sanitation programme; and to promote health education work.

**Afghanistan 28 School for Sanitarians, Kabul (July 1955 - end of 1963) TA**

To train sanitarians for community health services.
Afghanistan 31 Institute of Public Health, Kabul
(April 1956 - 1968) TA

To set up an Institute of Public Health for investigations, research and the training of public health workers.

Afghanistan 33 Tuberculosis Advisory Services
(June 1958 - 1967) TA

To develop and expand the tuberculosis control services.

Afghanistan 35 Nursing Advisory Services
(June 1957 - end of 1964) R UNICEF

To develop the training of male and female nurses and of midwives and to plan for meeting the country's needs in nursing services.

Afghanistan 36 Fellowships R: Bacteriology (twelve months), nursing (twelve months), preventive and social medicine (twelve months), sanitation (twelve months).

Afghanistan 37 Fellowships TA: Medical radiology (two for twelve months).

Burma 17 Leprosy Control (April 1950 - end of 1965)
R UNICEF

To expand and intensify the leprosy control programme to cover all endemic areas of the country and to train personnel for this purpose.

Burma 22 Vital and Health Statistics, Rangoon
(Dec. 1955 - end of 1963) R

To establish machinery for prompt notification of accurate statistical data; to improve processing of the information and to train staff in statistical methods.

Burma 25 Post-graduate School of Nursing, Rangoon

To give post-graduate training to nurse tutors, public health nurses and midwife tutors, to meet the requirements of the integrated health services.

Burma 28 Medical College, Rangoon
(Feb. 1955 - end of 1965) TA

To upgrade the pharmacology, physiology and preventive medicine departments in the Medical College of Rangoon University as part of a long-term programme for upgrading the medical faculty as a whole.

Burma 31 Malaria Eradication
(Feb. 1957 - end of 1973) MESA TA UNICEF

To eradicate malaria throughout the country in progressive stages.

Burma 34 Strengthening of Environmental Sanitation
(March 1956 - March 1963) TA UNICEF

See page 80.

Burma 36 Public Health Administration, Rangoon
(March 1955 - Dec. 1960) TA

WHO provided a public health adviser for eight months in 1955 and in 1956 and again from November 1958 to the end of 1960 in order to help strengthen the administration of the Health Directorate, assess health problems and co-ordinate the planning of health services. He advised on the administrative structure of the Health Directorate and on the compilation of annual health reports, studied the organization and administration of health services, undertook an appraisal of rural health services, reviewed staff training programmes, advised on control of communicable diseases, on medical education, vital statistics, health education, nutrition and the organization of maternal and child health services, and assisted in formulating the current four-year development plan.

The project has resulted in a strengthening of the administrative routine of the Health Directorate, and a number of activities in the country have benefited from decentralization of administration. The current health situation has been assessed, and the main problems identified. The project has also shown the need for training sufficient numbers of professional and auxiliary health workers and for providing adequate supervision for the auxiliaries.

Burma 40 Nursing Refresher Course (1 March - 31 May 1961) R

A refresher course in paediatric nursing, held at the Rangoon General Hospital. WHO provided half the cost of travel and maintenance expenses for the nine trainees and the WHO nursing adviser in Rangoon (attached to project Burma 56) helped to organize and conduct the course.

Burma 44 Communicable Disease Control (Epidemiology)
(Jan. 1961 - end of 1965) TA

To establish an epidemiological unit in the Health Directorate, Rangoon, with a view to developing throughout Burma an epidemiological service to provide prompt and accurate information on epidemic and endemic diseases; to define the pattern of epidemic and endemic diseases so as to institute control measures in order of priority.

Burma 54 Fellowships R: Dental health (two months), environmental sanitation (twelve months), filariasis control (two for three months).

Burma 56 Nursing Advisory Services
(March 1959 - end of 1963) TA

To assist the Division of Nursing of the Health Directorate in upgrading nursing and midwifery training schools, particularly the schools in district hospitals.

Burma 59 Medical College, Mandalay

To upgrade certain departments of the Medical College, Mandalay.
Burma 63 Filariasis Control (Aug. - Sept. 1961) R

In order to determine the extent of the filariasis problem, which is serious in certain areas, WHO provided a consultant for six weeks to assist in making a survey in Rangoon and other endemic areas and in assessing the effect of filariasis control measures taken in Rangoon. He has submitted a preliminary report and recommendations.

Fellowships have been awarded to two medical officers in charge of the filariasis control programme in Rangoon (see Burma 54).

Ceylon 4 Maternal and Child Health
(Sept. 1955 - March 1963) TA UNICEF

In the first instance, 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 to train various categories of health personnel; when these objectives have been achieved, to upgrade the child health services in a number of provincial hospitals and to link them with the child care work carried out in rural areas.

Ceylon 25 Tuberculosis Control and Training Centre, Colombo

The aim was to set up a model tuberculosis service and to train medical and paramedical personnel for it; and to revise the system of records and reports in tuberculosis institutions and set up a central tuberculosis register. WHO provided a medical officer, a public health nurse, a radiographer, a laboratory technician and a statistician, and six fellowships.

From 1953 to 1955 assistance was given to the tuberculosis demonstration and training centre in Galle. At the end of 1955 the project was transferred to the Welisara Chest Hospital, Colombo. The work done up to the end of 1956 is described in the Annual Reports for 1954, 1955 and 1956.

The medical officer, who completed his assignment at the end of 1955, returned for three months from November 1957 to January 1958 to advise the Government on planning and carrying out a country-wide tuberculosis programme, based on modern principles, and to review the progress of the project. The statistician, provided from November 1959 to October 1960, helped to organize the statistical work in chest clinics, chest hospitals and in the records and statistics branch of the tuberculosis campaign. Quarterly report forms were introduced in the clinics and hospitals, and a simplified system of notification and investigation of tuberculosis cases and a plan for an annual inventory of known cases were prepared.

The tuberculosis service has developed satisfactorily and good progress has been made in directing its policy towards prevention; recording and reporting procedures have been reorganized in accordance with the objective of the project.

Ceylon 26 Leprosy Control

In order to help assess the leprosy problem and plan the further development of the control programme, WHO provided a leprologist from July 1954 to June 1957, an occupational therapist from January 1955 to October 1956 and a consultant for two months in 1960, a fellowship and laboratory equipment and drugs.

A description of the work done until 1957 was given in the Annual Reports for 1955 and 1957. It included examination of patients under treatment in leprosy clinics, hospitals and colonies, surveys, training of various categories of personnel, rehabilitation work and improvement of laboratory facilities. In 1960 a consultant was assigned to review the situation, study the arrangements for rehabilitation of leprosy patients and advise on the further development of control and rehabilitation services. His report indicated that, although the true extent of leprosy in Ceylon is not known, the number of cases is probably about 6000—twice the number registered—and that about 2000 of them are probably suffering from disabilities.

The type of leprosy found in Ceylon is severe. Reconstructive surgery is not done at present and special training in the operative procedures is needed. The method of providing treatment for patients outside institutions needs to be improved and better training and supervision are required. It is estimated that leprosy can be controlled in Ceylon through a suitably organized programme.

Ceylon 35 Environmental Sanitation, Kurunegala
(March 1955 - Feb. 1961) TA UNICEF

The aim was to set up pilot projects in rural areas to improve water supplies and excreta disposal, and to train personnel in environmental sanitation; also to build up a health education programme to secure the people's co-operation. WHO provided a sanitary engineer from March 1955 to April 1958 and another from March 1958 to April 1959, a consultant for two months and a specialist in health statistics for one month in 1956, a sanitaryian from November 1957 to February 1961, and two twelve-month fellowships (one of them awarded under Ceylon 50).

Assistance was given with a rural water supply and latrine programme until 1959 and with a programme for training public health inspectors until February 1961. During the course of the project 3025 latrines and 280 wells were completed, 130 public health inspectors were trained and courses in environmental sanitation were arranged for other categories of public health workers. A sanitary code for Ceylon was drawn up by the WHO consultant in 1956.

Fairly wide coverage was obtained with the rural water supply and latrine programme which gained a fair measure of community acceptance. A pattern of work suitable for extension to other districts was evolved. A practical syllabus was developed for a nine-month training course for public health inspectors. The refresher courses for health inspectors in service and for other health workers were useful.

Pass rates in the courses held during the project were high, the method of providing treatment for patients outside institutions needs to be improved and better training and supervision are required. It is estimated that leprosy can be controlled in Ceylon through a suitably organized programme.

Ceylon 37 Mental Health, Colombo

To train a small cadre of psychiatric nurses for supervisory posts and a staff of assistant mental health nurses for the care of patients in mental hospitals.
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; and to plan future veterinary public health work, particularly on zoonoses and their control.


For this project WHO provided a nursing adviser to the Health Directorate, two twelve-month fellowships and supplies and equipment. The nursing adviser assisted in co-ordinating nursing services and nursing education, advised on the reorganization of nursing administration and on the enactment of nursing legislation, and made recommendations concerning the establishment and use of advisory bodies. She also helped to plan nursing education programmes and to arrange supervised practice in connexion with basic programmes and post-graduate training.

A detailed pattern of nursing administration and staffing has been evolved and satisfactory training programmes for nurses and auxiliary nurses have been established. The recommendations made are being carried out. A nursing education officer responsible for planning, implementing and supervising teaching programmes in nursing and auxiliary nursing schools was appointed in the Health Directorate in January 1960. A committee was appointed to review the system of examinations, and advisory boards were set up for all nursing schools.

Ceylon 45 Health Statistics (April 1957 - end of 1961) TA

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.

Ceylon 50 Fellowships R: Medical stores management (six months), venereal disease control (three months).

Ceylon 53 Nursing Advisory Services (July 1960 - end of 1963) R

To develop auxiliary, basic and post-basic nursing education, and particularly to set up a post-basic school of nursing and co-ordinate programmes for training nurse aides.

Ceylon 54 Training of Laboratory Technicians (April 1959 - March 1961) TA

The aims of this project were to set up a school of medical laboratory technology, to organize for it a programme of theoretical and practical training that would cover the subjects stipulated in an approved syllabus and be of the standard required, and to train four counterpart laboratory technologists as tutors of specific subjects. WHO provided a laboratory technician and supplies and equipment.

When the project started no complete curriculum in basic medical laboratory technology existed. Six-month courses of instruction were given by medical staff, but no syllabus was followed and in some weeks no lectures were given.

The school of medical laboratory technology, offering a one-year course, was opened in October 1959 in the Department of Pathology of the Children’s Hospital, Colombo. In 1960 the course was extended to two years, the second year consisting of internship in various laboratories. The aim of the school has been to train from twenty-five to thirty students a year. In the period covered by the project twenty-three students completed the 1959-1960 course and twenty-eight began the first two-year course; four counterpart laboratory technologists were trained and appointed to the school as tutors.

The principal aims of the project, as stated above, have been achieved. The training, which includes bacteriology, biochemistry, haematology, blood-bank techniques, serology, clinical techniques and parasitology, has reached a reasonably high standard.

Ceylon 55 School of Physiotherapy, Colombo (Oct. 1958 - June 1963) R

To train physiotherapists for physical medicine and rehabilitation services.

Ceylon 56 Filariasis Control (Dec. 1959 - July 1961) R

A consultant provided by WHO for three months made a filariasis survey; he found that human filariasis in Ceylon is principally a problem of the coastal areas of the south-west, where about one and a half million people are exposed to infection with Wuchereria bancrofti transmitted by Culex fatigans.

A fellowship was awarded to enable a medical officer to study control measures abroad.

Ceylon 58 Malaria Eradication (Aug. 1960 - end of 1963) MESA (ICA)

To eradicate malaria from the whole country.

Goa Fellowships 1 TA: Public health administration (six months).

Goa Nursing Education 2 (Oct. 1959 - 1965) TA

To upgrade and expand the training of nurses for institutional and public health nursing services; to set up a central nurse-training school.

India 53 Tuberculosis Chemotherapy Centre, Madras (Dec. 1955 - end of 1965) TA (British Medical Research Council; Indian Council of Medical Research)

To study the effects, on tuberculosis patients and their contacts, of chemotherapy given at home and in hospital and to assess the importance of nutrition; to find, by comparative trials, which drug or combination of drugs will provide cheap and effective domiciliary chemotherapy; to study the effects on the community of widespread chemotherapy of ambulant patients; and to train personnel in methods of research.

1 Awarded under Project No. Portuguese India 6.
2 Under Project No. Portuguese India 7.
To set up a Department of Public Health Engineering at the University of Madras and to organize post-graduate courses and field training in public health engineering; later to include courses in chemistry, bacteriology and biology in the University’s post-graduate course in sanitary engineering. Counterparts are to be trained to take over from the professors provided by WHO.

India 81 Leprosy Control (Jan. 1961 - end of 1965) R UNICEF
To plan a leprosy control programme for the whole country.

India 84 Environmental Sanitation, Uttar Pradesh (March 1958 - end of 1962) TA
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 - Sept. 1961) TA
The aim was to develop training and prepare experimental curricula for health education in one or more teacher-training institutions in Delhi. WHO provided a health educator, four twelve-month fellowships and teaching supplies and equipment. The project was located in the Central Health Education Bureau. A school health education section of the Bureau was set up. Training courses, seminars and workshops were arranged for school-teachers and teacher-trainers and syllabuses were drawn up for health education in schools and teacher-training colleges. Teachers were visited in their schools to follow up the training given. A number of states were visited and advice was given to state health education bureaux on the setting-up of health education sections. Assistance was given with training courses organized by the Bureau for various categories of health workers. Health education material was prepared for use in schools. Co-operation between the Ministry of Health and the Ministry of Education was secured. The school health education section was established on a satisfactory basis and a realistic system for health education in schools and suitable methods of training school-teachers in health education were worked out. The development of school health education programmes in several states was stimulated.

India 91 Training in Preventive and Social Medicine (Feb. 1956 - Dec. 1957; March 1959 - Sept. 1960) TA
Four professors of preventive and social medicine were provided by WHO for the Assam Medical College, the Nagpur Medical College, the Topiwala National Medical College, Bombay, and the King George Medical College, Lucknow, to assist in developing the departments of preventive and social medicine, incorporating preventive medicine into the general curriculum, organizing courses in preventive and social medicine for undergraduates and establishing centres for practical training, and to train counterparts to take over their functions. Fourteen fellowships—eleven of two years, two of one year and one of five months—were also provided under this project. The work done at the medical colleges in Assam, Nagpur and Bombay was described in the Annual Reports for the years 1956 to 1960.
Assistant was given to the King George Medical College, Lucknow, from March 1959 to September 1960. Teaching in preventive and social medicine, previously given only in the fourth year, was extended to four of the five years of the M.B., B.S. course. The number of hours of formal teaching was reduced to allow more time for field demonstrations, in which, however, difficulties were experienced because there were insufficient teachers for the large number of students. Post-graduate training was developed, research work on problems of immediate public health importance to India was started, and several studies were completed. It is planned that the professor should return to the college for a short time in 1963 to assess the development of the department of preventive and social medicine and to help to introduce the course for the Diploma in Public Health.

In the medical colleges in Assam and Nagpur, the departments of preventive and social medicine, which were set up on modern lines, with field practice areas, made considerable progress. There was full co-operation between the medical faculties and the state health services. In Nagpur a rural practice area was chosen, because of India’s predominantly rural population; in view of the travel involved, however, it was replaced by an urban area, which proved to be equally good for teaching purposes. Similar difficulties were experienced in Assam, where the rural practice area was also at some distance, and a secondary area was set up nearer the college. Both colleges are making the teaching of preventive and social medicine a regular feature of the medical curriculum. Research needs to be stimulated.

At the Topiwala National Medical College the work of the department of preventive and social medicine has continued satisfactorily under the counterpart to the visiting professor. Good progress was made also at the King George Medical College, Lucknow, where the department of preventive and social medicine is working satisfactorily, but needs further consolidation.

India 98 Refresher Courses for Nurses:
Visakhapatnam (27 Oct. - 21 Dec. 1960);
New Delhi (1-30 Nov. 1960; 1-30 Nov. 1961);
Kampur (3 Oct. - 30 Nov. 1961) R
Four refresher courses were held with the assistance of WHO nurses attached to projects in India, the nursing adviser to the Directorate of Health Services, Madhya Pradesh, and the regional nursing adviser: at the King George Hospital, Visakhapatnam, for nineteen sister tutors from ten states; at the Lady Hardinge Medical College and Hospital, New Delhi, for twenty-one nursing superintendents from various parts of India; at the Lala Lajpat Rai Hospital, Kampur, for twenty sister tutors; and at the Willingdon Hospital, New Delhi, for twenty nursing superintendents. WHO provided half the cost of travel and maintenance expenses of the participants.

India 99 Nursing Education (Public Health Integration) (Sept. 1957 - end of 1963) TA
To integrate training in public health into the basic training of nurses; to provide supervised practical observation and experience for student nurses in three selected undergraduate schools of nursing.
India 101 Trachoma Pilot Project (Feb. 1956 - May 1962) R UNICEF (Indian Council of Medical Research)

To develop a programme for a mass campaign against communicable eye diseases, to be carried out through primary health centres and subcentres in states where these diseases are a serious public health problem; and to plan extension of the project. The project provides for giving additional training in control measures to ophthalmologists, general physicians and nurses, so as to standardize methods of examination, diagnosis and treatment, and for the introduction of a programme of health education.

India 103 National Tuberculosis Programme
(Oct. 1956 - end of 1968) TA UNICEF

To plan and carry out, through the National Tuberculosis Institute, model urban and rural tuberculosis programmes —based on epidemiological findings and field research—suitable for application throughout India; to train personnel for the control programmes to be set up in the fifteen states and 380 districts of the country. See page 80.

India 106 Public Health Programme, Rajasthan
(March 1959 - March 1961) TA UNICEF

The aim was to expand health services in community development areas in Rajasthan State; to train personnel; and to organize other related rural health services, for integration into the community development programme under the second five-year plan. WHO provided a public health officer and a public health nurse.

The public health officer helped to upgrade the institutions selected for UNICEF assistance, assisted the Department of Preventive and Social Medicine of the Jaipur Medical College to improve health services and facilities at the Naila rural training centre, and co-operated in organizing an orientation training course for medical officers of primary health centres. The public health nurse helped with orientation training courses for nurse midwives and with the training programme in Jaipur for auxiliary nurse midwives.

A clearer understanding of the objectives of the programme, of the need for a properly integrated health service and of its requirements, had emerged during the period of the team's assignment. Recruitment of medical, paramedical and auxiliary personnel has improved.

India 107 Public Health Programme, Punjab

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.

India 108 Health Education — Bombay, Uttar Pradesh, Bihar, and Two States Undesignated (March 1958 - ) TA

To build up the health education bureaux in the directorates of public health in five states, and pilot demonstration and field training areas; to teach health education to public health and other personnel. WHO assistance to each state will continue for about two years.

India 110 Nursing Advisers, Madhya Pradesh, Madras and Punjab (Dec. 1957 - ) TA

To organize and expand nursing education and nursing services in three states and to co-ordinate supervisory services so as to ensure uniformly high standards of nursing and midwifery in their health programmes. WHO assistance to each state will continue for about three years.

India 111 Medical Education (Dec. 1958 - 1963) R

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.

India 114 Paediatric Education and Services

To expand, upgrade and reorient the teaching of paediatrics in a number of medical colleges. See page 81.

India 115 Fellowships R: Anatomy (two for twelve months), biochemistry (eleven months), dentistry (nine months), health statistics (four months), hospital physics (twelve months), leprosy control (three for five and a half months), nursing (eight months), pharmacology (twelve months), physiology (twelve months), production of freeze-dried smallpox vaccine (two months), production of oral polio vaccine (two for three and a half months), public health planning (two and a half months), radiation and isotopes (public health aspects) (twelve months), sanitary engineering (twelve months), vital and health statistics (twelve months).

India 116 Fellowships TA: Epidemiology (three for twelve months), paediatrics (four months), public health administration (two for seven weeks).

India 119 Bilharziasis Control (Jan. - March 1961) R

A consultant provided by WHO for six weeks made a survey of bilharziasis in the endemic foci in the Ratnagiri district, Maharashtra State. His findings, which indicate that bilharziasis is probably not confined to one area, and his recommendations for further studies and control measures, have been submitted to the Government.

India 120 Health Education Certificate Courses, All-India Institute of Hygiene and Public Health, Calcutta
(June 1959 - ) R

To teach the principles, methods and practices of health education in order to prepare specialists in health education for key posts in India.
India 122 Assistance to Specialized Departments of Medical Institutions (Sept.-Nov. 1960) R

Three consultants (in physiology, preventive and social medicine, and therapeutics) provided by WHO demonstrated modern methods of integrated teaching at the Osmania Medical College, Hyderabad, the Calcutta Medical College, other medical colleges in Kurnool and Guntur (Andhra Pradesh) and Calcutta, and at the National Medical Institute, Calcutta.

India 131 Vital and Health Statistics, West Bengal (Jan.-March 1960; May 1961-end of 1964) TA

To improve vital and health statistics services in West Bengal by introducing techniques to ensure accuracy and completeness of reporting, and training personnel in use of the new system, including coding of medical diagnoses.

India 133 Public Health Programme, Orissa (Feb. 1961-end of 1963) R UNICEF

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.

India 135 Assistance to the Departments of Paediatrics of the Three Medical Colleges in Bombay (May 1959-end of 1961) R UNICEF

To expand, upgrade and reorient the teaching of paediatrics at the three medical colleges in Bombay.

India 137 All-India Institute of Hygiene and Public Health, Calcutta (Exchange of Professors) (May 1959; Nov. 1960) TA

WHO provided a consultant in preventive and social medicine for three weeks in May 1959, a consultant in public health for one week in November 1960 and two six-month fellowships, in order to assist in raising the standard of teaching at the All-India Institute of Hygiene and Public Health. The consultant in preventive and social medicine advised in teaching techniques, and outlined a curriculum of training for teachers of preventive and social medicine; the consultant in public health helped with the course for senior public health administrators held at the Institute.

India 142 Department of Paediatrics, Osmania Medical College, Hyderabad (Feb.-April 1959; July-Nov. 1960) R UNICEF

A project to expand, upgrade and reorient the teaching of paediatrics at the Osmania Medical College, Hyderabad. WHO provided a consultant bacteriologist in 1959 and a consultant in biochemistry in 1960; the paediatrician and the paediatric nurse assigned to project India 134 worked on this project for two months.

The bacteriologist 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 extended to provide better facilities for paediatric training and services. The paediatrician and paediatric nurse helped to reorganize peripheral paediatric clinics. By the time they left three more clinics had been set up and plans for further development had been prepared. The consultant in biochemistry assisted in further developing the biochemical laboratory, which continues to function satisfactorily. A building for the outpatients' department, lecture rooms, health education service and house physicians' quarters was due to be completed by the end of 1961.

India 145 Public Health Programme, Bihar (Jan. 1958-end of 1963) R UNICEF

India 146 Public Health Programme, Uttar Pradesh (Jan. 1960-end of 1963) R UNICEF

India 147 Public Health Programme, Kerala (June 1960-end of 1963) R UNICEF

India 148 Public Health Programme, Mysore (Jan. 1958-end of 1963) TA UNICEF

India 149 Public Health Programme, Madhya Pradesh (May 1958-end of 1963) R UNICEF

India 150 Public Health Programme, Maharashtra (Jan. 1958-end of 1961) TA UNICEF

India 151 Public Health Programme, Andhra Pradesh (Jan. 1958-end of 1963) R UNICEF

India 152 Public Health Programme, Assam (Jan. 1958-end of 1961) R UNICEF

To expand health services in community development areas and train personnel; and to organize other related rural health services, for integration into the community development programme under the second five-year plan.

India 153 Malaria Eradication (Aug. 1958-end of 1968) MESA (ICA)

To eradicate malaria from the whole country.

India 158 Teaching of Psychiatry in Medical Colleges (Dec. 1959-1960) R

A professor of psychiatry was provided by WHO from December 1959 to March 1960; he studied the undergraduate teaching of psychological medicine in medical colleges at Agra, Madras, Bangalore, Hyderabad, Bombay, Poona and Nagpur and advised on improvements in the syllabuses and in teaching methods. A twelve-month fellowship in psychiatry was awarded in December 1960.


To enable public health officials in charge of teaching and training sanitation personnel to analyse development in rural and urban sanitation work and to determine the basic needs in auxiliary personnel for carrying it out. The conference was attended by delegates from fourteen states of India, the Central Directorate-General of Health Services, various Indian institutions and bilateral agencies.

The conference made a number of recommendations on the training and employment of auxiliary sanitation personnel, particularly health inspectors, and suggested the enactment of sanitary legislation in each state, based on the Model Public Health Act, 1955.

WHO provided a consultant for three months to assist with the arrangements for the conference.
India 160 Radiation Protection Training Courses, Bombay

WHO provided in 1960 fellowships for twenty-four trainees to attend a national course on protection against health hazards associated with X-ray installations in hospitals and other medical institutions. For a similar course in 1961 WHO provided a consultant for five weeks and 40 per cent. of the cost of attendance of twenty-four trainees.


To survey the technical, organizational and administrative aspects of current and future works and plans for the solution of the water supply problem, and related sewerage and drainage problems of the Calcutta metropolitan area.

India 173 Production of Diphtheria, Pertussis and Tetanus Vaccines (Jan. - March 1961) R UNICEF

To set up at the Central Research Institute, Kasauli, a unit for the production of diphtheria, pertussis and tetanus vaccines. WHO provided a consultant for six weeks to demonstrate methods of vaccine production and draw up a list of required supplies and equipment. His report has been sent to the Government.

Three fellowships were awarded, one of them to a medical officer of the Institute, to enable him to spend three and a half months at a vaccine-producing institute.

India 175 Public Health Programme, Gujarat
(July 1961 - end of 1963) TA UNICEF

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.

India 176 Central Public Health Engineering Research Institute, Nagpur (Feb. 1961 - end of 1964) R United Nations Special Fund

To make the Central Public Health Engineering Research Institute, Nagpur, an important centre for research on environmental sanitation problems, to co-ordinate research programmes and to train research workers.

Indonesia 9 Leprosy Control
(July - Sept. 1955; Sept. 1956 - end of 1963) R UNICEF

To plan and carry out, within the framework of the general health services, a leprosy control programme in all endemic areas of Indonesia.

Indonesia 29 Strengthening of Health Services (Epidemiology)
(Dec. 1958 - end of 1963) TA

To set up an epidemiological unit in the Ministry of Health which will determine the prevailing disease pattern and plan control measures; to advise all branches of the medical services on the use of epidemiological methods.

Indonesia 32 Malaria Eradication
(May 1955 - end of 1969) MESA TA (ICA)

To eradicate malaria throughout the country in progressive stages.

Indonesia 34 Medan Medical School
(Sept. 1956 - Nov. 1960) R

The aim was to raise the standard of medical education and to improve the facilities, especially in pre-clinical subjects, at the Medan Medical School. WHO provided a professor of anatomy, a professor of physiology, and supplies and equipment.

In the anatomy department a satisfactory academic standard of teaching was reached. Histological and photographic laboratories were set up, other new laboratories were brought into use, technical personnel and student assistants were trained and some minor research was started.

In the physiology department separate courses for junior and senior students were organized and a system of regular tests was introduced. A physiological experimental laboratory was set up with equipment supplied by WHO, the laboratory course was revised and guide notes and a manual were prepared.

Suggestions were submitted to the faculty on the admission of students who had completed part of their studies in other universities, principles of selection and screening of candidates for admission, the teaching of pre-clinical subjects, the conducting of examinations, and the organization of the physiology department.

Many difficulties were experienced during the project, the main one being shortage of staff. Suitable counterparts who could take over from the visiting professors were not provided. At one time there were no senior pre-medical teachers in the Faculty, and the visiting professors had to recommend reductions in the number of students admitted.

Indonesia 41 Nursing Advisory Services
(Oct. 1957 - July 1959; Nov. 1960 - end of 1963) TA

To strengthen, expand and co-ordinate programmes for training of all categories of nursing and midwifery staff and to set up a division of nursing.

Indonesia 48 Fellowships R: Dental health (twelve months), production of freeze-dried smallpox vaccine (two months), public health engineering (twelve months), trachoma control (two for one month), vaccine manufacture (three months).

Indonesia 50 Tuberculosis Control
(July 1961 - end of 1965) R UNICEF

To set up in Jogjakarta a tuberculosis epidemiological centre and a model community case-finding and treatment programme that will also serve for training personnel; later, to develop a similar tuberculosis control programme in a rural area in another province.

Indonesia 55 Strengthening of Health Services
(Sept. 1959 - 1964) TA

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.
Maldive Islands 4 Fellowships TA: Basic nursing (two years).

Maldive Islands 5 Public Health Administration (Oct. 1959 - ) R

To study the health situation and to train health assistants for the future health service.

Nepal 1 Malaria Eradication (June 1954 - end of 1970) R MESA (ICA)

To eradicate malaria throughout the country in progressive stages, starting with the central zone.

Nepal 2 Nursing Education (Nov. 1954 - 1964) TA

See page 81.

Nepal 3 Training of Health Assistants, Kathmandu (June 1955 - 1964) TA

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.

Nepal 4 Central Health Directorate (Aug. 1957 - ) TA

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.

Thailand 2 Yaws Control (May 1950 - end of 1963) TA UNICEF

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.

Thailand 21 Nursing Advisory Services (April 1954 - 1964) TA

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.


To train personnel for leprosy control and to extend the control programme to all endemic areas of Thailand. A pilot project has been organized in Khon Kaen Province for demonstrating modern methods of control, particularly case-finding, domiciliary treatment and surveillance of contacts.

Thailand 37 Vital and Health Statistics (1961 - ) R

To develop the health statistics section in the Division of Vital Statistics of the Department of Health and to train personnel in modern statistical techniques.


To strengthen the School of Public Health, Bangkok, by advice on various aspects of public health and by the teaching of certain subjects.

Thailand 42 National Tuberculosis Programme: Pilot Project (Oct. 1958 - end of 1968) TA UNICEF

To set up a tuberculosis epidemiological centre and to carry out a community case-finding and treatment programme in a well-delineated and congested area of Bangkok; later to develop a tuberculosis programme outside Bangkok, the first stage of which will be a pilot prevalence survey in one province, and to train personnel for the programme.

Thailand 43 Trachoma Control (July - Aug. 1959; April 1961 - June 1963) R UNICEF

To determine the nature of and seasonal variation in bacterial infections of the conjunctiva and their relation to the incidence and severity of trachoma and to ascertain the minimum course of antibiotic treatment effective against the type of trachoma found in Thailand; to plan a control programme for the areas where trachoma is endemic; to train personnel in control measures; to introduce a health education programme, and to evolve economically feasible procedures for gradually expanding control work in schools and among family contacts.

Thailand 44 Hospital Statistics (Nov. 1957 - end of 1962) TA

To improve the collection of hospital statistics and to develop training programmes for medical records officers and statistical clerks.

Thailand 46 Fellowships R: Anatomy (twelve months), electrophysiology (twelve months), epidemiology (twelve months), trachoma control (three months), X-ray techniques (two for two years).

Thailand 53 Training Course on Trachoma, Bangkok and Korat (2-20 Oct. 1961) R

In order to train staff to implement the trachoma control pilot project assisted by UNICEF and WHO (Thailand 43) a three-week course was given at the Department of Ophthalmology, Siriraj Hospital, Bangkok, and the Provincial Health Centre, Korat. The course covered public health aspects of trachoma and associated infections, clinical and laboratory diagnosis, epidemiology and control measures, and consisted of lectures and practical training, including field demonstrations. WHO provided a consultant for four weeks.

Two ophthalmologists from Indonesia were awarded fellowships to attend the course (see Indonesia 48).


A consultant professor of tropical medicine was provided by WHO for two and a half months in 1959 to advise on the organization of a post-graduate school of tropical medicine and endemic diseases in the University of Medical Sciences, Bangkok, and to help prepare a curriculum. His work was described in the Annual Report for 1959.

In 1961 the same professor returned to make an assessment and to advise on further development. He found that the school was well established. Building programmes for the
school and for the hospital were being implemented, teaching staff were being trained, additions were being made to the teaching aids and laboratory equipment, and the syllabus was being improved.

Assistance to the school is expected to continue until 1964.

Thailand 61  Bilharziasis Survey
(March - April 1960; Oct. 1960) R

The WHO consultant who made a bilharziasis survey in March - April 1960 carried out a second survey in October 1960 at the end of the rainy season. According to his findings, bilharziasis is not a public health problem in Thailand, but in view of the irrigation schemes in progress and planned, a watch has been kept on the situation.

A similar survey has been made in the Mekong River Basin in Laos (see WPRO 80).

Thailand 62  Departments of Preventive and Social Medicine,
University of Medical Sciences, Bangkok
(Sept. 1960 - end of 1964) R

To develop the Departments of Preventive and Social Medicine in the three medical faculties of the University of Medical Sciences (at Chulalongkorn and Siriraj (Bangkok) and at Chiangmai).
EUROPE


The seventh of a series of seminars to bring together leading workers in environmental sanitation for exchange of information. Papers were presented on research in various aspects of sanitary engineering, on sewage disposal and treatment methods for small communities, and on sanitary engineering aspects of nuclear energy. There were twenty-eight participants—from Belgium, Bulgaria, Czechoslovakia, Denmark, Federal Republic of Germany, Finland, France, Greece, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland, Union of Soviet Socialist Republics, United Kingdom and Yugoslavia—and observers from the Economic Commission for Europe, the International Atomic Energy Agency, the European Federation for the Protection of Water, the International Water Supply Association and the United States International Co-operation Administration.

WHO provided costs of attendance of twenty-two participants, and ten lecturers.

EURO 22.5 Conference on the Training of the Doctor for his Work in the Community, Edinburgh (21-29 Sept. 1961) R

A conference of twenty-eight representatives of various disciplines of medicine and related subjects. WHO provided costs of attendance of the participants (from Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, Federal Republic of Germany, Finland, France, Greece, Ireland, Italy, Netherlands, Poland, Portugal, Spain, Sweden, Switzerland, Turkey, Union of Soviet Socialist Republics, United Kingdom and Yugoslavia), a temporary adviser and seven lecturers.

The work of the conference was discussed at a meeting of the United Kingdom Committee for WHO, attended by several hundred persons, and at a meeting, on 26 November 1961, organized by the College of General Practitioners of the United Kingdom.

EURO 34.3 Training Course on the Rehabilitation of Physically Handicapped Adults, London (19 Sept.-8 Oct. 1960) R (UN ILO)

A course, in English, similar to that given in French at Nancy in 1957, on the organization of up-to-date rehabilitation services, the use of modern team-work techniques and the treatment of significant cases of disability in some rehabilitation centres. Twenty-six physicians, physiotherapists, nurses, prosthetic technicians, occupational therapists, disablement resettlement officers and social workers attended, from Austria, Belgium, Czechoslovakia, Denmark, Federal Republic of Germany, Ireland, Italy, Portugal, Spain, Switzerland, Turkey, Union of Soviet Socialist Republics and United Kingdom. The course was organized in collaboration with ILO, which sent a representative and sponsored four trainees. The United Nations, the European Coal and Steel Community, the International Society for the Rehabilitation of the Disabled, the World Confederation for Physical Therapy and the World Veterans Federation also sponsored lecturers or trainees.

WHO provided eighteen fellowships for trainees, and a consultant.


To assist a group of European investigators in evolving a research protocol for a co-ordinated study of pregnancy wastage, WHO provided temporary advisers for various meetings of the group, and of its committees, in 1959, 1960 and 1961. The decision was taken to limit future work to a study of some aspects of low birth weight, with a view to improving methods of investigation and throwing more light on the problem of foetal growth and development. This study will be financed from sources outside WHO.

EURO 52 Anaesthesiology Training Courses, Copenhagen (1950-1964) TA

To stimulate the development and improve the standards of national anaesthesiology services by providing training for medical personnel. See page 85.

EURO 56 Tuberculosis Training Courses, Istanbul (1953-1960) TA

Two training courses, consisting of lectures, practical demonstrations and discussions, have been held annually at the International Tuberculosis Training and Demonstration Centre, Istanbul, from 1954 to 1960, with the object of providing physicians and nurses with post-graduate training in the public health aspects of tuberculosis. WHO has provided lecturers and fellowships for physicians and nurses from countries, in Europe and other regions, eligible for Technical Assistance.

The last two courses of the series were held from 26 September to 14 October 1960. WHO provided three lecturers and fellowships to seventeen trainees from Cameroon, Central African Republic, Chad, Congo (Brazzaville), Dahomey, France (Algeria), Lebanon, Morocco, Portugal (Angola), Syria, Togo and Yugoslavia.

EURO 61.1 Rural Public Health Training Course, Soissons (3-28 Oct. 1960) R

The fourth course of a series given at the Rural Public Health Training Centre, Soissons, organized in collaboration with the National School of Public Health, Paris. It covered various aspects of rural health problems and included lectures, discussion groups, visits and demonstrations. There were eleven trainees—public health officers with at least two years' experience in public health administration, from Bulgaria, Czechoslovakia, Finland, Greece, Italy, Poland, Spain, Switzerland, Turkey, Union of Soviet Socialist Republics, and Yugoslavia.

WHO provided fellowships for the trainees and two lecturers, and three WHO staff members helped with the teaching. Two-month fellowships in care of mentally retarded children were awarded to two staff members of the Centre.
EURO 61.2 Rural Public Health Training Course, Uusimaa and Helsinki (4-30 Sept. 1961) R

The course covered the main public health problems in rural areas and included lectures, group discussions, visits, demonstrations and an evaluation session. There were fifteen trainees, from Czechoslovakia, Denmark, Federal Republic of Germany, Finland, Iceland, Ireland, Netherlands, Norway, Poland, Sweden, Turkey and Yugoslavia. The Government of Finland provided lecturers. WHO provided fellowships for twelve trainees and three temporary advisers; five WHO staff members helped with the teaching.

EURO 77.1 Post-basic Nursing Educational Institutions (1954 - 1969) R

To assist with the development of advanced nursing education programmes in the Region by preparing nurses, through study abroad, for administrative and teaching posts in post-basic schools of nursing.

EURO 97.3 Training Course on Poliomyelitis, Prague (20 May - 24 June 1961) R

A course, organized in collaboration with the Institute of Epidemiology and Microbiology, Prague, on modern methods of poliomyelitis control, to enable the trainees to advise health authorities on the planning and execution of control programmes. It included field visits to study the organization of the vaccination campaign being carried out in Czechoslovakia.

WHO provided fellowships for the eighteen trainees—from Austria, Brazil, Bulgaria, Chile, Cuba, Federal Republic of Germany, Greece, Iran, Italy, Japan, Mexico, Poland, Portugal, Romania, Spain, Switzerland, United Arab Republic and Yugoslavia—and five lecturers.

EURO 100.10 Course on Radiation Medicine for Teachers in Medical Schools, London (31 Aug. - 27 Sept. 1960) R

Nine senior members of the teaching staff of undergraduate medical schools in Austria, Czechoslovakia, Denmark, Federal Republic of Germany, Netherlands, Norway, Sweden, Switzerland and Yugoslavia attended the course given at the Department of Medical Physics of the Middlesex Hospital Medical School. Subjects included radiation physics and chemistry; use of radioactive isotopes for research in physiology, biochemistry and medicine, and for diagnosis and therapy; genetic effects of ionizing radiation; effects of ionizing radiations on animal and human tissues; disposal of waste products in laboratories and hospitals; national disasters involving contamination of the environment.

WHO provided fellowships for the trainees.

EURO 100.11 Training Course on Radiation Protection, Wantage, Oxford (10 - 28 July 1961) R

A course in radiation protection, organized for WHO by the United Kingdom Atomic Energy Research Establishment, which engaged lecturers specially for the purpose.

WHO provided thirteen fellowships to public health workers from Belgium, Czechoslovakia, Denmark, Finland, Ireland, Italy, Norway, Poland, Romania, Sweden, Switzerland and Yugoslavia, and a lecturer.

EURO 103.2 Seminar on Child Guidance, Brussels (29 Aug.-9 Sept. 1960) R

A seminar to discuss the utility of child guidance centres, their aims, the types of patients and families making use of their services, and the results of their work, including the long-term results shown by the follow-up of patients.

WHO provided two consultants, eight lecturers, and costs of attendance of the forty-four participants—from Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, Federal Republic of Germany, Finland, France, Greece, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland, Union of Soviet Socialist Republics, United Kingdom and Yugoslavia.

EURO 109 Neo-natal Problems R

WHO provided two lecturers for the study meeting on neo-natal problems organized by the École de Pédiculitie in Paris from 16 to 19 October 1960.

EURO 110 European Schools and Training Centres of Public Health (Jan. 1956 - ) R

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.

EURO 114.2 Symposium on the Epidemiological Aspects of Air Pollution, Copenhagen (13-16 Dec. 1960) R

At the symposium for the exchange of scientific information on the epidemiological aspects of air pollution in Europe, the subjects discussed included the nature and extent of air pollution, its sampling and measurement for epidemiological correlation, recent epidemiological studies on the effects of air pollution on public health, and diagnostic and statistical criteria to be applied in epidemiological studies. The symposium recommended the international exchange of workers on air pollution, improved arrangements for exchange of information, and the use of standard techniques for epidemiological studies and common criteria for the diagnosis of respiratory diseases.

WHO provided a consultant, four temporary advisers, and costs of attendance of the thirteen participants—from Belgium, Czechoslovakia, Denmark, Federal Republic of Germany, France, Italy, Netherlands, Norway, Poland, Sweden, Switzerland, United Kingdom and Yugoslavia.

EURO 115 Training Institutes for Specialized Sanitation Personnel (1956 - 1966) R

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.

EURO 127.5 Training Course on Laboratory Diagnosis of Virus Diseases, Prague (4 Sept.-1 Oct. 1960) R

A course to train junior laboratory workers in laboratory techniques used in diagnosis of the more common virus diseases and to give them some instruction on the investigation of virus diseases in general. The programme included lectures and practical laboratory work in Prague and other parts of Czechoslovakia.
WHO provided three lecturers and fellowships for the eleven trainees—from Bulgaria, Czechoslovakia, Poland, Union of Soviet Socialist Republics, and Yugoslavia.

EURO 128.3 Public Health Laboratories (1959 - 1965) R

To help to develop public health laboratories in the Region and promote international collaboration among them.

EURO 128.4 Symposium on Laboratory and Epidemiological Studies of Streptococcal Infections in Central Europe, Prague (6-10 Dec. 1960) R

A symposium to review present practice in the typing of streptococci, to assist laboratories in raising their standard of work in this field, and to promote epidemiological studies of streptococcal infections. It consisted of discussions and practical laboratory work.

WHO provided three discussion leaders and costs of attendance of the six participants—from France, Italy, Poland, Romania, Switzerland and Yugoslavia. There were three observers—two from the International Children’s Centre, Paris, and one from the European League against Rheumatism.

EURO 138.1 and 138.2 Courses in Hospital and Medical Services Administration (1959 - ) R

See page 86.

EURO 140 Training in Health Education (1958 - 1960) R

Under this project WHO has provided the following:
In 1958, a consultant to assist various projects in the Region; a short-term fellowship to a health educator from Italy for training in the United Kingdom and cost of attendance of participants from Greece and Turkey in the seminar on health education sponsored by WHO in Teheran.

In 1959, a lecturer to review and plan health education programmes at the Institute of Education, London; two twelve-month fellowships to candidates from France and Greece to take a diploma course at the Institute; and five short-term fellowships to enable trainees from Sweden and the United Kingdom attending the same course to take part in a study tour.

In 1960, cost of attendance of fourteen participants in the European Seminar on Research in Health Education, Frascati, Italy, sponsored by the International Union for Health Education and WHO; and eight short-term fellowships to candidates from Finland, France and the United Kingdom.

EURO 144 Training in Child Psychotherapy (1957 - 1960) R

A project to strengthen services for child psychotherapy, under which WHO provided consultant services and ten fellowships to Denmark, Finland, Greece, Italy, Portugal, Spain and Sweden. In Finland and Greece the work is being continued under country projects.

EURO 154 Tuberculosis Control (Nov. 1957 - 1962) R

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.

EURO 158.3 Technical Conference on the Control of Communicable Eye Diseases, Istanbul (13-18 Nov. 1961) TA

A conference to exchange information on problems connected with communicable eye diseases. It reviewed the experience gained in trachoma control projects in the Region and discussed future possibilities in the light of recent advances in laboratory research, taking into account the recommendations in the third report of the WHO Expert Committee on Trachoma. WHO provided five temporary advisers and costs of attendance of the twelve participants—from France (Algeria), Greece, Morocco, Poland, Portugal, Spain, Turkey and Yugoslavia. The representatives in Turkey of UNICEF and the Technical Assistance Board also attended.

EURO 159.1 Joint ECE/WHO Study on Water Pollution (1957 - 1960) R

WHO provided a temporary adviser to prepare a paper for a meeting convened by the Economic Commission for Europe in 1958 and, in 1960, a consultant for one month to collect and analyse basic information for the joint conference on water pollution in Europe (see EURO 159.2 below). He visited Bulgaria, Czechoslovakia, Poland and Romania, and prepared for the conference a comprehensive report on water pollution and its control in these four countries and in the Union of Soviet Socialist Republics.

EURO 159.2 ECE/FAO/IAEA/WHO Conference on Water Pollution Problems in Europe, Geneva (22 Feb. - 3 March 1961) R

A conference to review the most urgent water pollution problems in Europe and advise the sponsoring agencies on the assistance they might give in solving them. Leading workers in the health, economic, technical and industrial fields from twenty-three European countries, Israel and the United States of America, and representatives of the Organization for European Economic Co-operation and of the International Water Supply Association, took part.

WHO provided honoraria to thirteen persons who prepared working papers for the conference.

EURO 169 Symposium on Maternal and Child Health Problems in Europe, Berne (26 June - 5 July 1961) R

A symposium to review the needs and problems in maternal and child health work and the knowledge acquired during the last ten years. Discussions also covered the prevention of accidents in childhood, dental health services for children, maternal and child health and health education, immunization programmes, the work of maternal and child health and child health institutes, statistics, recording and evaluation.

WHO provided five temporary advisers and costs of attendance of the seventeen participants from Austria, Bulgaria, Czechoslovakia, Federal Republic of Germany, France, Greece,
Ireland, Poland, Portugal, Romania, Spain, Sweden, Switzerland, Turkey, Union of Soviet Socialist Republics, United Kingdom and Yugoslavia.

EURO 179.3 Study of Cardiovascular Diseases (1958 - ) R

A study of registration, coding and reporting of deaths from cardiovascular diseases, including prevalence surveys of ischaemic heart diseases in some European countries showing contrasting mortality rates.

EURO 183 Participation in Seminars and Conferences of the United Nations and Other Agencies (1959 - ) R

EURO 185 Follow-up of Inter-country Activities on a National Basis (1958 - ) R

To assist governments in developing national activities arising out of the inter-country programmes of the European Region.

EURO 187 European Seminar on the Application of Epidemiology in Health Administration, Opatija (16-23 Sept. 1960) R

A seminar to promote interest in the use of epidemiological methods in public health administration and to consider how health officers may use these methods in assessing the need for action, planning measures and evaluating results. The advantages and disadvantages of different ways of obtaining epidemiological information were discussed.

WHO provided a consultant, seven lecturers and costs of attendance of the twenty-two participants—from Austria, Belgium, Czechoslovakia, Denmark, Federal Republic of Germany, Finland, France, Ireland, Italy, Morocco, Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland, Turkey, Union of Soviet Socialist Republics, United Kingdom and Yugoslavia—all public health administrators with responsibility for the control of disease and particular interest in the conduct of epidemiological investigations.

EURO 188 Seminar on Nursing Education for Child Care, Vienna (14-23 Nov. 1960) R

A seminar to discuss new trends in the nursing care of healthy and sick children and education programmes to prepare nurses for nursing children at home, in hospital and through the general health services.

WHO provided three temporary advisers, four lecturers, and costs of attendance of the thirty-six participants—nurses, paediatricians, child psychologists, psychiatrists and an educator—from Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, Federal Republic of Germany, Finland, France, Greece, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom and Yugoslavia. The programme included plenary and group discussions and visits to paediatric hospitals and agencies for child care.

EURO 192 Epidemiology of Mental Disorders (1960 - ) R

To study and provide for exchange of views on systems of statistical reporting of psychiatric morbidity in certain European countries and to examine the requirements for making psychiatric statistics internationally comparable.


EURO 196 Joint ILO/WHO Seminar on the Problems of Health Services in Small Factories, Dun Laoghaire, Ireland (8-16 May 1961) R (ILO)

A seminar to collect information on current methods of organizing and administering health services in small industrial concerns and to discuss how such services may best be provided. The seminar consisted of lectures on different types of occupational health services for small factories in Europe, discussions and visits to occupational health services of local industries. The twenty-eight participants—from Austria, Belgium, Bulgaria, Denmark, Federal Republic of Germany, Finland, France, Greece, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Spain, Switzerland, Turkey, Union of Soviet Socialist Republics, United Kingdom and Yugoslavia—included employers' and workers' representatives.

WHO shared with ILO the cost of providing a consultant, seven temporary advisers, and the attendance of the participants.


See page 86.

EURO 201 Technical Conference on the Role of the Nurse in Mental Health Practice, Copenhagen (15-24 Nov. 1961) R

A conference to discuss trends in the nursing care of psychiatric patients and the role of psychiatric nurses and nurses in general in mental health promotion. In preparation for the conference a pilot study was made in two European countries to evolve techniques for studying the daily work of the psychiatric nurse and her attitude towards her patients; twenty-four countries in the Region were requested to complete a questionnaire on national nursing resources and education; and a questionnaire on psychiatric nursing practices and education programmes was sent to nineteen hospitals.

The participants included psychiatric and public health nurses, psychiatrists, a social anthropologist, a psychologist and a statistician. The discussions covered developments and trends in psychiatric practice in Europe; the role of the nurse
in mental health practice, in and outside the hospital, socio-cultural attitudes affecting it, and specific techniques for studying it; and the findings of psychiatric nursing studies and their relevance to psychiatric nursing education and administration. WHO provided a consultant for four months, four temporary advisers, and costs of attendance of seven participants from Belgium, Denmark, France, Sweden, Switzerland, the Union of Soviet Socialist Republics and the United Kingdom.

EURO 203 European Technical Meeting on the Quality Control of Pharmaceutical Preparations, Warsaw (29 May - 2 June 1961) R

A meeting to discuss the problems arising from the need for standardizing the quality control of pharmaceutical preparations in European countries.

WHO provided a consultant, nine lecturers, and costs of attendance of the fifteen participants—from Austria, Belgium, Czechoslovakia, Denmark, Federal Republic of Germany, France, Italy, Netherlands, Poland, Sweden, Switzerland, Turkey, Union of Soviet Socialist Republics, United Kingdom and Yugoslavia.

EURO 205.1 Vaccinations: International Children's Centre Training Course, Paris (6-26 March 1961) R: Fellowships for attendance of physicians from Greece, Italy, Spain and Turkey.


EURO 205.4 Mother and Child Care: International Children's Centre Training Course, Paris (9 Oct. - 17 Dec. 1961) R: Fellowships for attendance of administrators from Greece, Poland, Turkey and Yugoslavia.

EURO 205.5 Medical and Social Problems of Children suffering from Chronic Diseases: International Children's Centre Training Course, Nancy (6-26 March 1961) R: Fellowships for attendance of physicians from Austria, Bulgaria, Czechoslovakia and Romania.

EURO 207 Undergraduate Medical Teaching (1961 - ) R

To stimulate improvements in undergraduate medical teaching, and particularly the introduction of preventive and social medicine at all stages and in all sections of the curriculum.

EURO 208 European Symposium on Planning and Administration of National Environmental Sanitation Programmes, Dublin (9-14 Oct. 1961) R

A symposium to discuss the organization and administration of environmental sanitation services at central governmental level, to consider some typical programmes in the Region, and to define the role of sanitary engineers in the government departments concerned. WHO provided a consultant, eleven temporary advisers, and costs of attendance of the twenty participants—from Austria, Bulgaria, Czechoslovakia, Denmark, Federal Republic of Germany, Finland, France, Greece, Italy, Ireland, Netherlands, Norway, Poland, Spain, Sweden, Switzerland, Turkey, United Kingdom and Yugoslavia. Observers attended from the European Coal and Steel Community and the Organization for Economic Co-operation and Development. The participants—public health administrators, engineers and administrative officers with experience of environmental sanitation—reported on the planning and organization of environmental sanitation services in their countries, on water supply and waste disposal, air pollution control, housing and town planning, sanitary inspection services, and other subjects.

EURO 210 First Training Course on Medical Rehabilitation, Denmark and the United Kingdom (Oct. 1960 - June 1961) R TA (UN ILO)

A course, organized in collaboration with the Danish National Health Service and the Medical Faculty of the University of Copenhagen, to give physicians specialized training in rehabilitation. The syllabus included theoretical and practical instruction in anatomy, physiology of the locomotor nervous system, blood circulation, traumatology and psychology in relation to disability. The last month of the course, which took place in the United Kingdom, dealt especially with vocational and industrial rehabilitation.

WHO provided four lecturers and fellowships to the nine trainees—from Greece, Iraq, Lebanon, Spain, Turkey, United Arab Republic and Yugoslavia. The United Nations and ILO each provided a lecturer.

A second training course, similar to the above, began in October 1961.

EURO 235 Course on Radiation Medicine for Teachers in Medical Schools, Paris (13 Nov.- 1 Dec. 1961) R

A course, given in French at the Institut national d'Hygiène, Paris, similar to the one described under EURO 100.10 above.

WHO provided fellowships for the nine trainees—from Bulgaria, France, Poland, Portugal, Spain and Turkey.

EURO 237 Community Water Supply Advisory Team (1960 - 1964) Special Account for Community Water Supply

To assist governments in planning, organizing and financing the construction and extension of community water supply systems.

Albania 1 Fellowships R: Sera and vaccine production (twelve months).

Albania 4 Communicable Disease Control (Dec. 1960 - 1963) TA

To improve laboratory diagnostic methods, study problems of communicable disease control services, and train physicians in epidemiology and microbiology.

Austria 4.10 Sera and Vaccine Production (1954 - 1960) R UNICEF

In 1954 WHO provided a consultant to advise on the production of immunological substances and the use of the material supplied by UNICEF, and subsequently awarded ten fellowships of from three weeks' to seven months' duration. Production of sera and vaccine in Austria is now sufficient to meet the needs of the country.
Austria 11 Fellowships R: Air pollution (one month), analysis of mineral water and peat (two months), cancer registration (one month), chemistry and pharmacy analyses (two and a half months), electronic microscopy (two months), food hygiene (three for one month), laboratory methods (one for one month, one for six weeks), metabolism of cancer cells (two months), mycology (one month), neuro-surgery (one month), occupational health (two for six weeks), organization of serological and bacteriological institutes (one month), public health administration (one month), radiation protection (one month), radiology protection (two for three months), surgery (one month), vaccine production and control (one month), vascular surgery (one month).

Austria 12 Care of Premature Infants (Oct 1957 - Dec. 1960) R UNICEF

The aim was to strengthen and extend facilities for the care of premature infants. WHO provided two consultants, one in November 1957 and the other in October-November 1960, and five three-month and five one-month fellowships for study in Europe.

Thirteen centres for care of premature infants are now in operation. Three of them serve as training centres. Services have been organized for transport of the infants to the centres and for their follow-up after they leave. Home care has not yet been fully developed. In addition to in-service training, the Government arranged for two refresher courses for doctors and nurses. Adequate facilities now exist in Austria for training the personnel needed for expanding the centres and staff the new ones planned.

Austria 14 Development of Environmental Sanitation Services (1960 - 1963) R

To strengthen environmental sanitation services and train personnel.

Austria 15 Nursing Education and Administration (1961 - 1962) R

To prepare nurses for teaching and administrative posts in a new post-basic school of nursing.

Belgium 9 Fellowships R: Cancerology (one for three months, one for four months), genetics (two weeks), hospital administration (two for four months), organization and administration of nursing services (three months), psychiatry (one for three months, one for six months), public health administration (nine months), radiotherapy (two months).

Bulgaria 7 Fellowships R: Application of radioisotopes in neurology (four months), biophysics (four months), child psychiatry (four months), eletrophone and ballistography (three months), health statistics (three months), histochemistry (four months), immunology (twelve months), polio rehabilitation (three months), public health administration (six months), quarantine services (three months), radiology protection (four months), social psychiatry (four months).

Bulgaria 8 Training Institutes (1959 - end of 1961) R

To assist national institutes in the development of training in public health of medical and related personnel.

Czechoslovakia 8 Fellowships R: Cancerology (twelve months), electro-encephalography (three months), industrial toxicology (three months), mental health (three months), ophthalmology (four months), pharmacology (one for two months, one for three months), rehabilitation (three months), sanitary engineering (three months), toxicology of food additives (three months), virology (five months).

Czechoslovakia 9 Training Institutes (1959 - ) R

To assist national institutes in the development of training in public health of medical and related personnel.

Czechoslovakia 10 Study of Tuberculosis Epidemiology and Control (1960 - 1966) R

To study the epidemiological characteristics of tuberculosis in different population groups, so as to determine which groups should be given priority by tuberculosis control services; to assess the efficacy of various control measures in Czechoslovakia; and to carry out trials for comparing the value of hospital and home treatment in Czechoslovak communities.

Denmark 8 Post-graduate Training in Psychiatry (1953 - 1964) R

To assist a national training course for post-graduate specialization in psychiatry.

Denmark 11 Fellowships R: Cardiovascular surgery (four months), care of the deaf (two months), eye surgery (two months), family planning (two months), health services (two for one month), organization and administration of post-graduate teaching hospitals (two months), psychiatry (two months), public health nursing (three and a half months), radiology (two months), teaching of social medicine and geriatrics (two months), thoracic surgery (two months).

Finland 12 Fellowships R: Application of isotopes in medicine (two months), clinical biochemistry (two and a half months), geriatrics (two months), hospital administration (six weeks), mental health (one for one month, one for two months), physiotherapy of rheumatic patients (four months), psychiatric outpatient services (one for one month, one for five weeks, one for three months), psychiatry (two months), public health administration (one month), radiation protection (one month), sanitary engineering (nine months), sterilization (one month).

Finland 14 Child Psychiatry (1959 - 1962) R

To extend and improve child guidance and child psychiatric services.

France 28 Fellowships R: Alcoholism and mental health (two for two weeks, one for five weeks), cancerology (one month), environmental sanitation (one month), epidemiology of cancer (one month), haematology (one month), hospital construction, administration and organization (two for three weeks, ten for one month, one for five weeks), insecticides (two months), maternal and child health (two for one month), medical education (two for one month), organization of psychiatric services for children (three weeks), pharmacology (one month), port and airport sanitation (one month), public health administration (two for one month), rehabilitation (one for three weeks, one for one month), rural health (two weeks), tuberculosis (one month), tuberculosis statistics (two for two weeks).
Greece 29 Training Institutes (1961 - 1962) R
To assist national institutes in the development of training in public health of medical and related personnel.

Greece 32 Neuro-psychiatric Hospital for Children
(June - Dec. 1960) TA
WHO provided a psychiatric nursing consultant to assist in improving nursing services at the newly constructed neuro-psychiatric hospital for children at Daou Pendeli, near Athens. Owing to technical difficulties it was not possible to open the hospital at the date foreseen and the objective of the project could therefore not be attained. The consultant, however, gave training in the nursing of mentally retarded children to the staff of the hospital and of the Daphne Mental Hospital in Athens.

Ireland 13 Fellowships R: Anaesthesiology (one month), BCG vaccination (five weeks), biochemistry (one month), cancer (one month), diagnostic radiology (one month), health inspection services (three for one month), hospital administration (two for one month), lung function tests (three for one month), mental health (three for one month), metabolic diseases (one month), nursing in industry (one month), peripheral nervous system (one month), phage and other typing methods (one month), psychiatry and psychiatric services (five for one month), public dental services (one month), public health services (two for five weeks), schools for sanitary inspectors (three months), surgery (one for one month, one for three months), TPI test (one month).

Italy 21 Fellowships R: Air pollution (three months), bacteriology (two months), care of premature infants (four and a half months), etiology and epidemiology of gastro-enteritis (four months), health statistics (four months), neurology (three months), nutritional research (one for four months, one for six months), public health administration (nine months), quarantine (one month), sewage treatment (one month), social services for prostitutes (one and a half months), venereal disease control (six weeks).

Italy 23 Nursing Education and Administration (1960 - 1967) R
To train nurses abroad for teaching and administrative posts in the proposed post-basic school of nursing, which is to prepare nurse tutors and administrators for nursing education programmes and services.

The temporary adviser provided by WHO in 1958 to advise on the design and construction of a water treatment installation at the Esch-sur-Sûre barrage again visited the project to assess the progress made.
Malta 3 Fellowships R: Public health administration (nine months), radiation protection (three months).

Morocco 1 Communicable Eye Disease Control
(March 1953 - ) TA UNICEF
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 areas of high endemicity; 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.

Morocco 2 Venereal Disease Control
(Aug. 1954 - end of 1964) TA UNICEF
To reduce the incidence of syphilis, especially among mothers and children.

Morocco 9 Training of Public Health Personnel
(Oct. 1957 - 1964) TA UNICEF
To train various categories of health personnel, especially auxiliary public health personnel, for general public health work, including maternal and child health.

Morocco 12 Environmental Sanitation (1958 - 1965) TA
To develop a national programme of environmental sanitation; to train auxiliary health personnel for environmental sanitation work.

Morocco 15 Fellowships R: Bacteriological control of milk (one month).

Morocco 17 Health Education Services
(1958 - 1960) TA UNICEF
A consultant was provided by WHO for about two months a year in 1958, 1959 and 1960 to assist in developing a health education programme. Health education work has been expanded gradually; the subject has been introduced into the training curricula for various types of health personnel; a central department for health education has been set up; and teams of health educators are assisting health personnel in the field.

Morocco 18 Mental Health Services (1960 - 1961) R
A consultant provided by WHO for two weeks visited psychiatric hospitals and services and made recommendations for their further development. He also advised on the introduction of methods such as ergotherapy and social therapy.

Morocco 19 Nursing Education (Oct. 1959 - 1964) R
To expand and improve nursing education and services by gradually raising the schools of nursing to the level of state diploma schools and founding new schools.

Morocco 20 Malaria Eradication (Training of Public Health Personnel) (1961 - 1963) MESA
To train medical and paramedical personnel of public health services, and especially rural health services, in malaria eradication concepts and techniques, for a pre-eradication programme and later an eradication programme.

Morocco 21 Health Statistical Services (1961 - 1965) R
To develop the national health statistical services.

Morocco 22 Public Health Laboratories (1960 - 1964) R
To develop public health laboratory services, particularly the central public health laboratory in Rabat.

Morocco 23 Medical Education (1960 - 1967) R
To set up a medical school.

Morocco 24 Rehabilitation of the Physically Handicapped (1959 - 1963) TA
To organize a rehabilitation programme for the victims of the outbreak of TOCP poisoning. See page 86.

Netherlands 15 Fellowships R: Drug control (one month), ergonomics (two for six weeks), hospital pharmacy and toxicology (two months), ophthalmology (two months), pollution of surface waters (two for one month), psychiatric nursing administration (twelve months), refuse disposal (one month), salmonellosis (five for two weeks), statistical methods (four months), surgery (four months), veterinary public health (three for three weeks), waterworks (two months).

Norway 10 Fellowships R: Psychiatry (two for five days), public health administration (one for nine months, two for twelve months).

Poland 7 Rehabilitation of Handicapped Children (1959 - 1962) TA UNICEF
To establish a comprehensive and long-term programme for the medical, social, educational and vocational rehabilitation of handicapped children under eighteen.

Poland 12 Maternal and Child Health Services (1957 - 1963) R UNICEF
To increase training facilities for personnel for the expanding maternal and child health services.

Poland 13 Fellowships R: Diploma for tropical hygiene and medicine (five months), environmental sanitation (three months), food bacteriology (three for three weeks), nursing education (twelve months), occupational health (three months), organization of blood transfusion services (two months), paediatrics (three months), pathology of connective tissue (six months), public health administration (nine months), sanitary engineering (nine months), thoracic surgery (two months), tuberculosis (one month), virology (one for three months, one for five months).
Poland 15 Training Institutes (1958 - 1964) R
To assist national institutes in the development of training in public health of medical and related personnel.

Poland 16 Tuberculosis Control (1960 - ) TA UNICEF
To train staff in tuberculosis control; later, to set up a pilot area project for tuberculosis control, so as to reduce the risk of infection, especially among children; to study the epidemiological characteristics of tuberculosis in different population groups and assess the efficacy of various control measures.

Poland 18 Occupational Health Services (1960 - ) TA
To expand and improve the services of the Occupational Health Institute at Lodz.

Poland 20 Child Dental Health (1960 - 1963) R UNICEF
See page 85.

Poland 21 Radiation Protection (1960 - 1962) TA
To train staff for a programme of radiation protection.

Poland 22 Sera and Vaccine Production (Dec. 1960 - Jan. 1961) TA
Two temporary advisers were provided by WHO— one to advise on the problems of isolation and analysis of the endotoxins and Vi antigens of enteric bacilli, and the other to advise on serum and vaccine production, especially serum fractionation.

Poland 23 Environmental Sanitation (1960 - 1962) TA
To develop research and protective measures against air and water pollution.

Portugal 6 Training Institutes (1959 - 1962) R
To assist national institutes in the development of training in public health of medical and related personnel.

Portugal 17 Fellowships R: Biochemistry (two months), biochemistry of nutrition (eight months), blood transfusion services (one for one month, one for six weeks), infectious diseases of central nervous system (five weeks), maternal and child health nursing (two months), nursing education (three months), occupational therapy in psychiatry (three months), organization of nursing schools (one month), respiratory diseases (two for two months), sanitary engineering (two for two months), virology (one for two months, one for eight months).

Portugal 19 Public Health Nursing Education (1961 - 1968) R
To improve and expand public health nursing services and education programmes by preparing nurses, through study abroad, for teaching and administrative posts in public health nursing.

Portugal 23 Child Mental Health (1961 - end of 1963) R
To improve mental health services for children.

Romania 1 Fellowships R: Neurology (eight months), ophthalmology (seven months), otorhinolaryngology (eight months).

Romania 2 Training Institutes (1960 - end of 1961) R
To assist national institutes in the development of training in public health of medical and related personnel.

Romania 3 Malaria Eradication (1959 - end of 1962) MESA
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.

Spain 3 and 23 Rehabilitation of Physically Handicapped Children (1956 - 1962) R TA UNICEF
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.

Spain 8 Venereal Disease Control (1955 - 1963) TA UNICEF
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.

Spain 10 Care of Premature Infants (1955 - 1960) TA UNICEF
The aim was to set up a network of centres for the specialized care of premature infants and to train staff for them. A preliminary survey was made of the maternal and child health programme in Spain in 1954, and in 1955 and 1956 seven physicians and four nurses were awarded fellowships. In 1957, after centres had been set up in Madrid, Bilbao and Valencia with equipment supplied by UNICEF, a consultant visited Spain for three weeks, reviewed the work being carried out and made recommendations on the second phase of the project, including the opening of further centres. He also made a study of the paediatric services and made recommendations on training paediatricians.

In May 1959 a centre, equipped by UNICEF, was opened in Barcelona; further fellowships—to three physicians and two nurses—were awarded in that year and in 1960. When WHO assistance came to an end, three more centres in university hospitals in Madrid, Seville and Granada, all provided with equipment by UNICEF, were due to open shortly. In 1960 the four centres already operating admitted 662 premature infants. The centres in Madrid and Barcelona have provided in-service training to a number of doctors and nurses from other hospitals.

Spain 11 Communicable Eye Disease Control (1955 - ) TA UNICEF
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.
Spain 17. Fellowships R: Air pollution (one month), biological standardization (one month), food hygiene (three months), laboratory methods (three months), malaria control (two for two months), mental health (six months), mycology (two months), psychoanalysis (nine months), public health organization (three for two months).

To set up a post-basic school of nursing and to strengthen nursing education programmes by preparing nurses for administrative and teaching posts in the new school and in the existing basic schools of nursing.

To organize training courses on sanitation at the Engineering School of the University of Madrid.

To train personnel in psychotherapeutic methods for children.

Spain 24. Malaria Eradication (1959 - end of 1962) MESA
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.

To improve and expand the health education services.

Spain 27. Leprosy Control (1960 - end of 1965) TA
To strengthen services for leprosy control.

Sweden 12. Fellowships R: Accident surgery (two for six weeks), examination of subnormal children (two for three weeks), food hygiene and bacteriology (one for four weeks, one for five months), geriatrics (three months), psychiatric rehabilitation (six months), psychiatry (five days), public health administration (six weeks), public health nursing administration (six months), rehabilitation (ten weeks), tropical medicine (five months).

Switzerland 2. Training Institutes (1960 - 1962) R
To assist national institutes in the development of training in public health of medical and related personnel.

Switzerland 15. Fellowships R: Cardiovascular and thoracic surgery (four weeks), food bacteriology (three weeks), infantile nephrology (two weeks), orthopaedic surgery (three months), virology (three months).

Turkey 6. Maternal and Child Health (Sept. 1952 - 1964) TA
To carry out a long-term programme of maternal and child health, aimed at reducing morbidity and mortality rates in mothers, infants and children.

Turkey 11. Leprosy Control (1961 - end of 1965) TA
To intensify a programme for leprosy control.

Turkey 13. Tuberculosis Control (1952 - 1963) TA UNICEF
To continue the mass campaign of tuberculin testing and BCG vaccination of children and young adults; to establish a national tuberculin survey team to carry out prevalence surveys in samples of selected population groups.

To reorganize the School of Public Health in Ankara.

Turkey 23. Malaria Eradication (1956 - 1964) MESA TA UNICEF
To achieve malaria eradication by 1965.

Turkey 29. Nursing Education and Advisory Programme (Oct. 1955 - 1966) TA
To organize the work of the nursing division of the Ministry of Health, strengthen and develop nursing and midwifery education programmes, and train auxiliary personnel to work in institutional and public health nursing services.

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.

Turkey 36. Fellowships R: Dermatology (three months), public health administration (twelve months), tuberculosis control (seven weeks).

United Kingdom 13. Fellowships R: Community care in the mental health field (two months), dental health education (one month), family approach to psychiatry (three months), hospital planning and organization (two for five weeks, one for two months), hospital pharmacy organization (six weeks), housing, health and welfare services (one month), nursing education (two months), ophthalmology (six weeks), paediatrics (one for two months, one for five months), peptic ulcer (six weeks), psychiatric nursing (two months), public health administration (two months), public health nursing (two months), publicity in relation to nursing (one month), surgery (four months).

USSR 1. Fellowships R: Artificial kidney (three for three months), cerebral palsy (two months), clinical psychiatry (three months), grafting (three months), heart surgery (three months), immunology (three months), medical chemistry (six months), neuro-surgery (four months), neuro-virology (two months), orthopaedics (two months), public health administration (one month), radiobiology (two for three months), radiation medicine (three months), rehabilitation (nine months), sanitary engineering (nine months), stomatological health (two months), virology (three months).
Yugoslavia 6  Care of Premature Infants  
(1958 - 1960) TA UNICEF

The aim was to strengthen and extend facilities for the care of premature infants. WHO provided four one-month and three three-month fellowships; UNICEF provided incubators, ward equipment, refrigerators and teaching equipment. Demonstration and training centres were set up in Maribor (Slovenia), Rijeka (Croatia), Sarajevo (Bosnia) and Skopje (Macedonia), in addition to those previously set up in Belgrade, Ljubljana and Zagreb. They were connected with the corresponding medical faculties and the number of doctors, nurses and midwives specialized in the care of premature infants was increased.

Yugoslavia 7  Rehabilitation of Handicapped Children  
(Nov. 1955 - 1963) TA UNICEF

To establish a network of demonstration and training centres for the rehabilitation of handicapped children. Project Yugoslavia 11 has now been merged with this project.

Yugoslavia 11  Rehabilitation  
(1958 - 1960) TA

Seven fellowships, of from three to six months' duration, and some training equipment were provided by WHO under this project, which has now been merged with Yugoslavia 7.

Yugoslavia 12 and 28  Mental Health Services  
(1958 - 1965) R TA

To develop mental health services.

Yugoslavia 16.1  Sera and Vaccine Production  
(1953 - 1963) TA

To reduce the prevalence of certain endemo-epidemic diseases which are still a serious problem in Yugoslavia.

Yugoslavia 16.2  Environmental Sanitation  
(1961 - ) TA

To organize refresher courses at the University of Zagreb for training sanitary engineers.

Yugoslavia 16.5  Communicable Eye Disease Control  
(1954 - ) TA UNICEF

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.

Yugoslavia 16.7  Institutes of Public Health and Hygiene  
(1953 - 1960) TA

For this project, the aim of which was to promote the technical development of institutes of public health and hygiene, WHO provided a consultant for one month in 1958, twenty fellowships (including thirteen short-term fellowships for a study tour) and supplies and equipment. The project has now been merged with Yugoslavia 20.

Yugoslavia 16.9  Maternal and Child Health Services  
(1953 - 1963) TA UNICEF

To raise the standard of maternal and child care.

Yugoslavia 16.11  Health Statistical Services  
(1954 - 1960) TA

For this project, the aim of which was to develop the statistical services, WHO provided a consultant for three weeks in 1955, a temporary adviser to lecture at a national seminar in 1959, sixteen fellowships of from one to ten months' duration, and supplies and equipment. The project has now been merged with Yugoslavia 20.

Yugoslavia 16.12  Occupational Health  
(1954 - end of 1962) TA

To promote occupational health services.

Yugoslavia 20  Public Health Administration  
(1956 - end of 1964) TA

To train various categories of health personnel for the federal and republic institutes of public health. Projects Yugoslavia 16.7, 16.11 and 27 have now been merged with this project.

Yugoslavia 23  Fellowships R: Endocrinology (twelve months), environmental sanitation (two for four months), medical education (two months), mental health (five months), microbiology (two for three weeks), orthodontics (two months), physiology (four months), teaching of public health (three months), virology (one for three months, one for six months).

Yugoslavia 25  Nursing Education  
(1959 - 1964) TA

To improve and expand nursing education programmes and services by preparing nurses for senior posts in nursing education and administration.

Yugoslavia 27  Radiation Protection and Medical Uses of Isotopes  
(1958 - 1960) TA

For this project, which has now been merged with Yugoslavia 20, WHO provided six fellowships of from four to six months' duration.

Yugoslavia 30  Malaria Eradication  
(1959 - 1963) MESA

To eradicate malaria from the areas where it is still endemic; to consolidate the results obtained.
EMRO 5 Higher Institute of Nursing, University of Alexandria (Oct. 1953 - end of 1964) TA UNICEF

To raise the standard of nursing education in the United Arab Republic and other countries of the Region; to meet the needs for teaching and administrative staff for expanding programmes of health services 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 in the Region.

EMRO 7 Arab States Training Centre for Education in Community Development, Sirs-el-Layyan (May 1953 - end of 1963) TA (UNESCO)

To train physicians, nurses, sanitarians, teachers and agricultural and social workers from all Arab States in community development. This is primarily a UNESCO-assisted project, in which WHO provides training in health subjects.

EMRO 15 Nursing Seminar, Lahore (23 Nov.- 3 Dec. 1960) R

See page 92.

EMRO 19 Regional Malaria Eradication Training Centre, Cairo (Jan. 1959 - 1964) MESA

To assist the countries of the Eastern Mediterranean Region to train technical staff and to promote study and research on technical problems encountered in malaria eradication.


To give guidance on the development of health education in the Region.

EMRO 41 Regional Tuberculosis Prevalence Survey Team (Dec. 1958 - June 1961) R UNICEF

The aim of the project was to plan and train personnel for prevalence surveys (including tuberculin testing and X-ray and bacteriological examinations) so as to obtain the epidemiological information needed for planning tuberculosis control programmes; and to integrate survey methods in comprehensive tuberculosis control programmes. WHO provided a team, consisting of a medical officer, a public health nurse, a statistician, an X-ray technician and a laboratory technician, and supplies and equipment.

The team worked in Iraq, Jordan, Libya, Syria and Tunisia. In each country the team planned a country-wide survey, based on random sampling of representative fractions of the population. The surveys were started with a national team, which received training to enable it to continue and complete a much longer programme than the WHO team could take part in. The value of the surveys will depend on the extent to which the countries concerned follow them up with further public health measures against tuberculosis, based on the results obtained.

EMRO 45 Participation in Training Courses and Educational Meetings (April 1959 - ) R

To enable countries of the Region to participate in seminars, conferences and training courses organized in other regions and by other agencies.

EMRO 51 Epidemiological and Statistical Centre (Jan. 1960 - end of 1964) R

To assist with the epidemiological and statistical aspects of tuberculosis and other projects in the Region, and to train health personnel in statistical and epidemiological methods in tuberculosis.


A WHO consultant made a survey of libraries at university medical schools, hospitals and other health institutes and training schools in Iran, Iraq, Kuwait, Pakistan and the United Arab Republic and submitted recommendations on various aspects of organization and staffing.

EMRO 56 Community Water Supply (Oct. 1961 - 1963) Special Account for Community Water Supply

To help governments in developing the organization and management of community water supply programmes and provide advice on the technical, legal, financial and administrative aspects. The project provides for teams of consultants and advice as necessary from the Regional Office.

EMRO 58 Malaria Eradication Evaluation Team (April 1961 - end of 1963) R MESA

To assist the Governments of Iraq, Jordan, Lebanon and Syria to evaluate their malaria eradication programmes and to co-ordinate their activities, particularly with regard to frontier malaria problems.

EMRO 60 Travelling Seminar on Public Health Administration, Union of Soviet Socialist Republics (26 July - 23 Aug. 1961) TA

Twenty-five senior public health administrators visited Moscow and places in the Turkmen, Azerbaidzhan and Ukrainian Soviet Socialist Republics similar to their own countries in basic climatic and epidemiological conditions, to exchange scientific information and study health administration, epidemiology, communicable disease control and the development of social, occupational and industrial health services. The programme included visits to ministries of health, local health authorities, rural health services of collective farms, industrial plants, research institutions, sanatoria, children's institutions, and medical schools.
WHO provided travel and stipends for the participants—from Afghanistan, Ghana, Iran, Iraq, Israel, Kuwait, Lebanon, Nigeria, Pakistan, Saudi Arabia, Somalia, Sudan, Syria, Turkey and the United Arab Republic.


A meeting to establish working relationships among mental health experts in the Region, discuss the concept of mental health, agree on methodology and a system of information, and review the status of institutions in the Region and the programme for the development of mental health within the public health services. Fifteen persons from Cyprus, Iran, Iraq, Lebanon, Pakistan, Sudan, Tunisia and the United Arab Republic took part in the meeting, at which nineteen working papers were contributed by invitation.

WHO provided a short-term consultant and supplies.


A course, held at the Institute of Health and Preventive Medicine, Lahore, to provide engineers with some basic training in chemistry, bacteriology and health principles of waterworks design and operation. It included lectures, discussions and visits to waterworks; the formal training was followed by a nine-day field trip.

WHO provided three short-term consultants and fellowships for ten engineers from Cyprus, Iran, Iraq, Jordan, Sudan, Syria and the United Arab Republic; twenty-eight participants from East and West Pakistan attended at their Government's expense.

Cyprus 3 Fellowships R: Public health administration (two for twelve months).

Cyprus 4 Fellowships TA: Laboratory techniques (two for twelve months), midwifery tutorship (twelve months), nursing tutorship (twelve months), psychiatric nursing (two for twelve months).

Cyprus 10 Leprosy Control (July 1961) TA

A consultant was provided by WHO for ten days to study the leprosy situation in Cyprus with a view to advising on future measures.

Cyprus 12 Veterinary Public Health (1-10 Dec. 1960) R

A WHO consultant made a preliminary survey of hydatid disease in Cyprus and submitted recommendations for further control measures.

Ethiopia 3 Public Health Administration (Oct. 1952 - end of 1963) TA

To improve public health administration generally, and incorporate the several services in a long-term basic health programme.

Ethiopia 4 Venereal Disease Control (June 1952 - ) TA UNICEF

To demonstrate modern methods of venereal disease control and to survey the problem in various parts of the country; to train health personnel; and to implement mass control programmes in areas of high prevalence.

Ethiopia 6 Tuberculosis Control (March 1959 - end of 1963) TA UNICEF

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 of tuberculosis; to extend co-operation with social welfare agencies.

Ethiopia 9 Health Training Centre, Gondar (March 1954 - beyond 1963) TA UNICEF (ICA)

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.

Ethiopia 14 (b) Malaria Eradication Training Centre (June 1959 - beyond 1963) MESA (ICA)

To train auxiliary personnel for the malaria eradication programme.


The aim was to set up, in the Ministry of Public Health, a communicable eye disease control unit which, in co-operation with appropriate institutions, would train national staff for a communicable eye disease control campaign; to make a preliminary survey in schools; and to start control work in some areas. WHO provided an ophthalmologist as senior adviser, and drugs and supplies.

The project began with a preliminary morbidity survey of communicable eye diseases among 6049 children attending twenty-six primary schools in Addis Ababa, Gondar and Harrar. The survey was followed by a pilot control campaign in twenty-three of the schools. The 8866 children covered by the campaign were divided into groups; 3060 with active trachoma were given intermittent treatment—half of them with achromycin and half with terramycin—and 4045 received “blanket” treatment for conjunctivitis. After treatment 6936 (including 2393 treated) of the children were examined. Only 5.4 per cent. still had active trachoma (as against 44.4 per cent. before treatment) and 15.2 per cent. conjunctivitis (as against 39.9 per cent.). In the control groups 33.6 per cent. had active trachoma and 40.4 per cent. conjunctivitis (as against 37.7 and 40.7 per cent. respectively at the beginning of the control period). The type of trachoma in Ethiopia was found to be generally benign. The incidence appeared to vary in different ethnic groups. Response to treatment was good in children of all ages, but especially so in the older age groups. During the campaign...
smears were taken for bacteriological and virological research at the Pasteur Institute, Addis Ababa.

After WHO assistance ended, the control work was continued in the Begemedir district, through health centres and dispensaries. In Eritrea control of communicable eye diseases has been carried out by the Government since 1952, with assistance from UNICEF.

A full evaluation is to be made by the Regional Office early in 1962.

**Ethiopia 18** Fellowships R: Organization and activities of basic health services (two and a half months), surgery (two years — extension of previous award), tuberculosis prevalence survey techniques (two months), undergraduate medicine (two for twelve months, one five-month and five twelve-month extensions of previous awards).

**Ethiopia 19** Fellowships TA: Tropical medicine and hygiene (twelve months), undergraduate medicine (three for twelve months, three twelve-month extensions of previous awards).


To set up a maternal and child health demonstration and training centre and to train auxiliary personnel.

**Ethiopia 26** Mental Health (Feb.- March 1961) R

A consultant and a psychiatric nurse were provided by WHO to assist in reorganizing the Emmanuel Hospital and improving the psychiatric services it provides to the public. A programme was planned for training Ethiopian nurses in mental health nursing and social techniques in relation to nursing.

**Iran 1** Malaria Eradication (1957 - 1967) MESA UNICEF (ICA)

To eradicate malaria progressively throughout the country, by residual spraying and other measures.

**Iran 21** Midwifery Education (Nov. 1954 - Aug. 1961) R UNICEF

The aim was to reopen the midwifery school at the University Women's Hospital and to provide a fifteen-month course in institutional and district midwifery for qualified nurses. WHO provided two midwifery educators and training and demonstration supplies. The first course began in February 1956. By August 1961, when the second of the two midwifery educators left, the seventh course had started and sixty-three nurse midwives had been trained. The course was reduced to twelve months when qualified nurse midwives became available to help with the teaching and supervision. In 1960 an Iranian woman director was appointed, assisted by two midwives trained on WHO fellowships. The courses included clinical practice in the maternity hospital, an ante-natal clinic and the maternal and child health demonstration and training centre formerly assisted by WHO, and training in the nursing of premature infants.

The midwifery school has been satisfactorily established and the programme is being competently administered by qualified Iranian nurses. Greater emphasis, however, needs to be placed on training in domiciliary midwifery and in the preventive aspects of midwifery and child care.

**Iran 26** Public Health Laboratory, Teheran (March 1955 - June 1963) R

To improve the public health laboratory in Teheran, particularly by setting up a food and drug analysis section; to train technical personnel.

**Iran 28** Mental Health (May 1959 - June 1963) R

To reorganize the mental health services at all levels, giving particular attention to in-patient and extra-mural care, training of personnel, research and health protection.

**Iran 35** Fellowships R: Blood transfusion (nine months), midwifery teaching (twelve months), public health administration (two for one week, one for twelve months), radiology (twelve months), statistics (two for six and a half months).

**Iran 36** Fellowships TA: Nursing education (fifteen months), public health administration (twelve months), public health laboratory methods and organization (three months), tuberculosis control (six months), undergraduate nursing (twelve months — extension of previous award).

**Iran 37** Nursing Education, Red Lion and Sun School of Nursing, Rey (June 1956 - June 1963) TA

To reorganize the School of Nursing as an independent educational institution to train nurses for the country's expanding health services.

**Iran 38** Bilharziasis Control (Nov. 1958 - June 1963) TA

To carry out field studies on prevention and control of bilharziasis; to train staff; and to plan a control programme, integrated as far as possible into the programme for economic development.

**Iran 42** Rehabilitation Services, Shiraz (Sept. 1961 - beyond 1963) R

To set up, at the Shiraz Medical Centre, a school of physiotherapy and medical rehabilitation services for physically handicapped persons; and to develop a medical rehabilitation programme, especially for the Teheran area.


A consultant provided by WHO for three months carried out a survey of leprosy in most parts of Iraq, including the leprosy colony in Amara Province, and made recommendations regarding improvement of control services, treatment, rehabilitation and social services for patients.

**Iraq 11** Malaria Eradication (1957 - end of 1964) R MESA UNICEF

To carry out a plan for the eradication of malaria from the whole country, as an extension of the control programme with which WHO has assisted since 1952.
Iraq 15 Bilharziasis Control (Nov. 1955 - beyond 1963) TA

To evolve effective methods for bilharziasis control, particularly for the prevention of infection in newly developed areas, and to conduct pilot engineering studies in various irrigation systems.

Iraq 18 Communicable Eye Disease Control (Jan. 1961 - June 1963) R UNICEF

To evolve suitable methods of controlling communicable eye diseases in Iraq and to carry out a programme, first in a pilot area and later in the rest of the country, based on centres in Mosul, Baghdad and Basra.

Iraq 28 Fellowships R: Public health administration (twelve months), public health administration and industrial hygiene (sixteen months), statistics (three for six and a half months).

Iraq 29 Fellowships TA: Tuberculosis control (twelve months), tuberculosis nursing (twelve months).

Iraq 33 Medical Schools, Baghdad and Mosul (Nov. 1961) R

WHO provided three senior medical educators for a month to study and advise on the improvement of medical education in the medical schools at Baghdad and Mosul. They submitted a report with suggestions concerning the programme of studies, teaching and research work, and staff.

Iraq 35 Training of Health Personnel (Jan. 1960 - end of 1963) TA

To train health personnel, particularly sanitarians, in order to develop the local health services.

Israel 5 Malaria Eradication (1959 - 1963) MESA

To achieve complete eradication of malaria and prevent its reintroduction.


To reorganize the mental health and child psychiatry services.

Israel 26 Hospital Administration (July - Sept. 1961) TA

A consultant provided by WHO for six weeks made an evaluation of hospital services and advised on their further development; he also assisted with a seminar for hospital administrators, directors of nursing services and regional health directors.

Israel 27 Fellowships R: Care of premature babies (three months), endocrinological assay methods (four months), fluoridation in preventive dentistry (three months), public health administration (two for twelve months), public health statistics (twelve months).

Israel 28 Fellowships TA: Management of general and psychiatric hospitals (four months), production of biologicals (six months), public health administration and insecticide poisonings (four months).

Israel 29 Hadassah Medical School, Jerusalem: Preventive and Social Medicine (Jan. 1959 - June 1962) R

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; and to develop research projects in preventive and social medicine. (See also page 91.)

Jordan 5 Tuberculosis Control (Jan. 1956 - Dec. 1960) TA

The aim was 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. WHO provided a medical officer for the duration of the project, a public health nurse for nearly three years, an X-ray technician for nearly four years, a laboratory technician for one month, and an X-ray unit, supplies and equipment.

The centre at Amman was not opened until November 1957 owing to damage in transit to the X-ray equipment. In the first year of operation case-finding, diagnostic, prevention and treatment facilities were established and a training programme for nurses, student nurses, X-ray technicians and medical practitioners was instituted. Later, domiciliary chemotherapy was undertaken on a large scale. A second centre was opened in Jerusalem in 1959. The WHO Regional Tuberculosis Prevalence Survey Team (EMRO 41) worked in Jordan from April to July 1960.

The project has provided the health authorities and physicians with a demonstration of modern preventive, diagnostic and treatment methods, and has enabled an assessment—one of the first in the Region—to be made of the difficulties of organizing domiciliary chemotherapy and of evaluating its clinical and epidemiological results. The setting-up of the tuberculosis centres has stimulated the provision of social assistance to needy patients and their families and has promoted health education work. A National Tuberculosis Association has been set up by the Government.

The project has been hampered by various difficulties, particularly staffing difficulties, and the main developments in the antituberculosis campaign took place in the last year of the project. The control programme has now become a recognized component of the national health effort. Since the Jerusalem centre was opened efforts have been made to extend services to other provinces; improvements have been made in the training of national personnel, some of whom have been awarded WHO fellowships.

Jordan 6 Malaria Eradication (June 1958 - end of 1963) MESA TA UNICEF (ICA)

See page 91.

Jordan 11 Communicable Eye Disease Control (April 1960 - 1964) TA

To plan and implement a campaign against communicable eye diseases, including epidemiological surveys, pilot studies and treatment programmes.

Jordan 18 Fellowships R: Public health administration (two months), radiology (twelve months), statistics (three for six and a half months), urology (twelve months), virology (six months).
Jordann 19 Fellowships TA: Chest surgical nursing (twelve months), mycology (twelve months), nursing administration (three months), paediatric nursing (twelve months), preparation of dried smallpox vaccine (one and a half months), quarantine measures and sea hygiene (three months), statistics (two for six and a half months), trachoma and advanced eye surgery (two months), undergraduate medicine (one for twelve months and one twelve-month extension of previous award), undergraduate pharmacy (one for twelve months and one twelve-month extension of previous award), vaccine production (one month).

Jordann 23 Production of Vaccines
(Nov. 1960 - end of 1963) R UNICEF (ICA)
To develop the production of diphtheria and tetanus vaccines and to train technical personnel.

Jordann 24 Children's Hospital, Amman
(Feb. 1961 - end of 1964) TA UNICEF
To improve nursing services at the Children's Hospital, Amman, and to give paediatric training to nursing and auxiliary personnel; and to co-ordinate the work of the maternal and child health demonstration and training centre, Amman.

Lebanon 4 Rural Health Unit
(Second phase: July 1960 - end of 1963) TA
To organize a model district health service to be used later as a demonstration and training centre for health personnel for other rural units.

Lebanon 7 Malaria Eradication
(1957 - end of 1964) MESA UNICEF
To eradicate malaria from the whole country, by elimination of any residual foci of infection.

Lebanon 21 Hospital Administration (Nov. 1961 - ) R
To study the possibility of training non-medical administrators for district and rural hospitals.

Lebanon 26 Fellowships R: Health education (three months), mental health (five months—extension of previous award), public health administration (one for three months and one for twelve months), public health nursing (three months), vital and health statistics (eight months).

Lebanon 27 Fellowships TA: Bacteriological diagnosis of communicable diseases (twelve months), meat and food inspection (eight months), psychiatric nursing (two years), rural health (three months), sanitary engineering (twelve months).

Lebanon 32 Leprosy Control (Aug.- Sept. 1961) TA
A consultant was provided by WHO for ten days to collect information on leprosy and to visit the leprosarium at Douma, near Damascus, where some Lebanese leprosy patients are treated. He made recommendations for measures to improve the control of the disease.

Lebanon 39 American University of Beirut
(May 1960 - June 1962) R
To strengthen the training of undergraduate and post-graduate students of sanitary engineering at the American University of Beirut.

Lebanon 43 Mental Health (Oct.- Nov. 1961) R
WHO provided a consultant for six weeks to advise on the education of mentally deficient children.

The aim was to establish a demonstration and training centre to train community midwives and demonstrate modern methods of mother and child care, and to organize maternal and child health centres as an integral part of the general health services. WHO provided a paediatrician (senior adviser) for four years, two public health nurses (one for five and one for two years) and a nurse midwife for six years.

A maternal and child health centre was set up in the Suk El Giuma area of Tripoli, providing pre-natal, post-natal, and infant and child care, education of mothers, home visiting, and a domiciliary midwifery service. Three groups of community midwives were given eighteen months' training at the centre for work in rural maternal and child health centres. Eleven completed their training in 1956 and ten in 1959; twelve of them were appointed to centres in Tripolitania and Fezzan and five to hospitals, pending transfer to centres. Fifteen more trainees were recruited in September 1959. Dayas (auxiliary midwives) were also trained at the Tripoli centre. The merging of the centre's training programme with the WHO-assisted nurse training project in Tripoli (Libya 3) was under discussion at the end of 1961.

Not all the objectives of the project could be achieved, because of a number of difficulties. Lack of a clear plan prevented the maternal and child health services from being integrated into the general health services and shortage of funds delayed the opening of provincial maternal and child health centres. Arrangements for practical training and for the supervision of community midwives were not altogether satisfactory. Some staffing difficulties were encountered: a replacement had twice to be found for the WHO senior adviser and not all the counterparts provided for the WHO staff were of the necessary calibre.

Libya 3 Nursing Education, Tripoli
(Sept. 1955 - beyond 1965) R UNICEF
To develop a nursing education programme adapted to local needs and resources in order to provide professional nurses and assistants for the country's expanding health services.

Libya 7 Health Training Institute, Benghazi
(Dec. 1955 - 1963) TA UNICEF
To train health assistants and sanitarians for work in the rural health centres under the supervision of professional staff, and to train laboratory assistants for provincial public health and hospital laboratories; to give in-service training to auxiliary health personnel already employed. The long-range objective of this project is to expand and improve the public health services, particularly in the rural areas. See page 92.
Libya 9 Malaria Eradication
(April 1960 - end of 1964) MESA (ICA)

- To eradicate malaria by application of residual insecticides, antilarval measures, chemotherapy and epidemiological surveillance, and to train personnel.

This follows the pre-eradication survey carried out (under the same project number) from June 1958 to September 1959.

Libya 12 Maternal and Child Health, Cyrenaica
(Sept. 1956 - June 1962) TA UNICEF

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.

Libya 14 Fellowships R: Nursing administration and teaching (twelve months), statistics (two for six and a half months), undergraduate medicine (two for twelve months and one for six months—extensions of previous awards), undergraduate nursing (twelve months).

Libya 15 Fellowships TA: Health aspects of community development (two for nine months and one for twelve months), tuberculosis and chest diseases (twelve months).

Libya 21 Maternal and Child Health Adviser to the Government
(Jan.- Dec. 1960) TA

The medical officer who had been senior adviser of the maternal and child health demonstration and training project in Benghazi (Libya 12) was appointed adviser to the Government for the year 1960, to assist in planning the development of the maternal and child health services as part of the general health services. He also made periodic visits to the two maternal and child health demonstration and training centres in Tripoli and Benghazi and other maternal and child health centres in the provinces to give advice and guidance, and participated in the technical committee of the High Health Council. He made recommendations on the reorganization of the provincial centres and on the training programme for community midwives and drew attention to the need for giving better training to the medical officers working at dispensaries and for providing supervision for the community midwives employed at the maternal and child health centres.

Lack of funds has hampered the development of the chain of provincial maternal and child health centres, and has also delayed the provision of qualified supervisors in the provinces, and of transport for home visiting and the domiciliary midwifery service.

Pakistan 23 Children's Hospital, Karachi
(Oct. 1956 - end of 1961) R UNICEF

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 visitors in paediatrics and child health.

Pakistan 25 School of Physiotherapy, Karachi
(Jan. 1956 - end of 1962) R

To establish a school of physiotherapy based on the former Physiotherapy Department of the Jinnah Hospital; to give a full course in physiotherapy to men and women students.

Pakistan 27 Fellowships R: Clinical pathology (two for twelve months), epidemiology (twelve months), health laboratory organization and methodology (six weeks), hospital administration (twelve months), leprosy control (two for four months), operating theatre techniques (twelve months), public health administration and maternal and child health (one for twelve months and one for eighteen months), public health statistics (twelve months), radiology (twelve months—extension of previous award), statistics (six and a half months), tuberculosis control (twelve months), venereal diseases (twelve months), virology (twelve months).

Pakistan 30 Nursing Education, East Pakistan
(Jan. 1958 - beyond 1965) R UNICEF

To strengthen education and training programmes for nursing and midwifery personnel.

Pakistan 32 Tuberculosis Control (Prevalence Survey)
(Nov. 1959 - end of 1961) R UNICEF

To obtain information on the epidemiological pattern of tuberculosis in the population as a whole by a prevalence survey among groups selected at random; and to plan, for the whole country, a comprehensive tuberculosis control programme based on the results of the survey.

Pakistan 33 Public Health Institute, East Pakistan
(Oct. 1961 - 1963) TA

To develop epidemiological and bacteriological departments in the Public Health Institute, Dacca, East Pakistan.

Pakistan 36 Malaria Eradication (1961 - 1974) MESA

To eradicate malaria from the whole country, by stages. The eradication programme follows a pre-eradication survey carried out with assistance from WHO in 1959 and 1960.

Pakistan 39 Leprosy Control
(Nov. 1961 - end of 1963) R UNICEF

To undertake leprosy control work. In this project, which follows the visits of WHO short-term consultants in 1959 and 1960, special attention will be paid to East Pakistan, where leprosy is a serious public health problem.
Pakistan 41 Smallpox Control (July - Sept. 1961) R

WHO provided a consultant for two months, to advise on the production of lyophilized smallpox vaccine, and five million doses of vaccine for the pilot mass vaccination campaign in East Pakistan. Further supplies and equipment are to be provided.

Pakistan 42 Adviser on Prosthetic Appliances
(Feb. 1961 - last quarter of 1962) TA UNICEF (UN)

To set up a prosthetic workshop and to train workers in the fabrication of braces and prosthetic appliances.

Pakistan 43 Vital and Health Statistics
(Jan. 1961 - end of 1962) TA

To reorganize and improve the health statistical services.

Pakistan 44 Nursing Education, West Pakistan
(Sept. 1961 - 1963) TA

To improve and develop nursing education. Under this project WHO gives assistance in the administration of a model school of nursing set up by the Government.

Pakistan 48 National Health Laboratories, Islamabad
(April 1961 - ) R

To establish, at Islamabad, national health laboratories to serve as a central research laboratory for both East and West Pakistan.

Pakistan 49 Malaria Eradication Training Centres
(Nov. 1960 - end of 1970) MESA

To train technical staff for the malaria eradication programme and to carry out research on technical problems encountered in malaria eradication.

Saudi Arabia 4 Malaria Pre-eradication Survey
(July 1959 - end of 1961) MESA

To prepare a comprehensive plan of operations for a malaria eradication programme.

Saudi Arabia 5 Environmental Sanitation

To set up an environmental sanitation service in the Ministry of Health, Riyadh, to co-ordinate the work of all branches of the national administration that deal with environmental sanitation.

Somalia 2 Malaria Eradication Pilot Project and Pre-eradication Survey (Second phase: 1960 - end of 1963) MESA UNICEF

To prepare a plan for combining the malaria services in the northern and southern parts of the Republic into one national malaria service and, during 1961, to draw up a plan of operations for a pre-eradication programme for the whole country; meanwhile, to continue antimalaria operations so as to maintain the results already achieved.

Saudi Arabia 18 Fellowships TA: Organization of public health laboratories (six months), undergraduate medicine (two for twelve months).

Somalia 9 Fellowships R: Laboratory techniques (two for twelve months), operating theatre techniques (six months—extension of previous award), undergraduate medicine (three for twelve months, one three-month and four twelve-month extensions of previous awards), undergraduate nursing (three for twelve months).

Somalia 10 Fellowships TA: Dispensers' course (twelve months), laboratory techniques (three for twelve months), operating theatre techniques (twelve months), undergraduate medicine (three for twelve months, two twelve-month extensions of previous awards), undergraduate nursing (twelve months).

Saudi Arabia 23 Public Health Adviser (Epidemiologist)
(Oct. 1960 - end of 1963) TA

To set up in the Ministry of Health a department of preventive medicine, whose functions will include the development of statistical services and international quarantine work.

Somalia 11 Tuberculosis Control
(March 1960 - end of 1963) TA UNICEF

To set up a tuberculosis centre in Mogadishu to demonstrate tuberculosis control techniques and train local health personnel; later, to make a prevalence survey and, on the basis of findings, to plan a control programme, including mass BCG vaccination in a pilot zone.
Sudan 28 Smallpox Control and Eradication (1961 - ) R

To carry out a mass vaccination campaign against smallpox in areas highly exposed to the introduction of the disease.

The Wad Medani centre is able to serve only the adjacent area, mostly urban, and in order to reach most of the surrounding rural population some system of home-visiting in the rural council areas is necessary for drug distribution and the follow-up of patients and suspects.

Sudan 15 Control of Communicable Eye Diseases (Dec. 1960 - 1963) R TA UNICEF

To make a survey of communicable eye diseases and to carry out a control project, starting in the Wadi Halfa area and extending progressively to highly infected areas of the Northern Province.

Sudan 16 Venereal Disease Control (Second phase: July 1961 - June 1963) TA

To develop a programme for control of venereal diseases and to train health personnel.

Sudan 17 Dental Assistants' Training (Jan. 1951 - June 1963) R

To train dental health assistants—particularly needed because of the shortage of qualified dental surgeons.

Sudan 19 Rural Health Demonstration Area (1960 - end of 1963) TA UNICEF

To establish a rural health demonstration area at El Huda in the Menagil extension of the Gezira irrigated area, as part of a pilot scheme of community development.


To set up a blood transfusion and blood bank service and to train doctors, nurses and auxiliary workers in its operation.

WHO provided consultants in 1958, 1959 and for six months in 1960, supplies and equipment, and fellowships. The blood bank was officially opened on 31 December 1960.

Sudan 24 Fellowships R: Cardiology (six months), health aspects of community development (nine for three months), nursing administration (twelve months), paediatrics (two months), public health administration (eleven months), statistics (two for six and a half months), therapeutic radiology (twelve months—extension of previous award), undergraduate nursing (twelve months—extension of previous award).

Sudan 25 Fellowships TA: Clinical pathology (two for twelve months—extensions of previous awards), health aspects of community development (three for three months), hospital administration (three months), nursing (twelve months), psychiatric medicine (twelve months—extension of previous award), public health administration (four for twelve months), therapeutic radiology (six months—extension of previous award), tropical medicine and hygiene (nine months), undergraduate nursing (four for twelve months—extensions of previous awards).

Sudan 28 Smallpox Control and Eradication (1961 - ) R

To carry out a mass vaccination campaign against smallpox, aiming at the eventual eradication of the disease.
Syria 2 Malaria Eradication  
(March 1956 - end of 1964) MESA TA UNICEF  
To eradicate malaria from the whole country, where one and a half million people out of a population of over four million live under malaria risk.

To establish an efficient health statistics system, and to improve the registration and compilation of vital statistics.

Syria 16 Rural Health Unit (Jan. 1958 - end of 1963) TA  
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.

Syria 28 Fellowships R: Medical education (two and a half months), medical radiotherapy (twelve months), paediatrics (twelve months), public health administration (twelve months), tuberculosis control (one for eight months, one for six months — extension of previous award), undergraduate nursing (twelve months — extension of previous award).

Syria 29 Fellowships TA: Public health administration (twelve months).

Syria 30 Public Health and Endemic Diseases Laboratory, Damascus (Oct. 1959 - mid-1963) R  
To develop the government public health and endemic diseases laboratory, in particular the food control section.

The aim was to organize a national environmental sanitation programme, especially for rural areas, and to build up an adequate sanitary engineering service. WHO provided a sanitary engineer, a consultant entomologist from May to July 1959, and supplies and equipment. The main work consisted of surveys and the assessment of environmental sanitation problems in a rural project area and of assistance in carrying out improvements and in co-ordinating the work with that carried out under the WHO-assisted rural health programme in Syria. Similar activities were started in an adjacent area where a community development programme was being carried out. Assistance in urban sanitation, especially refuse and sewage disposal, was given to the Municipality of Damascus. Close contact was established with the Ministry of Municipal and Rural Affairs and some help in developing water supplies was provided to the service concerned. Preparations were made for a training course for sanitation workers and in-service training was arranged for sanitation personnel already employed. A plan for a national environmental sanitation programme and a sanitary engineering service was prepared. The entomologist advised on control of flies and other disease-bearing insects.

To establish the framework of an adequate sanitary engineering service, with well qualified staff to carry on the work, was not attained owing to various difficulties. These, however, may be overcome in the near future, since the project has resulted increasing the awareness of the importance of environmental sanitation.

For the development of a satisfactory environmental sanitation programme, especially in rural areas, increased co-ordination with the community development and other related work is required. In-service training has been started, but in order to make available the sanitation workers urgently needed, the training programme requires strengthening and developing.

Syria 37 Nursing Education, Damascus  
(Nov. 1960 - beyond 1963) R UNICEF  
To improve nursing service and nursing education programmes through in-service training and refresher courses in teaching, supervision and administration for qualified nurses.

Tunisia 3 Communicable Eye Disease Control  
(Second phase: May 1959 - 1965) TA UNICEF  
To carry out a mass campaign against seasonal conjunctivitis, collective treatment of trachoma in schools, and a programme of research on communicable eye diseases.

Tunisia 6 Maternal and Child Health  
(Second phase: May 1959 - 1965) TA UNICEF  
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; and to train professional and auxiliary personnel.

Tunisia 9 Tuberculosis Chemotherapy Pilot Project  
The aim was to compare the effects of isoniazid used alone in hospital and in domiciliary treatment, and to ascertain its efficacy as a chemoprophylaxis for contacts of tuberculous cases; and to determine the most practical methods of controlling tuberculosis in a community by chemoprophylaxis and chemotherapy. WHO provided a medical officer, a statistician and a laboratory technician, and an X-ray unit and laboratory supplies.

An outline of the programme of work and detailed instructions were drawn up by the national medical officer and the WHO staff of the Tuberculosis Research Office before field operations started in January 1958. A detailed map was made of the project area—the Djebel Lahmar section of Tunis—which covers four sq. km. and has a population of about 25 000. A complete census of the population was made and all persons were tuberculin tested; photofluorograms and, where necessary, bacteriological examinations were made. Persons excreting tubercle bacilli were treated with isoniazid, some in hospital and some as ambulatory patients, the selection being made at random. Suspects, persons with calcified lesions, and persons without pulmonary shadows, whether reactors or non-reactors to tuberculin, were placed, at random, on a twelve-month regime of isoniazid or of a placebo, except for one-third of the non-reactors, who were vaccinated with BCG. Control examinations of persons with pulmonary shadows were made three-monthly, six-monthly or yearly, and a final examination of all persons without pulmonary shadows was made during the last few months of operations. In all 25 346 persons were examined and 17 582 were treated.

Thirteen doctors, three nurses, seven X-ray technicians, three laboratory technicians, twelve BCG technicians and six social
workers spent some time on the project; a number of them, including some WHO fellows, received training there.

Some difficulties were experienced in getting the population to follow the treatment prescribed; and it was not possible to keep a check on the considerable amount of migration to and from the project area. The experience gained in the project has been useful in planning and operating the tuberculosis control project in Tunisia (Tunisia 24) and a number of technicians working on that project were trained at Djebel Lahmar.

A WHO statistician made a statistical evaluation of the data collected. The final evaluation is expected to be ready in the first half of 1962.

Tunisia 13 Fellowships TA: Control of pharmaceutics (twelve months), electro-radiology (twelve months), medical services administration (nine months), trachoma control (six weeks), undergraduate sanitary engineering (twelve months—extension of previous award).

Tunisia 14 Fellowships R: Audio-visual methods (three months), cancerology (three months), drug control (two for six months), mental health (two for twelve months), neuropsychiatry (eleven months—extension of previous award), neurosurgery (twelve months), occupational health (two months), rheumatic diseases (twelve months), thoracic surgery (twelve months), tuberculosis statistics (two months), undergraduate sanitary engineering (one for twelve months and one twelve-month extension of a previous award), virology techniques (two for six months).

Tunisia 17 Malaria Pre-eradication Survey
(Sept. 1958 - Dec. 1960) MESA TA

The aim was to study the distribution of malaria and its vectors and to draw up a plan of operations for a malaria eradication programme. WHO provided a malariologist, an entomologist and a sanitaryian, five fellowships for training at the Regional Malaria Eradication Training Centre, Cairo, and supplies and equipment.

A survey covering the entire malarious area of the country was carried out, during which detailed data on the distribution of the disease was collected and studies were made of the malaria vectors and of problems likely to affect the eradication programme. In accordance with the information obtained, in 1960 a comprehensive draft plan of operations was prepared for a programme, to be implemented by stages, to protect the two and a half million persons living under malaria risk. Various categories of workers were trained in malaria eradication techniques.

Tunisia 20 Public Health Laboratory (1961 - 1964) R

To develop and improve the public health laboratory services.

Tunisia 22 Ophthalmological Centre, Tunis
(Nov. 1957 - end of 1963) R

To study the etiology of trachoma and related eye diseases in Tunisia, particularly the virological aspects; and to provide laboratory facilities for the use of modern techniques and undertake a basic programme of research.

Tunisia 24 Tuberculosis Control
(Sept. 1959 - Sept. 1961) R UNICEF

The aim was 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 to be used in planning a national tuberculosis control project and as a basis for evaluating results; and, later, to extend tuberculosis control services throughout the country. WHO provided a medical officer and an X-ray technician and supplies and equipment.

Although the project began only in September 1959, the national tuberculosis campaign actually started ten months earlier.

A protocol and working instructions were prepared to cover recording, case-finding, treatment, follow-up, prophylaxis (by BCG vaccination and isoniazid), health education and evaluation. Five mobile photofluorographic teams were assigned to the project; they covered Sousse Governorate from 1959 to 1961; then two moved to Kairouan Governorate for case-finding, the others remaining in Sousse to follow up cases. In Sousse 341696 persons were X-rayed, of whom 9499 were found to have active tuberculosis, but because of absenteeism only 5979 of them could be followed up. Tuberculin tests totalled 189430 and 20225 persons were vaccinated with BCG. New methods of work were tested and in-service training was given to technicians and infirmières itinérantes. These activities are being continued and a uniform criterion for interpretation of X-rays is gradually being worked out.

The project is being incorporated into project Tunisia 28, under which a demonstration and training centre is being set up, with assistance from WHO, at the National Tuberculosis Institute. Stronger central guidance will thus be available for pursuing the objectives of the project, which have not been fully met. No prevalence surveys, other than the one made by the WHO Regional Tuberculosis Prevalence Survey Team (see EMRO 41) in 1960 have been carried out, which will make subsequent assessment more difficult. The problem of following up tuberculosis cases and their contacts, and of ensuring regular medication, has not been solved. The project, however, has demonstrated that, with adequate personnel and equipment, a tuberculosis control programme on a community scale is feasible.

Tunisia 27 Medical Education

Three short-term consultants provided by WHO carried out a complete survey of medical education facilities in Tunisia. Their report, with recommendations on the establishment of a medical faculty, has been sent to the Government.

Tunisia 28 National Tuberculosis Institute

To set up, at the National Tuberculosis Institute, a centre for demonstrating and teaching public health methods of tuber-
culosis control to professional and technical personnel from the Eastern Mediterranean Region and other regions.

Tunisia 29 Medical Rehabilitation Centre  
(First phase: Feb.- March 1961) R UNICEF

A consultant provided by WHO made a survey of facilities for the development of a medical rehabilitation centre for the physically handicapped and submitted recommendations for immediate action and for a long-term programme.

Tunisia 30 Venereal Disease Control (June - Aug. 1961) R

A consultant provided by WHO collected information on venereal diseases, which are an important public health problem in Tunisia, and discussed with the Government measures which might be carried out with WHO assistance for the improvement of control services.

United Arab Republic 23 Malaria Pre-eradication Survey  
(Feb. 1959 - April 1961) MESA

The aim was to prepare a plan of operations for a malaria eradication programme. WHO provided a malariologist, one fellowship for training at the Malaria Eradication Training Centre, Jamaica, supplies and equipment, and sent fellows to the Regional Malaria Eradication Training Centre, Cairo, which was also attended by nationals.

A pre-eradication survey covering the entire malarious area of the country was carried out, during which detailed data on the distribution of the disease were collected. In accordance with these, and the data available from previous work of the National Control Service, a comprehensive plan of operations was drawn up for a programme, to be implemented by stages, to protect the population of 18 350 000 living under malaria risk.


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 the United Arab Republic.

United Arab Republic 38 Centre for Sanitary Engineering Research, University of Alexandria (Oct. 1958 - end of 1962) TA

To organize a laboratory and centre for sanitary engineering research and to strengthen the teaching of the subject.

United Arab Republic 39 Fellowships R: Drug analysis (two for four months), dust diseases of the lungs (six weeks), epidemiology (three months), medical education (two months), medical librarianship (three months), poliomyelitis (one month), public health administration (two for two months), radiation biology (twelve months), tuberculosis and chest diseases (twelve months).

United Arab Republic 40: Fellowships TA: Bilharziasis control (six weeks), industrial health (eight months), live measles and mumps vaccines (three months), maternal and child health (three months), occupational health (four months), preparation of live attenuated polio vaccine (three months), public health administration (one for six weeks and one for nine months).

United Arab Republic 48 Pharmaceutical Quality Control Laboratory (March 1961 - end of 1963) TA

To make a survey of pharmaceutical quality control facilities, prepare plans for further development of laboratories and services for the examination, registration and quality control of pharmaceutical preparations, and train technical personnel.

United Arab Republic 49 Bilharziasis Control Pilot Project and Training Centre (Jan. 1961 - end of 1963) R UNICEF

To test measures for controlling bilharziasis, so as to find those cheapest and most effective under conditions in the United Arab Republic, and to carry out operational and basic research. The project is to be developed to serve as a field demonstration and training centre for the Region.

United Arab Republic 50 Nursing Education  
(Aug. 1961 - end of 1963) TA

To strengthen the Ahmed Maher Hospital School of Nursing, by organizing in-service training in clinical teaching and nursing administration for graduate nurses.

United Arab Republic 52 Dried Smallpox Vaccine Production (1961 - 1963) R

To produce lyophilized smallpox vaccine for the vaccination programme.

United Arab Republic 53 Typhus Control  

See page 93.

Yemen 3 Public Health Adviser (Jan. 1961 - end of 1963) R

To establish health units in the population centres of Yemen.

Yemen 5 Bilharziasis Control (Jan.- Feb. 1961) R

A consultant provided by WHO organized a bilharziasis field demonstration and training programme in the neighbourhood of Sana'a and trained sanitarians in the use of molluscicides. He submitted recommendations on control measures and on treatment of patients. Six Yemenites have been awarded fellowships for a practical sanitation course, including training
in some aspects of bilharziasis control, in the United Arab Republic and Sudan.

Yemen 8 Health Centre, Sana’a (July 1956 - 1966) TA

To establish a health centre and training school in Sana’a in order to provide practical training for auxiliary health personnel, demonstrate modern practice in the prevention and cure of diseases and in the control of communicable diseases, assist the promotion of health, and facilitate the organization of public health services.

Yemen 11 Fellowships R: Laboratory techniques (five for six months), malaria eradication (six for six months), practical sanitation (six for six months), public health administration (four months), statistics (two for six and a half months), undergraduate medicine (five for twelve months, three twelve-month extensions of previous awards), X-ray techniques (twelve months).

Yemen 12 Fellowships TA: Undergraduate dentistry (twelve months), undergraduate medicine (twelve months), undergraduate nursing (three for twelve months).

Yemen 15 Local Health Services, Taiz and Hodeida (1961 - ) R

To establish integrated health centres in Taiz and Hodeida.
WESTERN PACIFIC


See page 96.


A seminar to identify the most important problems of schoolchildren and young people in the Region, make recommendations for improving and extending health programmes for them, and consider what schools may do, in cooperation with parents and health and other agencies, to meet the health needs of schoolchildren. There were twenty-four participants—from Australia, China (Taiwan), Federation of Malaya, French Polynesia, Hong Kong, Japan, Netherlands New Guinea, New Zealand, Papua and New Guinea, Philippines, Republic of Korea, Republic of Viet-Nam, and Singapore—and two observers from UNICEF.

WHO provided three short-term consultants, four seminar staff members, cost of attendance of the participants, and supplies and equipment. UNESCO provided the services of a consultant and a secretariat staff member.

WPRO 37  Poliomyelitis Centres, Singapore and Tokyo (June 1956 - ) R

A six-month fellowship in virology was awarded under this project to a candidate from the Philippines.


To co-ordinate antimalaria work in the countries represented on the Antimalaria Co-ordination Board (Burma, Cambodia, Federation of Malaya, Laos, Republic of Viet-Nam, and Thailand).

WPRO 44  Nursing Administration Seminar, Tokyo (16-28 Oct. 1961) TA

A seminar to bring together nurses engaged in nursing education and nursing service administration to exchange views on nursing administration in countries of the Region—its function in health programmes, how it can be improved at all levels, and how nurses can be better prepared for administrative posts—and to make recommendations for action and study. Discussions centred on ways of establishing effective relationships between nursing and other health services and between nursing education and nursing services, of providing nursing of high standard under prevailing conditions, and improving skill in nursing administration. There were twenty-five participants—from Australia, Cambodia, China (Taiwan), Federation of Malaya, Guam, Hong Kong, Japan, North Borneo, New Zealand, Philippines, Republic of Korea, Republic of Viet-Nam, and Singapore—and representatives from the United States Operations Missions in Korea and Viet-Nam and the International Council of Nurses.

WHO provided two short-term consultants and six seminar staff members, costs of attendance of the participants, and supplies and equipment.


A seminar to consider the objectives of occupational health services, problems encountered in the Region, and research and training. The agenda covered health problems in places of work, organization of occupational health services, training, responsibilities of employees and workers, health education in industry, social implications of industrialization in Asia, industrial hygiene surveys, and the role of occupational health institutes in field work and research. Three discussion groups considered the collection and use of statistical data in work accidents, occupational diseases and absenteeism, the organization of an occupational health service for small plants, and occupational health problems in agriculture. The programme included visits to institutes and industrial plants.

There were twenty-nine participants, from Australia, China (Taiwan), Federation of Malaya, Hong Kong, Japan, New Zealand, Philippines, Republic of Korea, and Singapore. The United States International Co-operation Administration Mission in China (Taiwan) sent an observer.

WHO provided travel and allowances for fifteen participants, two short-term consultants, four temporary advisers and supplies and equipment. Nine participants attended at the expense of ILO.

WPRO 59  Public Health Administration Fellowships (Undergraduate Medical Studies, Central Medical School, Fiji) (Dec. 1960 - ) R

To increase the number of assistant medical and dental officers in the health services of the South Pacific island territories by providing fellowships for undergraduate studies at the Central Medical School, Fiji.

WPRO 62  Sewerage Planning and Design Training, Taiwan (Dec. 1958 - ) R

To enable environmental sanitation workers from countries in the Region to study sewerage planning and design in Taiwan.


A training course to assist governments to improve their civil registration and vital and health statistical services. It included lectures, discussions, visits to statistical agencies of the Govern-
ment of the Philippines, and three days' field work—a demographic and health sample survey in the Province of Laguna.

There were forty trainees—from Burma, China (Taiwan), Federation of Malaya, Fiji, India, Indonesia, Iran, Japan, Netherlands New Guinea, Pakistan, Philippines, Portuguese Timor, Republic of Korea, Republic of Viet-Nam, Trust Territory of the Pacific Islands, and Western Samoa—and a representative from the United States Operations Mission in Viet-Nam.

WHO provided travel and stipends for seventeen trainees from the Region and supplies and equipment. Eleven trainees attended at the expense of the United Nations.

WPRO 68 Trial of Medicated Salt (Pinotti's Method), Pailin, Battambang Province, Cambodia (July 1959 - end of 1962) MESA

To carry out a trial distribution of chloroquinized salt, so as to study the technical and administrative aspects of distribution in a particular social and ethnic environment and, by assessment of epidemiological trends, to ascertain whether malaria endemicity has been reduced and transmission stopped. (Chloroquinized salt has been substituted for the pyrimethaminized salt which was used in this project until May 1961.)

WPRO 69 Seminar on Health Laboratory Services, Manila (5-16 Dec. 1960) TA

A seminar to promote the improvement of health laboratory services in the Region. The main subjects discussed were the planning, organization and administration of national health laboratory services, technical requirements for public health laboratories, staff training, and use of international and bilateral aid. Reports on laboratory services in various countries of the Region were considered. A classification of categories of staff required, and specifications covering their pre-training qualifications and the duration and nature of their training, were prepared. The seminar emphasized the importance of co-ordinating the work of all laboratories, government and private, in the same area, and stressed the need for comprehensive legislation.

WHO provided three short-term consultants, travel and stipends for the seventeen participants—from Australia, China (Taiwan), Federation of Malaya, Fiji, Japan, New Zealand, North Borneo, Papua and New Guinea, Philippines, Republic of Korea, Republic of Viet-Nam, Ryukyu Islands, Sarawak, Singapore and Western Samoa—and technical literature. There were three observers from the Philippines and one from Japan.

WPRO 70 Training Courses on Malaria Eradication Techniques, Institute of Malariology, Tala, Rizal, Philippines (March 1959 - May 1961) MESA (ICA)

To provide an international malaria eradication training centre for various categories of personnel needed by countries of the Western Pacific and other regions. The project is being redefined.

WPRO 75 Regional Tuberculosis Advisory Team (April 1961 - ) R

To assist countries of the Region in assessing their tuberculosis programmes.

WPRO 76 Refresher Course on Integrated Rural Health for Assistant Medical Officers in the South Pacific, Apia, Western Samoa (2 Nov.- 15 Dec. 1961) R (South Pacific Commission)

A five-week refresher course on integrated rural health (including environmental sanitation, maternal and child health, medical care, public health, tuberculosis and health education) for eighteen assistant medical officers from American Samoa, British Solomon Islands Protectorate, Cook Islands, Fiji, Gilbert and Ellice Islands, New Hebrides (British Service), Niue, Papua and New Guinea, Tonga and Western Samoa.

WHO provided three short-term consultants, costs of attendance of the trainees, and supplies and equipment. Two staff members were seconded by the South Pacific Commission.


To search for active and latent cases of human bilharziasis and to carry out an ecological survey in connexion with the United Nations Mekong River Basin project.

WPRO 84 Water Supply Programmes (Oct. 1961 - ) Special Account for Community Water Supply

To assist countries of the Region with the organization of water supply programmes. The project provides for three consultant teams, to be constituted according to needs.

Australia 200 Fellowships R: Food control (nine months), mental health (twelve months).

British Solomon Islands Protectorate 2 Malaria Eradication Pilot Project (Sept. 1961 - ) MESA TA

To find a method of interrupting malaria transmission in the Protectorate and collect the data needed for planning malaria eradication; and to train staff in preparation for an eradication programme.

British Solomon Islands Protectorate 3 Nursing Education (Nov. 1959 - 1964) R UNICEF

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

Cambodia 1 Malaria Pre-eradication Programme (Oct. 1950 - ) MESA TA

To organize antimalaria services; to pave the way for malaria eradication; to train personnel.

Cambodia 3 Nursing Education, Phnom-Penh (Dec. 1951 - 1965) R UNICEF (Colombo Plan ICA)

To set up a school of nursing in Phnom-Penh; to organize nursing and midwifery training.

Cambodia 5 Royal School of Medicine, Phnom-Penh July 1953 - 1964 TA (French Economic Mission ICA)

To raise the standard of teaching at the Royal School of Medicine to professional level and to increase facilities for training hospital assistants.
Cambodia 8  Treponematoses Control  
(Sept. 1959 - 1963) R UNICEF

To train professional and auxiliary medical personnel in yaws control methods; to reduce the incidence of yaws by mass treatment with penicillin and eventually to eliminate the disease; to organize in the project area a rural health service which will also continue the yaws control work; and to carry out a smallpox eradication campaign in the area.

Cambodia 9  Rural Health Training Centre, Takhmau  
(Jan. 1957 - 1967) TA UNICEF (UNESCO Asia Foundation ICA)

To plan and implement a comprehensive provincial health programme; to build up model public health services in Kandal Province; and to give field training to all categories of medical and health personnel at the Takhmau centre.

Cambodia 10  Public Health Administration  
(March 1960 - 1970) R

To survey health conditions and prepare long-range national health plans, and to reorganize as necessary the central and local health administration.

China 1  Venereal Disease Control, Taiwan  

See page 98.

China 3  Maternal and Child Health, Taiwan TA UNICEF

Two fellowships (one for two years and one for twelve months) were awarded under this project, for which staff and other assistance were provided between 1952 and 1959.

China 6  Nursing Education, Taiwan (May 1952 - 1963) TA (China Medical Board)

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.

China 7  Malaria Eradication, Taiwan  
(May 1952 - 1963) MESA (ICA)

To complete the eradication of malaria from Taiwan by use of residual insecticides, antimalarial drugs and an effective surveillance system.

China 14  Environmental Sanitation, Taiwan  
(Oct. 1954 - 1954) TA (ICA)

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; and to train personnel.

China 17  Tuberculosis Control, Taiwan R UNICEF

An eleven-month fellowship was awarded under this project, for which a medical officer and other assistance were provided between 1956 and 1960.

China 20  Mental Health, Taiwan (Oct. 1955 - 1955) R

To carry out a mental health programme with particular attention to child guidance and community mental hospitals.

China 27  Institute of Public Health (Aug. 1958 - 1963) R (China Medical Board ICA)

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

China 34  Trachoma Research and Evaluation, Taiwan  

To improve knowledge of the epidemiology of trachoma and related viral and bacterial infections of the conjunctiva in Taiwan; to define and standardize the criteria for their diagnosis and cure; to develop methods of treatment which are effective and practicable on a large scale; and to provide data on which to base control measures and later evaluation.

China 200  Fellowships R: Nursing (twelve months), public health administration (one for three months, one for five and a half months, one for six months, two for twelve months).

Cook Islands 200  Fellowships R: Public health administration (nine months).

Fiji 2  Central Medical School, Suva (Feb. 1955 - 1963) R  
(China Medical Board)

To train assistant medical officers for government service in Fiji and adjacent territories, and to strengthen the staff of the Central Medical School.

Fiji 200  Fellowships R: Maternal and child health (twelve months), radiology (six months), tuberculosis control (five months).

French Polynesia 2  Tuberculosis and Leprosy Control  

A consultant provided by WHO for six months helped to carry out a survey, by tuberculin testing and BCG vaccination, in groups of islands off Tahiti, and submitted recommendations for a tuberculosis control programme. The same time he investigated the leprosy situation, which was not found to be serious.


A consultant provided by WHO investigated the nutritional status of the population and submitted recommendations for improving diets and dietary habits and for further inquiries.

Hong Kong 200  Fellowships R: Dental nursing (two for two years).

Japan 4  National Institute of Mental Health (June 1953 - ) R

To survey needs and facilities and draw up a mental health programme; to carry out research, and to train local professional and auxiliary personnel.
Japan 21 Control of Virus Diseases (May - June 1960; 1961) R

To assist in strengthening services for the control of virus diseases, WHO provided a consultant, who took part in a survey of laboratories and lectured at and helped to plan a curriculum for training courses, and two six-month fellowships.

Japan 24 Health Education Advisory Services (Oct.-Nov. 1961) R

A consultant was provided by WHO for six weeks to advise on the reorganization of the health education programme introduced eleven years previously; to suggest improvements leading to integration of health education into public health work, including community health programmes, and an increase in the health education carried out by local health centres; and to advise on standard functions and minimum qualifications for health education workers.

Japan 200 Fellowships R: Food control (six months), laboratory control of poisonous substances (six months), medical care (five months), public health administration (twelve months), public health aspects of cancer control (two for six months), public health work in hospitals (five months).

Japan 201 Fellowships TA: Poliomyelitis (six months).

Korea 4 Leprosy Control (Nov. 1961 - end of 1965) R

To improve the leprosy control programme by co-ordinating the present control work, providing health education, and training medical and other personnel concerned with leprosy control.

Korea 13 Malaria Pre-eradication Programme (June 1959 - 1963) MESA

To survey the malaria situation, organize a national malaria service and train staff, so as to enable an eradication programme to be planned and implemented.


To set up two demonstration centres, one for urban health and the other for rural health; to implement pilot projects for disease control and health promotion, in which trainees of the National Institute for Public Health Training may gain practical experience; to organize short-term pre-service, in-service and refresher training for government health workers.

Korea 200 Fellowships R: Endemo-epidemic diseases control (ten months), leprosy control (two for five and a half months), midwifery (two years), parasitology and entomology (ten months), public health administration (twelve months), tuberculosis control (ten months).

Korea 201 Fellowships TA: Maintenance of X-ray equipment (six months), maternal and child health (four and a half months).

Laos 6 Maternal and Child Health (Sept. 1959 - 1964) R UNICEF

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

Laos 9 Public Health Administration (April 1961 - 1970) TA

To survey health conditions and prepare long-range national health plans; to develop a programme of work appropriate to local conditions, and to organize the operation of the national health administration at the central and peripheral levels.


To provide practical training courses in nursing and midwifery and in-service training; to promote and develop environmental sanitation; and to carry out health education, particularly as regards home sanitation, maternal, infant and child care and nutrition.

Work carried out under this project is a part of the programme, assisted by the United Nations, for the economic and social development of the rural population. It is planned to set up four centres in rural areas, with staff from the participating agencies.

Laos 13 Hospital Administration (7-11 Jan. 1961) R

A WHO consultant made a survey of the Pahosot General Hospital and submitted a report with recommendations.

Macao 200 Fellowships R: Laboratory control of water purification (seven and a half months).

Malaya 14 Hospital Administration (May 1956 - 1963) TA

To review the hospital administration system and to provide training for lay hospital administrators in the Federation or overseas.

Malaya 15 Hospital Records (Nov. 1956 - 1963) TA

To review and reorganize the hospital records systems in the Federation and to train local personnel.

Malaya 20 Malaria Eradication Pilot Project (Feb. 1960 - 1963) R MESA

To find a method of interrupting the transmission of malaria; to collect the data needed in order to plan for malaria eradication; and to train personnel.

Malaya 21 Training Institutions (Clinical Pathology) (Nov. 1960 - 1963) R

To raise the standard of training at the Institute for Medical Research and to reorganize its course in clinical pathology.

Malaya 24 Public Health Administration (Rural), Kuala Lumpur (Feb. 1960 - 1963) R

To extend and improve health services, particularly in the rural areas.
Malaya 26 Survey of Public Health Administration and Education and Training (Oct. 1960 - March 1961) TA

See page 98.


To improve and extend maternal and child health services and develop a general maternal and child health programme providing for co-ordination of preventive and curative work; to strengthen paediatric services and training.

Netherlands New Guinea 9 Rural Environmental Sanitation (Jan. 1961 - 1964) TA UNICEF

To carry out a pilot project of rural environmental sanitation, including a study of relevant technological, social, economic and cultural factors (particularly those affecting village water supply and human excreta disposal), and to train government employees through village demonstration work.

Netherlands New Guinea 200 Fellowships R: Leprosy control (three months), nursing (twelve months), public health administration (twelve months), rural health (five months).

New Zealand 200 Fellowships R: Biometry (three months), control of rheumatism and cerebral palsy (two months), hospital administration (two for three months).

North Borneo 5 Malaria Eradication (July 1955 - 1968) MESA TA UNICEF

See page 97.

Papua and New Guinea 200 Fellowships R: Epidemiology (four months), health education (twelve months), medical education (three and a half months), tuberculosis control (five weeks), virology research (three and a half months).


To organize a medical programme, including out-patient services, for the National Mental Hospital.

Philippines 9 Bilharziasis Control Pilot Project, Leyte (June 1952 - 1963) TA UNICEF FAO (ICA)

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.

Philippines 12 Institute of Hygiene, University of the Philippines, Manila (July 1953 - 1962) TA (Johns Hopkins University, Rockefeller Foundation)

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.

Philippines 43 Environmental Sanitation (June 1955 - March 1961) R (ICA)

The aim was to co-ordinate and strengthen environmental sanitation services. WHO provided a sanitary engineer, six fellowships, and supplies and equipment.

Attention was concentrated primarily on training environmental sanitation personnel. In seven ten-week courses 161 sanitary inspectors were trained. The sanitary engineer helped to plan a public health engineering course at the Institute of Hygiene and lectured there and in the Department of Health's in-service training programme. He advised on an engineering study of sanitation problems in the National Mental Hospital and assisted the Bureau of Census and Statistics in preparing a questionnaire for a survey of sanitary facilities. A joint water quality committee was set up, which resulted in closer cooperation among the Department of Health, the Manila Health Department and the National Waterworks and Sewerage Authority. A technical working group of the Authority and WHO personnel undertook preliminary studies on a water fluoridation programme. In Manila a study was made of the refuse storage, collection and disposal system and an environmental sanitation survey was carried out.

Good progress was made in strengthening the environmental sanitation services. The main achievement of the project was in the training of environmental sanitation personnel, a most important element of the long-term environmental sanitation programme. There was increased recognition of the need to use engineering and management techniques.

Philippines 50 Virology Centre (June 1960 - 1964) TA

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.

Philippines 51 Environmental Sanitation Training Course (June 1958 - 1964) R UNICEF (ICA)

To organize an advanced training programme for sanitary inspectors and to demonstrate environmental sanitation work in a selected area.

Philippines 53 Malaria Eradication (Aug. 1956 - 1968) MESA (ICA)

To revise and implement the plan for malaria eradication.

Philippines 62 Health Statistics (July 1961 - 1963) R

To review and reorganize the health statistical services of the Department of Health and at provincial and local levels and to train personnel; to develop and improve vital statistics.

Philippines 64 Public Health Advisory Services (Nov. 1961 - June 1962) R

To evaluate the national rural health programme.

Philippines 68 Midwifery Programme (Oct. 1960 - Feb. 1961) TA

A WHO consultant made an assessment of midwifery education and services and submitted a report with recommendations.
Philippines 71  Physiotherapy (July 1961 - 1966) TA (Colombo Plan)

To organize, at the State University, collegiate courses for training of physiotherapists, and to develop professional standards to ensure a high quality of service; to provide in-service training in physiotherapy for sub-professional workers.

Philippines 72  Training of Tuberculosis Control Supervisors (Oct.- Dec. 1960) TA

A training course on the operation of tuberculosis control programmes for regional tuberculosis control supervisors. Since most of the trainees had extensive experience of clinical tuberculosis and previous training in public health, the course was conducted as a seminar. Discussions covered the community approach to the problem of tuberculosis, diagnosis, treatment, prevention, control programmes, and tuberculosis control in the Philippines. After the course the trainees were given practical training in the Division of Tuberculosis before taking up their posts in June 1961.

The consultant provided by WHO to plan the course also submitted a number of recommendations on the organization and operation of the national tuberculosis programme.

Philippines 200  Fellowships  R: Public health administration (twelve months).

Philippines 201  Fellowships  TA: Hospital administration (twelve months).

Sarawak 5  Malaria Eradication (July 1952 - 1966) MESA TA

To eradicate malaria from the whole country. This is a conversion of the malaria pilot project started (under the same project number) in 1952.


To provide maternal and child health services, school dental services and health education for the population (about 125 000) living near the Institute; and to train at the Institute undergraduate medical and post-graduate public health students of the University of Malaya (including students from other countries of the Region), and health visitors, health inspectors and other auxiliary personnel.

Singapore 8  Nursing Education (June 1962 - 1964) TA

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.


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.

Tonga 1  Environmental Sanitation (March 1958 - 1963) TA

To strengthen environmental sanitation services; particularly to study the problems of rural and urban environmental sanitation and the social, economic and cultural factors affecting them; to plan, execute and evaluate a pilot environmental sanitation project and to train personnel.


To set up a maternal and child health service as part of the general public health and medical care services by improving and extending existing facilities; to train personnel for the service; to train staff from neighbouring countries with maternal and child health problems similar to those of Viet-Nam; to undertake research on these problems.

Viet-Nam 7  Tuberculosis Control (Jan. 1958 - 1965) TA UNICEF (ICA French Economic Aid)

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.

Viet-Nam 9  Environmental Sanitation (Nov. 1956 - June 1961) R

The aim was to strengthen national and local environmental sanitation services and carry out pilot schemes, and to train professional and sub-professional personnel. WHO provided a sanitary engineer, a twelve-month fellowship, and supplies and equipment.

The project started with assistance in the organization of an environmental sanitation service in the Ministry of Health and with studies and surveys of the work related to sanitation that was being done by various agencies, of the personnel required for sanitation services, and of the possibilities for their training. In 1957 the first two-week course for sanitary agents was organized in co-operation with the United States Operations Mission. Other courses followed, and their duration was extended to four months. In all 128 sanitary agents were trained and assigned to health teams in rural areas, where they have been active in improving the sanitation facilities. A course on membrane filter technique and a three-month course for water control laboratory technicians were given with the assistance of the sanitary engineer. The sanitary engineer also prepared a proposal for a pilot composting plant which is being considered by the national and municipal authorities.

The project has helped to remedy the lack of organized environmental sanitation work in Viet-Nam. The environmental sanitation service in the Ministry of Health has been placed on a firm foundation, with adequate staff and physical facilities. The training programme has produced the first group of trained environmental sanitation field personnel in Viet-Nam. The Government considers that the training given to the Vietnamese sanitary engineers will enable them to carry out their duties without direct technical support from WHO staff.
Viet-Nam 11 Vital and Health Statistics
(Dec. 1960 - end of 1963) R
To develop and improve health and vital statistics.

To set up a communicable-disease control service, study the local pattern of communicable diseases, organize a system of notification and routing of reports, and draw up a long-range plan for the control of the major communicable diseases in the country.

Viet-Nam 15 Hospital Administration
A WHO consultant carried out a hospital administration survey, which included a review of management policies, staffing, financing, and accessory services such as laboratory, pharmacy and general services, and submitted a report with recommendations.

Viet-Nam 16 Malaria Pre-eradication Programme
(March 1959 - ) MESA (ICA)
To train national staff and to make preparations for the implementation of a malaria eradication programme.

Viet-Nam 17 Distribution of Pharmaceuticals
To improve the distribution of medical supplies and pharmaceuticals to hospitals, health centres, and similar establishments, and the arrangements for the maintenance of medical equipment; to organize a central purchase system for medical supplies and prepare standard lists of medical supplies, equipment, and pharmaceuticals.

Western Samoa 3 Tuberculosis Control (June 1960 - 1963) R
To expand and improve the chest clinic in Apia Hospital and to make it the headquarters of the national tuberculosis control programme and the main service unit for Western Samoa; to carry out a case-finding programme (by a mobile team based on the national headquarters) and a programme of prevention, including vaccination.
INTER-REGIONAL

Inter-regional 49 Insecticides Testing Unit

To carry out advanced field evaluation of the use against anopheline mosquitoes of suitable compounds submitted to the Organization under its confidential evaluation and testing scheme for new insecticides, with a view ultimately to recommending them for use in large-scale malaria eradication programmes.

Inter-regional 51 Treponematoses Advisory Team (1959 - ) R

To study the nature, extent and significance of endemic treponematoses so as to provide data on which to base public health programmes; and to assess the results achieved in mass treponematoses campaigns, particularly campaigns for yaws eradication.

Inter-regional 52 Bilharziasis Advisory Team (1959 - ) R

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 bilharziasis; and to make recommendations on control measures and their co-ordination, especially as regards the engineering aspects of control.

Inter-regional 54 Leprosy Advisory Team (Feb. 1960 - ) R

To help governments to investigate the prevalence of leprosy and disease patterns; and to assess the results of leprosy control campaigns in progress, with regard to case-finding methods, results of mass treatment, and the extent of the problem of disabilities due to leprosy.

Inter-regional 55.1 Inter-regional Post-graduate Leprosy Training Course, Philippines (20 Nov. - 9 Dec. 1961) TA

A post-graduate training course attended by thirty-four doctors, many of whom were in charge of leprosy control campaigns, from Burma, China (Taiwan), Federation of Malaya, Hong Kong, India, Japan, Mauritius, Netherlands New Guinea, Nigeria, Pakistan, Philippines, Republic of Korea, Ryukyu Islands, Sarawak, Singapore and Thailand. Thirty-five lectures were given, covering all technical aspects—clinical bacteriology, histology, therapy, epidemiology, prophylaxis and control. Special attention was paid to the practical approach to leprosy problems, by means of clinical seminars and clinical demonstrations, practical laboratory work, visits to leprosy institutions and practical demonstrations of leprosy control work in the field.

WHO provided a short-term consultant and travel costs and stipends for thirteen faculty members and for twenty-two participants.

Inter-regional 58 Diarrhoeal Diseases Advisory Team (1959 - ) TA

To assess national programmes on diarrhoeal diseases and epidemiological investigations, including the efficacy of the epidemiological methods used; to recommend control measures; to advise governments on the planning of comprehensive diarrhoeal disease programmes in relation to their medical and public health laboratory facilities; and to stimulate studies on specific problems connected with diarrhoeal diseases.

Inter-regional 73.1 Training Course on Freeze-dried Smallpox Vaccine Production, Yaba, Lagos (14-26 Nov. 1960) R

A training course whose main purpose was to provide a demonstration of the recently improved techniques in freeze-dried smallpox vaccine production. The course also included lectures and practical work, during which all the participants prepared vaccine, of which they took samples back to their countries. Laboratory facilities for the course were provided by the Government of Nigeria.

WHO provided a short-term consultant to conduct the course and fellowships for the eight participants from Ghana, Iran, Kenya, Nigeria, Sudan and United Arab Republic.

Inter-regional 73.2 Training Course on Freeze-dried Smallpox Vaccine Production, Bangkok (6-18 Nov. 1961) R

A training course similar to the one described under Inter-regional 73.1 above. It was attended by seventeen participants from Australia, Cambodia, China (Taiwan), Federation of Malaya, Iraq, Japan, Jordan, New Zealand, Pakistan, Philippines, Republic of Korea, Republic of Viet-Nam, Thailand and Turkey. Sixteen of the participants were actively engaged in smallpox vaccine production or were in charge of institutes where smallpox vaccine was being prepared; several had previous experience in the production of freeze-dried vaccines, and some in the preparation of freeze-dried smallpox vaccine. Laboratory facilities for the course were provided by the Government of Thailand.

WHO provided a short-term consultant (who had conducted the course in Yaba in 1960) and fellowships for fifteen participants.

Inter-regional 74 Inter-regional Smallpox Conference, New Delhi (14-19 Nov. 1960) R

A conference at which were discussed the management and operation of smallpox eradication campaigns and the problems of extending national control programmes and of co-ordinating them with control programmes in other countries and regions. Other subjects considered were epidemiological considerations of smallpox control, the social and educational aspects of eradication campaigns, the evaluation of such campaigns, appropriate types of vaccine and improved vaccination techniques, and the international aspects of the smallpox situation with special reference to the application of the International Sanitary Regulations. Participants came from Afghanistan, Burma, Ceylon, Federation of Malaya, India, Indonesia, Iran, Iraq, Jordan, Lebanon, Pakistan, Republic of Viet-Nam, Singapore and Thailand. Conference facilities were provided by the Government of India.

--- 167 ---
WHO provided a short-term consultant and costs of attendance of the participants.

Inter-regional 75.1 Inter-regional Conference on Techniques of Surveys on the Epidemiology of Mental Disorders, Naples (6-15 Dec. 1960) R

A conference to stimulate the interest of psychiatrists, health statisticians and public health officers in epidemiological studies on mental disorders and to clarify the possibilities and the technical problems involved in carrying out such studies. It was attended by nineteen psychiatrists and four public health officers from eleven countries in the European and Eastern Mediterranean Regions.

WHO provided the costs of attendance of the participants, and six consultants and three staff members who, with a member of the Milbank Memorial Fund of New York, participated in the conference and led discussions.

Inter-regional 76 IAEA/WHO Symposium on the Use of Radioisotopes in the Study of Endemic and Tropical Diseases, Bangkok (12-16 Dec. 1960) R (IAEA)

A symposium to enable experts in the medical uses of radioisotopes and in tropical medicine to review the results so far obtained in the applications of radioisotopes to the study of endemic and tropical diseases. It was also designed to make scientists from tropical countries more familiar with the problems of tropical medicine that might be successfully investigated by means of radioisotopes and so enable them to initiate or intensify clinical research with radioisotopes in their own countries. There were forty participants, from Australia, Ceylon, China (Taiwan), India, Iraq, Pakistan, Philippines, Portugal, Republic of Viet-Nam, South Africa, Sweden, Thailand, United Kingdom, United States of America, and Venezuela.

WHO contributed to the cost of the symposium, which was convened jointly by the International Atomic Energy Agency and WHO, and at which FAO was represented.

Inter-regional 78.1 Malaria Eradication: Technical Consultants (1959 - ) MESA

To provide expert advice on the preparation of malaria eradication programmes, to assist governments to assess such programmes and to advise on special technical problems.

Inter-regional 78.2 Malaria Eradication: Administrative Consultants (May - June 1961) MESA

In May and June 1961 a course, consisting of five weeks' theoretical instruction in Geneva, followed by two weeks' practical training in Iran, was given for administrative officers in malaria eradication programmes. WHO provided a lecturer and costs of attendance of twelve participants. Lectures were also given by permanent members of the WHO staff.

Inter-regional 79 Malaria Eradication: Training Programme for International Recruits (1958 - ) MESA

To train in malaria eradication techniques malariologists, entomologists, sanitary engineers, sanitarians and other categories of staff in internationally assisted malaria eradication training centres and subsequently in malaria eradication projects.

Inter-regional 82 Spraying Equipment Evaluation Programme (1959 - Dec. 1961) MESA

The aim was to make field trials of sprayers which met the basic WHO specifications in two countries with differing climatic, labour and housing conditions, in order to establish a list of sprayers suitable for malaria eradication work and provide recommended replacement and maintenance schedules. WHO provided a short-term consultant (engineer), a sanitarian, equipment and partial cost of local labour.

The evaluation work was carried out in Iran and Nigeria with the co-operation of the respective Governments. The following equipment was tested: compression sprayers, stirrup-pump sprayers, rubber disc flow regulators, mechanical regulators and T-jet nozzle tips.

Inter-regional 85 Second Asian Conference on Yaws, Bandung (30 Oct. - 10 Nov. 1961) R UNICEF

A yaws co-ordination meeting was held from 30 October to 3 November 1961, followed by a conference from 4 to 10 November 1961 to evaluate the achievements of the yaws campaigns in the South-East Asia and Western Pacific Regions and the methods used in those campaigns, and to discuss the problems which are arising in organizing the later stages of the campaigns and in integrating them into the rural health services.

WHO provided costs of attendance of the twenty participants from Burma, Cambodia, Ceylon, Federation of Malaya, India, Indonesia, Philippines, Thailand and Western Samoa.


A seminar to bring together responsible officials from seventeen countries in the African and Eastern Mediterranean Regions to discuss the economic, social and health advantages resulting from the provision of community water supplies, examine the latest information on the financing, management and organization of community water supply programmes and to exchange views on methods for stimulating new construction and improving existing systems. It was attended by twenty-eight participants—from Ethiopia, Federation of Rhodesia and Nyasaland, Ghana, Guinea, Iran, Iraq, Kenya, Liberia, Madagascar, Nigeria, Pakistan, Saudi Arabia, Senegal, Somalia, Sudan and United Arab Republic—and by seven observers—two from Portugal and five from the United States International Co-operation Administration. Twenty papers were presented at plenary sessions and discussions were held both in plenary session and in small discussion groups. Inspection visits were arranged to waterworks in and around Addis Ababa.

WHO provided three short-term consultants and costs of attendance of the participants.

Inter-regional 88 Inter-regional Leprosy Conference, Istanbul (2-7 Oct. 1961) R

A conference to determine the extent of the leprosy problem in certain countries of the European and Eastern Mediterranean Regions, to study its aspects and to define the most suitable methods for leprosy control. It was attended by sixteen participants—from Bulgaria, Cyprus, Greece, Iran, Italy, Lebanon, Malta, Morocco, Portugal, Spain, Turkey and Yugoslavia—and by seven observers from governmental and non-governmental organizations. In addition to studying leprosy control, the conference examined the methods of treatment, prophylaxis
and rehabilitation most appropriate for recommending to the countries concerned, and different aspects of teaching and training in leprosy for medical students, for physicians, and for paramedical personnel of leprosy campaigns.

WHO provided three temporary advisers, a short-term consultant, and costs of attendance of the participants.

**Inter-regional 99 Malaria Eradication: Training Centre, French Language, Belgrade (1961) MESA**

To establish and operate a French-language malaria eradication training centre to train malarialogists, entomologists, sanitary engineers, sanitarians and other categories of staff in malaria eradication techniques.

**Inter-regional 92 Inter-regional Training Course on Occupational Health, Alexandria (2 Oct. - 25 Nov. 1961) R (ILO)**

A course, sponsored jointly by ILO and WHO, to give training in occupational health to workers from various countries, and thus stimulate the development of occupational health in those countries. The course, which covered all aspects of occupational health, included lectures, laboratory demonstrations, discussion sessions, and particular attention was paid to practical aspects and to field visits. There were thirty-one trainees—from Ceylon, China (Taiwan), Cyprus, Federation of Malaya, India, Indonesia, Iran, Iraq, Japan, Kuwait, Lebanon, Pakistan, Philippines, Sudan, Thailand, Turkey and United Arab Republic.

WHO provided three short-term consultants, fellowships for twenty-one trainees, supplies and equipment; ILO provided fellowships for the other ten trainees and the services of two staff members.


A seminar at which geneticists and radiation epidemiologists discussed with persons concerned with the recording of vital and health statistics the present adequacy and future potentialities of vital and health statistical data for use in studies on human genetics and on the effects of radiation in human populations. Common problems were examined and suggestions for overcoming limitations in the data were considered.

WHO provided financial assistance for the seminar, which was attended by sixty-one participants—from Austria, Belgium, Brazil, Canada, Chile, Czechoslovakia, Denmark, Federal Republic of Germany, Federation of Rhodesia and Nyasaland, Finland, France, India, Italy, Japan, Netherlands, Norway, South Africa, Spain, Sweden, Switzerland, Union of Soviet Socialist Republics, United Kingdom, United States of America, and Yugoslavia—and representatives from the International Atomic Energy Agency and UNESCO.

**Inter-regional 96 IAEA/WHO Training Course in Radiation Health and Safety, Chiba City, Japan (24 Oct. - 21 Nov. 1961) R (IAEA)**

A training course, sponsored jointly by the International Atomic Energy Agency and WHO, for persons having responsibilities in the field of radiation health and safety. It covered the basic physical and biological principles involved in radiation health, problems connected with the medical and industrial uses of X-rays, radioisotopes and other sources of radiation, the public health aspects of atomic energy activities and waste disposal, and the health problems associated with atomic energy installations. The course was followed by a study tour in the Kansai area of Japan from 22 to 26 November 1961. Twenty-one persons attended—from Australia, Burma, Cambodia, Ceylon, China (Taiwan), India, Indonesia, Japan, New Zealand, Pakistan, Philippines, Republic of Korea, Republic of Vietnam, and Thailand.

WHO and the International Atomic Energy Agency jointly provided the director of the course, two teaching assistants, the costs of attendance of fifteen trainees, and supplies; the United States Public Health Service provided a lecturer and the Government of Japan provided lecturers, facilities for the course and costs of attendance of six Japanese trainees.

**Inter-regional 97 FAO/IAEA/WHO Conference on the Use of Radioisotopes in Animal Biology and the Medical Sciences, Mexico City (21 Nov. - 1 Dec. 1961) R (FAO IAEA)**

A conference to bring together specialists in animal biology and the medical sciences who are interested in the use of radioisotopes, to enable them to discuss the results of their research work and to exchange information on a series of subjects in which rapid developments are taking place. It was also intended to give medical scientists a greater appreciation of the potentialities of radioisotope techniques in studies on general physiology and biochemistry, and to acquaint non-medical biologists with problems relating to the physiology of disease and with clinical uses of radioisotopes. There were 169 participants from thirty-two countries; they were nominated by their governments, which financed their attendance. Four speakers, from Canada, the Union of Soviet Socialist Republics, the United Kingdom and the United States of America, were invited, and representatives of the Inter-American Nuclear Energy Commission and the World Veterinary Association attended.

The costs of the conference were provided by FAO, the International Atomic Energy Agency, the Government of Mexico and WHO.

**Inter-regional 111 Travelling Seminar on Health Education, Union of Soviet Socialist Republics (13 May - 12 June 1961) TA**

A travelling seminar on health education in the Union of Soviet Socialist Republics, for health education specialists responsible for health education services in ministries of health and public health officers and epidemiologists having particular interest in the health education aspects of training programmes for health workers or of health services. There were eighteen participants—from Argentina, Brazil, Burma, Cameroun, Ceylon, Ethiopia, Ghana, India, Iran, Japan, Morocco, Nigeria, Pakistan, Poland, Senegal, Turkey and United Arab Republic. They studied the planning and organization of health education services at various administrative levels of government; educational work carried out through hospitals, polyclinics, dispensaries, medico-sanitary units, sanatoria, sanitary epidemiological stations and other health services and in industrial concerns; school health education; health education training of health personnel; the role of other agencies and organizations; and studies and research in health education.

WHO provided the costs of attendance of the participants, two technical advisers, a consultant, and six seminar staff members.
Inter-regional 112 Malaria Eradication: Team for Special Epidemiological Studies (1961 - ) MESA

To form a team to conduct special epidemiological studies and investigations and to help governments to solve problems related to residual malaria.

Inter-regional 113 International Training Course in the Epidemiology and Control of Tuberculosis, Prague (15 Nov. 1961 - end of March 1962) R

A course to teach modern methods of controlling tuberculosis as a public health problem to persons who will be engaged on tuberculosis control programmes. The course included lectures and panel discussions at the Post-graduate Medical School, Prague, and practical demonstrations by the Tuberculosis Research Institute and the Institute of Epidemiology and Microbiology, Prague.

WHO provided fellowships for the ten trainees—from Afghanistan, Argentina, Indonesia, Nigeria, Poland, Sudan and Turkey—eight short-term lecturers and special supplies.

Inter-regional 114 Venereal Diseases Travelling Seminar, Union of Soviet Socialist Republics (8 Sept. - 7 Oct. 1961) TA

Eighteen participants—from Brazil, Cambodia, Ceylon, Denmark, India, Indonesia, Iran, Iraq, Italy, Japan, Lebanon, Liberia, Philippines, United Arab Republic, United Kingdom, Venezuela and Yugoslavia—studied the methods in use in the Union of Soviet Socialist Republics for venereal disease control in rural, urban and maritime populations, the trends in research and the education and training of personnel.

WHO provided three short-term consultants, interpreters, and costs of attendance of the participants.

Inter-regional 125 Conference on Comparative Studies in Leukaemias, Philadelphia (27 Feb. - 3 March 1961) Special Account for Medical Research

A conference to further the integration of knowledge of and future research on bovine and canine leukaemias into work on leukaemias in man. The papers presented and the discussions dealt with the nomenclature and classification of leukaemias in cattle and dogs, areas for future research, criteria for descriptive epidemiological studies, trials of therapeutic substances, and leukaemias in animals other than cattle and dogs. The conference indicated suitable areas of future research and recommended the lines along which WHO could assist. There were thirty-one participants—from Canada, Denmark, Federal Republic of Germany, Sweden, United Kingdom and United States of America.

WHO provided a temporary adviser for nineteen days and the costs of attendance of seven participants, and three WHO staff members attended the conference.


The meeting was convened jointly by FAO, the International Atomic Energy Agency and WHO to discuss the nature of experimental evidence needed to provide a technical basis for legislation on the production and use of irradiated foods, from the point of view of their nutritional adequacy and harmlessness. Invitations to attend were sent to all Member States of the three sponsoring organizations; twenty-eight countries participated, the number of delegates of each country varying from one to eighteen. Representatives of the European Atomic Energy Community, the Organization for Economic Co-operation and Development, the European Nuclear Energy Agency, the International Union against Cancer and the International Union of Nutritional Sciences were also present. A general guide to the manner in which experimental studies on irradiated foods should be conducted was presented in the recommendations, and it was further recommended that a joint expert committee be convened in the near future to advise on special requirements for the testing of the wholesomeness of irradiated foods.

WHO, which shared the costs of the meeting jointly with FAO and the International Atomic Energy Agency, provided one of the three joint secretaries.
ANNEXES
### ANNEX 1

**MEMBERS AND ASSOCIATE MEMBERS OF THE WORLD HEALTH ORGANIZATION**

*at 31 December 1961*

At 31 December 1961 the World Health Organization had 108 Member States and two 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.

#### African Region

<table>
<thead>
<tr>
<th>Country</th>
<th>Date of Admission</th>
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<tbody>
<tr>
<td>Cameroon</td>
<td>6 May 1960</td>
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<tr>
<td>Central African Republic</td>
<td>20 September 1960</td>
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<tr>
<td>Chad</td>
<td>1 January 1961</td>
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<tr>
<td>Congo (Brazzaville)</td>
<td>26 October 1960</td>
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<td>Congo (Leopoldville)</td>
<td>24 February 1961</td>
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<td>Dahomey</td>
<td>20 September 1960</td>
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<td>Gabon</td>
<td>21 November 1960</td>
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<td>Ghana</td>
<td>8 April 1957</td>
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<td>Guinea</td>
<td>19 May 1959</td>
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<tr>
<td>Ivory Coast</td>
<td>28 October 1960</td>
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<td>Liberia</td>
<td>14 March 1947</td>
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<td>Madagascar</td>
<td>16 January 1961</td>
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<td>Mali</td>
<td>17 October 1960</td>
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<td>Mauritania</td>
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<td>Sierra Leone</td>
<td>20 October 1961</td>
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<td>South Africa</td>
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<td>Togo</td>
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<tr>
<td>Upper Volta</td>
<td>4 October 1960</td>
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</tbody>
</table>

#### Associate Members

- Federation of Rhodesia and Nyasaland: 14 May 1954
- Ruanda-Urundi: 20 February 1961

#### Region of the Americas

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<td>Argentina</td>
<td>22 October 1948</td>
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<td>Bolivia</td>
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<td>Brazil</td>
<td>2 June 1948</td>
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<td>Canada</td>
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<td>Chile</td>
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<td>Colombia</td>
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<td>Costa Rica</td>
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<td>Cuba</td>
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<td>Dominican Republic</td>
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<td>Ecuador</td>
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<td>El Salvador</td>
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<td>Haiti</td>
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<td>Honduras</td>
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<tr>
<td>Mexico</td>
<td>7 April 1948</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>24 April 1950</td>
</tr>
<tr>
<td>Panama</td>
<td>20 February 1951</td>
</tr>
<tr>
<td>Paraguay</td>
<td>4 January 1949</td>
</tr>
<tr>
<td>Peru</td>
<td>11 November 1949</td>
</tr>
<tr>
<td>United States of America</td>
<td>21 June 1948</td>
</tr>
<tr>
<td>Uruguay</td>
<td>22 April 1949</td>
</tr>
<tr>
<td>Venezuela</td>
<td>7 July 1948</td>
</tr>
</tbody>
</table>

#### South-East Asia Region

<table>
<thead>
<tr>
<th>Country</th>
<th>Date of Admission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>19 April 1948</td>
</tr>
<tr>
<td>Burma</td>
<td>1 July 1948</td>
</tr>
<tr>
<td>Ceylon</td>
<td>7 July 1948</td>
</tr>
<tr>
<td>India</td>
<td>12 January 1948</td>
</tr>
<tr>
<td>Indonesia</td>
<td>23 May 1950</td>
</tr>
<tr>
<td>Nepal</td>
<td>2 September 1953</td>
</tr>
<tr>
<td>Thailand</td>
<td>26 September 1947</td>
</tr>
</tbody>
</table>

#### European Region

<table>
<thead>
<tr>
<th>Country</th>
<th>Date of Admission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>26 May 1947</td>
</tr>
<tr>
<td>Austria</td>
<td>30 June 1947</td>
</tr>
<tr>
<td>Belgium</td>
<td>25 June 1948</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>9 June 1948</td>
</tr>
<tr>
<td>Byelorussian SSR</td>
<td>7 April 1948</td>
</tr>
<tr>
<td>Czecho-lovakia</td>
<td>1 March 1948</td>
</tr>
<tr>
<td>Denmark</td>
<td>19 April 1948</td>
</tr>
<tr>
<td>Finland</td>
<td>7 October 1947</td>
</tr>
<tr>
<td>France</td>
<td>16 June 1948</td>
</tr>
<tr>
<td>Germany, Federal Republic</td>
<td>29 May 1951</td>
</tr>
<tr>
<td>Greece</td>
<td>12 March 1948</td>
</tr>
<tr>
<td>Hungary</td>
<td>17 June 1948</td>
</tr>
<tr>
<td>Iceland</td>
<td>17 June 1948</td>
</tr>
<tr>
<td>Ireland</td>
<td>20 October 1947</td>
</tr>
<tr>
<td>Italy</td>
<td>11 April 1947</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>3 June 1949</td>
</tr>
</tbody>
</table>

1 Member States that have acceded to the Convention on the Privileges and Immunities of the Specialized Agencies and its Annex VII.

2 Tanganyika, which had been admitted to associate membership on 20 February 1961, became an independent State on 9 December 1961.
European Region (continued)

<table>
<thead>
<tr>
<th>Country</th>
<th>Date of Admission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monaco</td>
<td>8 July 1948</td>
</tr>
<tr>
<td>Morocco</td>
<td>14 May 1956</td>
</tr>
<tr>
<td>Netherlands</td>
<td>25 April 1947</td>
</tr>
<tr>
<td>Norway</td>
<td>18 August 1947</td>
</tr>
<tr>
<td>Poland</td>
<td>6 May 1948</td>
</tr>
<tr>
<td>Portugal</td>
<td>13 February 1948</td>
</tr>
<tr>
<td>Romania</td>
<td>8 June 1948</td>
</tr>
<tr>
<td>Spain</td>
<td>28 May 1951</td>
</tr>
<tr>
<td>Sweden</td>
<td>28 August 1947</td>
</tr>
<tr>
<td>Switzerland</td>
<td>26 March 1947</td>
</tr>
<tr>
<td>Turkey</td>
<td>2 January 1948</td>
</tr>
<tr>
<td>Ukrainian SSR</td>
<td>3 April 1948</td>
</tr>
<tr>
<td>Union of Soviet Socialist Republics</td>
<td>24 March 1948</td>
</tr>
<tr>
<td>United Kingdom of Great Britain and Northern Ireland</td>
<td>22 July 1946</td>
</tr>
<tr>
<td>Yugoslavia</td>
<td>19 November 1947</td>
</tr>
</tbody>
</table>

Eastern Mediterranean Region

<table>
<thead>
<tr>
<th>Country</th>
<th>Date of Admission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyprus</td>
<td>16 January 1961</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>11 April 1947</td>
</tr>
<tr>
<td>Iran</td>
<td>23 November 1946</td>
</tr>
<tr>
<td>Iraq</td>
<td>23 September 1947</td>
</tr>
<tr>
<td>Israel</td>
<td>21 June 1949</td>
</tr>
<tr>
<td>Jordan</td>
<td>7 April 1947</td>
</tr>
<tr>
<td>Kuwait</td>
<td>9 May 1960</td>
</tr>
<tr>
<td>Lebanon</td>
<td>19 January 1949</td>
</tr>
<tr>
<td>Libya</td>
<td>16 May 1952</td>
</tr>
<tr>
<td>Pakistan</td>
<td>23 June 1948</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>26 May 1947</td>
</tr>
<tr>
<td>Somalia</td>
<td>26 January 1961</td>
</tr>
<tr>
<td>Sudan</td>
<td>14 May 1956</td>
</tr>
<tr>
<td>Syria</td>
<td>18 December 1946</td>
</tr>
<tr>
<td>Tunisia</td>
<td>14 May 1956</td>
</tr>
<tr>
<td>United Arab Republic</td>
<td>16 December 1947</td>
</tr>
<tr>
<td>Yemen</td>
<td>20 November 1953</td>
</tr>
</tbody>
</table>

Western Pacific Region

<table>
<thead>
<tr>
<th>Country</th>
<th>Date of Admission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>2 February 1948</td>
</tr>
<tr>
<td>Cambodia</td>
<td>17 May 1950</td>
</tr>
<tr>
<td>China</td>
<td>22 July 1946</td>
</tr>
<tr>
<td>Japan</td>
<td>16 May 1951</td>
</tr>
<tr>
<td>Korea, Republic of</td>
<td>17 August 1949</td>
</tr>
<tr>
<td>Laos</td>
<td>17 May 1950</td>
</tr>
<tr>
<td>Malaya, Federation of</td>
<td>24 April 1958</td>
</tr>
<tr>
<td>New Zealand</td>
<td>10 December 1946</td>
</tr>
<tr>
<td>Philippines</td>
<td>9 July 1948</td>
</tr>
<tr>
<td>Viet-Nam</td>
<td>17 May 1950</td>
</tr>
</tbody>
</table>

Annex 2

MEMBERSHIP OF THE EXECUTIVE BOARD


<table>
<thead>
<tr>
<th>Designated by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr A. O. Abu Sham, Vice-Chairman</td>
</tr>
<tr>
<td>Dr M. Allaria</td>
</tr>
<tr>
<td>Professor E. J. Y. Aujaleu</td>
</tr>
<tr>
<td>Dr R. Baidya</td>
</tr>
<tr>
<td>Dr V. N. Butrov, Vice-Chairman</td>
</tr>
<tr>
<td>Dr Ca Xu Cam ²</td>
</tr>
<tr>
<td>Dr D. Castillo</td>
</tr>
<tr>
<td>Sir John Charles</td>
</tr>
<tr>
<td>Dr C. Estrada Sandoval ³</td>
</tr>
<tr>
<td>Dr M. N. Etemadian, Rapporteur</td>
</tr>
<tr>
<td>Dr J. D. Hourihan</td>
</tr>
<tr>
<td>Dr Yong Seung Lee</td>
</tr>
<tr>
<td>Dr A. Lynch C</td>
</tr>
<tr>
<td>Dr L. Moliitor</td>
</tr>
<tr>
<td>Dr A. Nabulsi</td>
</tr>
<tr>
<td>Dr H. M. Penido, Chairman</td>
</tr>
<tr>
<td>Dr J. Adjei Schandorf, Rapporteur</td>
</tr>
<tr>
<td>Dr K. Suvarnakich</td>
</tr>
</tbody>
</table>

¹Member States that have acceded to the Convention on the Privileges and Immunities of the Specialized Agencies and its Annex VII.
²Alternate to Dr Le Cuu Truong.
³Alternate to Mr H. Olivero.
2. Twenty-seventh session (New Delhi, 30 January - 2 February 1961)

Designated by

Dr A. O. Abu Shamma, Vice-Chairman .......... Sudan
Professor E. J. Y. Aujaleu ................. France
Dr R. Baidya .............................................. Nepal
Dr J. C. R. Buchanan 1 .................. United Kingdom of Great Britain and Northern Ireland
Dr V. N. Butrov, Vice-Chairman ........... Union of Soviet Socialist Republics
Dr D. Castillo ......................................... Venezuela
Dr J. D. Hourihan ....................................... Ireland
Dr Le Cui Truong ................................... Republic of Viet-Nam
Dr A. Lynch C ........................................... Peru
Dr A. Martinez Marchetti ................. Argentina
Dr L. Molitor, Rapporteur .................. Luxembourg
Dr H. M. Morshed ....................................... Iran
Dr A. Nabulsi .............................................. Jordan
Dr E. Novaes 2 ........................................ Guatemala
Dr Chubyung Pak ........................................ Republic of Korea
Dr H. M. Penido, Chairman .................. Brazil
Dr J. Adjei Schandorf, Rapporteur .......... Ghana
Dr K. Suvarnakich .................................... Thailand

3. Following the election at the Fourteenth World Health Assembly, 7-24 February 1961

The election at the Fourteenth World Health Assembly was the first after the entry into force, on 25 October 1960, of the amendments to the Constitution increasing the membership of the Executive Board from eighteen to twenty-four. The Fourteenth World Health Assembly therefore elected twelve new Members to designate persons to serve on the Board—six of them being to replace the retiring members designated by Brazil, France, Guatemala, Iran, the Republic of Viet-Nam and the Union of Soviet Socialist Republics. In pursuance of Article 25 of the Constitution, it was determined by lot that the terms of Chile and Nigeria should be one year and those of Iceland and Pakistan two years, the terms of the other eight Members elected being three years.

The election resulted in the following composition of the Board, the newly elected Members being denoted by asterisks:

<table>
<thead>
<tr>
<th>Designating country</th>
<th>Unexpired term of office at the time of closure of the Fourteenth World Health Assembly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>2 years</td>
</tr>
<tr>
<td>* Chile</td>
<td>1 year</td>
</tr>
<tr>
<td>Ghana</td>
<td>2 years</td>
</tr>
<tr>
<td>* Iceland</td>
<td>2 years</td>
</tr>
<tr>
<td>* Iraq</td>
<td>3 years</td>
</tr>
<tr>
<td>Ireland</td>
<td>1 year</td>
</tr>
<tr>
<td>* Israel</td>
<td>3 years</td>
</tr>
<tr>
<td>* Italy</td>
<td>3 years</td>
</tr>
<tr>
<td>* Japan</td>
<td>3 years</td>
</tr>
<tr>
<td>Jordan</td>
<td>2 years</td>
</tr>
<tr>
<td>Korea, Republic of</td>
<td>2 years</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>1 year</td>
</tr>
<tr>
<td>Nepal</td>
<td>1 year</td>
</tr>
<tr>
<td>* Nigeria</td>
<td>1 year</td>
</tr>
<tr>
<td>* Pakistan</td>
<td>2 years</td>
</tr>
<tr>
<td>Peru</td>
<td>1 year</td>
</tr>
<tr>
<td>* Poland</td>
<td>3 years</td>
</tr>
<tr>
<td>* Senegal</td>
<td>3 years</td>
</tr>
<tr>
<td>* Spain</td>
<td>3 years</td>
</tr>
<tr>
<td>Sudan</td>
<td>1 year</td>
</tr>
<tr>
<td>Thailand</td>
<td>2 years</td>
</tr>
<tr>
<td>United Kingdom of Great Britain and Northern Ireland</td>
<td>2 years</td>
</tr>
<tr>
<td>* United States of America</td>
<td>3 years</td>
</tr>
<tr>
<td>Venezuela</td>
<td>1 year</td>
</tr>
</tbody>
</table>

1 Alternate to Dr D. Thomson.
2 Alternate to Mr H. Olivero.
Annex 3

EXPERT ADVISORY PANELS AND COMMITTEES

1. EXPERT ADVISORY PANELS

Addiction-producing drugs
Antibiotics
Biological standardization
Brucellosis
Cancer
Cardiovascular diseases
Cholera
Chronic degenerative diseases
Dental health
Environmental health
Food additives
Health education
Health laboratory services
Health statistics
Human genetics

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

1 Alternate to Dr Pyung Hak Lee.
2 Alternate to Mr A. B. Sar.
3 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 third session, see section 4 below.
2. EXPERT COMMITTEES

The membership of the expert committees which met between 1 October 1960 and 31 December 1961 was as follows

**Expert Committee on Addiction-producing Drugs**

*Geneva, 10-15 October 1960*

Dr N. B. Eddy, Consultant on Narcotics, 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 G. Joachimoglu, Professor Emeritus of Pharmacology; formerly Chairman, Superior Health Council, Ministry of Social Welfare, Athens, Greece
Dr J. La Barre, Professor of Pharmacology, Faculty of Medicine and Pharmacy, Université libre de Bruxelles, Belgium
Dr T. Masaki, Professor Emeritus, Department of Pharmacology, Hokkaido University School of Medicine, Sapporo, Japan
Dr B. Mukerji, Director, Central Drug Research Institute, Lucknow, India
Dr V. V. Vassilieva, Professor of Pharmacology, Second Medical Institute, Moscow, Union of Soviet Socialist Republics

**Expert Committee on Arterial Hypertension and Ischaemic Heart Disease (Public Health Aspects)**

*Geneva, 16-23 October 1961*

Dr J. Brod, Associate Professor of Medicine, Vice-Director, Institute for Cardiovascular Research, Prague, Czechoslovakia
Dr H. E. Hilleboe, Commissioner of Health, New York State Department of Health, Albany, N.Y., United States of America
Dr N. Kimura, Professor of Medicine; Chief, Third Medical Clinic, and Director, Institute for Cardiovascular Diseases, Kurume University Medical School, Kyushu, Japan
Dr J. Lenègre, Professor of Medicine, Medical Clinic, Hôpital Boucicaut, Paris, France
Dr A. L. Myasnikov, Professor of Medicine; Director, Institute of Therapy, Academy of Medical Sciences of the USSR, Moscow, Union of Soviet Socialist Republics
Dr V. Puddu, Professor of Medicine, Rome, Italy
Dr F. H. Smirk, Professor of Medicine, University of Otago Medical School, Dunedin, New Zealand
Dr C. Wilson, Professor of Medicine; Director, Medical Unit, London Hospital, London, England

**Expert Committee on Cancer (Reviewing Nominations for United Nations Award)**

*Geneva, 19-22 December 1961*

Dr L Berenblum, Professor of Cancer Research; Head, Department of Experimental Biology, Weizmann Institute of Science, Rehovot, Israel
Professor N. N. Blokhin, President, Academy of Medical Sciences of the USSR; Director, Institute of Experimental and Clinical Oncology, Moscow, Union of Soviet Socialist Republics
Professor L. Bugnard, Member of the Academy of Medicine; Director, Institut national d'Hygiène, Paris, France
Dr K. M. Endicott, Director, National Cancer Institute, National Institutes of Health, Bethesda, Md., United States of America
Expert Committee on Chemotherapy of Cancer

Geneva, 18-22 September 1961

Dr A. L. Aboul Nasr, Professor of Cancer Surgery; Head, Cancer Institute, Faculty of Medicine, University of Cairo, United Arab Republic

Professor N. N. Blokhin, President, Academy of Medical Sciences of the USSR; Director, Institute of Experimental and Clinical Oncology, Moscow, Union of Soviet Socialist Republics

Dr J. Holland Burchenal, Chief, Division of Clinical Chemotherapy, Sloan-Kettering Institute for Cancer Research, New York, N.Y., United States of America

Dr M. Ibrahim, formerly Professor of Cardiology, Faculty of Medicine, University of Cairo, United Arab Republic

Dr A. I. Darling, Professor of Dental Medicine, University of Bristol, England

Dr G. N. Davies, Associate Professor and Head of Department of Preventive, Public Health and Children's Dentistry, University of Otago, Dunedin, New Zealand

Dr R. M. Grainger, Professor, Research Division, Faculty of Dentistry, University of Toronto, Ont., Canada

Dr J. W. Knutson, Professor of Preventive Dentistry and Public Health, University of California, Los Angeles, Calif., United States of America

Dr V. F. Roudko, Chief Stomatologist, Ministry of Health of the USSR, Moscow, Union of Soviet Socialist Republics

Dr S. Sweilim, Assistant Under-Secretary of State, Ministry of Health, Cairo, United Arab Republic

Expert Committee on Chronic Cor Pulmonale

Geneva, 10-15 October 1960

Dr J. Dankmeijer, Professor of Anatomy, Embryology and Physical Anthropology, University of Leiden, Netherlands

Dr F. Herles, Professor of Medicine, Second Internal Clinic, Charles University, Prague, Czechoslovakia

Dr M. Ibrahim, formerly Professor of Cardiology, Faculty of Medicine, Cairo University, United Arab Republic

Dr D. D. Reid, Professor of Epidemiology, Department of Medical Statistics and Epidemiology, London School of Hygiene and Tropical Medicine, London, England

Dr Dickinson W. Richards, Lambert Professor of Medicine, College of Physicians and Surgeons, Columbia University, New York, N.Y., United States of America

Dr C. H. Stuart-Harris, Professor of Medicine, University of Sheffield, England

Professor A. C. Taquini, Director, Cardiological Research Centre, Faculty of Medicine, University of Buenos Aires, Argentina

Dr L. Werko, Professor of Medicine, First Medical Clinic, Göteborg University, Sweden

Expert Committee on Dental Health (Standardization of Reporting of Dental Diseases and Conditions)

Geneva, 14-20 November 1961

Dr Andrée Chaput, Professeur agrégé, Faculty of Medicine, University of Paris, France

Dr A. I. Darling, Professor of Dental Medicine, University of Bristol, England

Dr G. N. Davies, Associate Professor and Head of Department of Preventive, Public Health and Children's Dentistry, University of Otago, Dunedin, New Zealand

Dr R. M. Grainger, Professor, Research Division, Faculty of Dentistry, University of Toronto, Ont., Canada

Dr J. W. Knutson, Professor of Preventive Dentistry and Public Health, University of California, Los Angeles, Calif., United States of America

Dr V. F. Roudko, Chief Stomatologist, Ministry of Health of the USSR, Moscow, Union of Soviet Socialist Republics

Dr S. Sweilim, Assistant Under-Secretary of State, Ministry of Health, Cairo, United Arab Republic

Expert Committee on Filariasis

Geneva, 25 July - 1 August 1961

Professor E. A. H. Friedheim, Geneva, Switzerland

Professor J. F. Kessel, Director, Pacific Tropic Diseases Project, University of California Medical Center, Los Angeles, Calif., United States of America

Dr N. G. S. Raghavan, Deputy Director, Malaria Institute of India, New Delhi, India

Dr O. Rodrigues da Costa, Professor of Parasitology, Faculty of Medicine, University of Belém, Brazil

Mr C. B. Symes, Taunton, Somerset, England

Dr T. Wilson, Liverpool School of Tropical Medicine, Liverpool, England

Expert Committee on Health Laboratory Services (Planning, Organization and Administration of a National Health Laboratory Service)

Geneva, 6-13 November 1961

Dr R. Buttiaux, Section Chief, Institut Pasteur, Lille, France

Dr R. B. Hogan, Medical Director, Chief Laboratory Branch, Communicable Disease Center, Atlanta, Ga., United States of America

Professor V. S. Mangalik, Lucknow, India

Dr R. E. Nassif, Chairman, Department of Clinical Pathology, and Director of Hospital Laboratory, School of Medicine, American University of Beirut, Lebanon

Dr K. Raska, Professor of Charles University; Director, Institute of Epidemiology and Microbiology, Prague, Czechoslovakia

Dr J. B. Shrivastav, Director, Central Research Institute, Kasauli, Punjab, India

Dr R. Turner, Adviser in Pathology, State Health Department, South African Government Pathological Laboratory, Cape Town, South Africa

Dr C. H. Yen, Commissioner of Health, Department of Health, Taiwan Provincial Government, Taichung, China

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1 Unable to attend.

Dr V. M. Zhdanov,1 Chief Scientific Secretary of the Praesidium, Academy of Medical Sciences of the USSR, Moscow, Union of Soviet Socialist Republics

Expert Committee on Health Statistics 2

Geneva, 5-10 December 1960

Mr F. F. Harris, Director, Health and Welfare Division, Dominion Bureau of Statistics, Ottawa, Ont., Canada

Dr J. D. Horn (formerly Senior Specialist (Medical Statistician)), Federal Government of Nigeria, Edinburgh, Scotland

Mr F. E. Linder, Director, National Center for Health Statistics, Department of Health, Education and Welfare, Public Health Service, Washington, D.C., United States of America

Dr W. P. D. Logan, Chief Statistician (Medical), General Register Office, London, England

Professor E. A. Sadvokasova,1 Head, Department of Health Statistics, Semashko Institute of Public Health Administration and History of Medicine, Moscow, Union of Soviet Socialist Republics

Dr S. C. Seal, Officer on Special Duty (Morbidity Survey), Directorate General of Health Services, New Delhi, India

Dr H. Soda, Vice-Director, Institute of Public Health, Tokyo, Japan

Dr M. Vacek, Research Worker, Statistical Department, Institute for Research into the Organization of the Public Health Services, Prague, Czechoslovakia

Expert Committee on Health Statistics: Sub-Committee on Classification of Diseases

Geneva, 13-21 November 1961

Dr J. M. Aubenque, Chief, Division of Health and Medical Statistics, National Institute of Statistics and Economic Studies, Paris, France

Mr F. F. Harris, Director, Health and Welfare Division, Dominion Bureau of Statistics, Ottawa, Ont., Canada

Dr Gertrude Kallner, Chief, Health Section, Central Bureau of Statistics, Jerusalem, Israel

Professor S. Koller, Federal Statistics Office, Wiesbaden, Federal Republic of Germany

Dr Morton Kramer, Chief, Biometrics Branch, National Institute of Mental Health, Bethesda, Md., United States of America

Dr I. M. Moriyama, Chief, Office of Health Statistics Analysis, National Center for Health Statistics, Department of Health, Education and Welfare, Public Health Service, Washington, D.C., United States of America

Dr V. K. Ovcharov,1 Head, Department of Health Statistics, Semashko Institute of Public Health Administration and History of Medicine, Moscow, Union of Soviet Socialist Republics

Dr D. D. Reid, Professor of Epidemiology, Department of Medical Statistics and Epidemiology, London School of Hygiene and Tropical Medicine, London, England

Dr B. Skrinjar, Head, Division of Social Medicine, National Institute of Health, Ljubljana, Yugoslavia

Expert Committee on Human Genetics (The Teaching of Genetics in the Undergraduate Medical Curriculum and in Postgraduate Training)

Geneva, 28 November - 4 December 1961

Professor J. A. Böök, Institute for Medical Genetics, University of Uppsala, Sweden

Professor R. Ceppellini, Institute for Medical Genetics, University of Turin, Italy

Dr F. Clarke Fraser, Department of Genetics, McGill University, Montreal, Quebec, Canada

Dr J. A. Fraser Roberts, Medical Research Council, Clinical Genetics Research Unit, Institute of Child Health, Hospital for Sick Children, London, England

Dr O. Frota-Pessoa, Faculty of Philosophy, Science and Literature, University of São Paulo, Brazil

Professor D. Klein, Institute for Medical Genetics, University Ophthalmological Clinic, Geneva, Switzerland

Professor M. Lamy, Paris University Faculty of Medicine, Medical Genetics Clinic, Hôpital des Enfants-Malades, Paris, France

Expert Committee on Insecticides (Toxic Hazards of Pesticides to Man)

Geneva, 23-30 October 1961

Dr J. M. Barnes, Director, Toxicology Research Unit, Medical Research Council Laboratories, Carshalton, Surrey, England

Dr W. J. Hayes, Director, Chief, Toxicology Section, Communicable Disease Center, United States Public Health Service, Atlanta, Ga., United States of America

Professor C. Heymans, Director, Institute of Pharmacology and Therapeutics, National University, Ghent, Belgium

Dr B. Holmstedt, Department of Pharmacology, Karolinska Institut, Stockholm, Sweden

Dr D. P. Kennedy, Director, Division of Public Health, Department of Health, Wellington, New Zealand

Dr L. J. Medved, Director, Institute of Labour Hygiene, Kiev, Union of Soviet Socialist Republics

Dr S. P. Ramakrishnan, Director, Malaria Institute of India, New Delhi, India

Professor R. C. J. Truhaft, Professor of Toxicology and Industrial Health, Faculty of Pharmacy, University of Paris, France; Member of the Conseil supérieur d'Hygiène publique de France

Expert Committee on Maternal and Child Health (Public Health Aspects of Low Birth Weight) 3

Geneva, 21-26 November 1960

Sir Dugald Baird, Regius Professor of Midwifery and Gynaecology, University of Aberdeen, Scotland

Dr Leona Baumgartner, Commissioner of Health, New York City Health Department, United States of America

Dr K. C. Chaudhuri, Director, Institute of Child Health, Calcutta, India

Dr F. Gómez, Director, Children's Hospital, Mexico, D.F., Mexico

1 Unable to attend.
Dr M. Lelong, Professor, Clinic for Child Health and Welfare, St-Vincent-de-Paul Hospital, Paris, France
Professor J. Lesinski, Deputy Director, Institute of Mother and Child, Obstetrics and Gynaecology Clinic, Warsaw, Poland

Expert Committee on Mental Health (Programme Development in the Mental Health Field) 1

Geneva, 3-8 October 1960

Dr J. de Ajuriaquerra, Professor of Psychiatry; Director, Psychiatric Clinic, Geneva University, Switzerland
Sir Kenneth Cowan, Chief Medical Officer, Department of Health for Scotland, Edinburgh
Dr E. Cunningham Dax, Chairman, Mental Hygiene Authority of Victoria, Melbourne, Australia
Dr R. H. Felix, Director, National Institute of Mental Health, Bethesda, Md., United States of America
Dr H. L. Harmsen, Professor of Social Hygiene; Director, Institute of Hygiene, Hamburg, Federal Republic of Germany
Miss I. Marwick, Matron, Tara Hospital, Johannesburg, South Africa
Dr F. A. Quirós, Director, Mental Health Department, Ministry of Public Health, San José, Costa Rica
Dr A. V. Snehnevsky, Professor of Psychiatry; Director, Department of Psychiatry, Institute for Advanced Training of Physicians, Moscow, Union of Soviet Socialist Republics
Dr A. Wagdi, Director, Mental Health Administration, Ministry of Health, Cairo, United Arab Republic

Expert Committee on Mental Health (The Role of Public Health Officers and General Practitioners in Mental Health Care)

Geneva, 31 October - 7 November 1961

Dr J. Horwitz, Chief, Psychiatric Service, Psychiatric Hospital, Santiago, Chile
Dr W. A. Karunaratne, Director of Health Services, Department of Health, Colombo, Ceylon
Dr O. V. Kerbikov, Professor of Psychiatry; Director, Second Medical Institute, Moscow, Union of Soviet Socialist Republics
Dr T. A. Lambo, Medical Superintendent, Western Region Neuropsychiatric Centre, Aro Hospital, Abeokuta, Nigeria
Dr A. S. Manugian, Physician Superintendent, Lebanon Hospital for Mental and Nervous Disorders, Asfuriyeh, Beirut, Lebanon
Dr M. Martin, Chief, Mental Health Division, Department of National Health and Welfare, Ottawa, Ont., Canada
Dr A. Querido, Professor of Social Medicine, University of Amsterdam, Netherlands
Dr P. D. Sivadon, Professor of Psychiatry, Université libre de Bruxelles, Belgium; Médecin des Hôpitaux psychiatriques de la Seine, Le Mesnil-Saint-Denis, France

Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel (Recommended Requirements for Schools of Public Health) 2

Geneva, 12-16 December 1960

Professor E. J. Y. Aujaleu, Director-General of Health, Ministry of Public Health and Population, Paris, France

Dr V. V. Ermakov, Chief, Section of Medical Training Establishments and Personnel, Ministry of Health of the USSR, Moscow, Union of Soviet Socialist Republics
Sir Edward Ford, Director, School of Public Health and Tropical Medicine, University of Sydney, Australia
Dr N. Jungalwalla, Deputy Director-General of Health Services, Directorate General of Health Services, New Delhi, India
Dr A. M. Kamal, Director, High Institute of Public Health, Alexandria, United Arab Republic
Dr E. L. Stebbins, Dean, Johns Hopkins University School of Hygiene and Public Health, Baltimore, Md., United States of America
Dr H. Urzua, Director, School of Public Health, University of Chile, Santiago, Chile
Dr W. S. Walton, Professor of Public Health, London School of Hygiene and Tropical Medicine, London, England

Expert Committee on the Public Health Aspects of Housing 3

Geneva, 19-26 June 1961

Mr A. L. Berti, Director of Malariology and Environmental Sanitation, Ministry of Health and Welfare, Caracas, Venezuela
Mr G. Blachère, Engineer-in-Chief for Bridges and Roads, and Director, Scientific and Technical Building Centre, Paris, France
Mr H. von Hertzen, Managing Director, Housing Foundation, Helsinki, Finland
Mr E. Larrey, Engineer-in-Chief, Public Works Division, Ministry of Works and Housing, Accra, Ghana
Dr Y. D. Lebedev, Chief, State Sanitary Inspectorate, Ministry of Health of the USSR, Moscow, Union of Soviet Socialist Republics
Dr J. M. Mackintosh, formerly Professor of Public Health, London School of Hygiene and Tropical Medicine, London, England; Consultant, Milbank Memorial Fund
Mr N. V. Modak, Director, Central Public Health Engineering Research Institute, and Consulting Engineer, Bombay Municipal Corporation, India
Dr C. Woodbury, Director of Urban Research, and Chairman, Regional Planning Course, University of Wisconsin, Madison, Wis., United States of America

Expert Committee on Radiation (Radiation Hazards in Perspective)

Geneva, 24-30 October 1961

The Right Honourable Lord Adrian, O.M., The Master’s Lodge, Trinity College, Cambridge, England
Dr Austin M. Brues, Director, Division of Biological and Medical Research, National Laboratory, Argonne, Ill., United States of America
Dr L. T. Friberg, Professor of Hygiene, Institute of Hygiene, Karolinska Institut, Stockholm, Sweden
Dr M. Hasek, Czechoslovak Academy of Sciences, Biological Institute, Prague, Czechoslovakia

Dr E. E. Pochin, Medical Research Council, Department of Clinical Research, University College Hospital Medical School, London, England

Dr M. N. Rao, Professor of Physiological and Industrial Hygiene, All-India Institute of Hygiene and Public Health, Calcutta, India

Dr A. T. Shousha, Supervisor, Health Department, League of Arab States, Cairo, United Arab Republic

Dr E. C. Vigliani, Professor of Occupational Health, University of Milan, Italy

Expert Committee on Specifications for Pharmaceutical Preparations

Geneva, 5-9 December 1960

Dr T. Canback, 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 F. N. Hughes, Dean, Faculty of Pharmacy, University of Toronto, Ont., Canada

Dr T. Itai, Chief, Department of Drug Research, National Institute of Hygiene, Tokyo, Japan; Member of the Japanese Pharmacopoeia Commission

Dr K. G. Krebs, Director of Quality Control, E. Merck A.G., Darmstadt, Federal Republic of Germany

Dr Z. Margasinski, Head, Department of Chemistry, Institute of Drugs, Warsaw, Poland

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

Professor Noronha da Costa, Professor of Industrial Pharmaceutical Chemistry, University of the State of Rio de Janeiro, Rio de Janeiro, Brazil

Expert Committee on Specifications for Pharmaceutical Preparations: Sub-Committee on Non-Proprietary Names

Geneva, 8-11 November 1961

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 K. O. Moller, Director, Department of Pharmacology, Faculty of Medicine, University of Copenhagen, Denmark

Professor V. Zakusov, Director, Institute of Pharmacology and Chemotherapy, Academy of Medical Sciences of the USSR, Moscow, Union of Soviet Socialist Republics

Expert Committee on Trachoma

Geneva, 29 August - 4 September 1961

Professor G. B. Biatti, Director, Ophthalmological Clinic, University of Rome, Italy

Dr A. M. Kamal, Director, High Institute of Public Health, Alexandria, United Arab Republic

Professor A.-M. Larmande, Director, Algiers Trachoma Institute, Algeria

Professor Olga Litricin, Professor of Ophthalmology, Faculty of Medicine, Belgrade, Yugoslavia

Professor Ida Mann, Research Committee of the Ophthalmic Research Institute of Australia, Perth, Western Australia

Dr A. A. de Carvalho Sampaio, Senior Inspector of Health and Hygiene, Ministry of Health, Lisbon, Portugal

Dr J. Graham Scott, Medical Centre, Johannesburg, South Africa

Dr J. C. Snyder, Dean, Harvard University School of Public Health, Boston, Mass., United States of America

Joint Committees

Expert Committee on Pesticide Residues (held jointly with an FAO Panel of Experts on the Use of Pesticides in Agriculture)

Rome, 9-16 October 1961

Dr Simone Dormal - van den Bruel, Attachée de recherches, Belgian Institute for the Promotion of Scientific Research in Industry and Agriculture (I.R.S.I.A.), National Centre for Phytopharmacy Research, Gembloux, Belgium

1 Unable to attend.
Dr. W. J. Hayes, Jr., Scientist Director, Chief, Toxicology Section, Communicable Disease Center, United States Public Health Service, Atlanta, Ga., United States of America

Dr. H. Hurtig, Associate Director of Program, Research Branch, Department of Agriculture, Ottawa, Ont., Canada

Dr. E. J. Miller, Chemistry Department, Plant Pathology Laboratory, Hatching Green, Harpenden, Herts., England

Dr. H. H. Schwartt, Head, Department of Entomology, Cornell University, Ithaca, N.Y., United States of America

Dr. H. F. Smyth, Jr. Administrative Fellow, Mellon Institute, Pittsburgh, Penn., United States of America

Dr. H. B. Stoner, Toxicology Research Unit, Medical Research Council Laboratories, Carshalton, Surrey, England

Professor R. C. J. Truhaut, Professor of Toxicology and Industrial Health, Faculty of Pharmacy, University of Paris, France; Member of the Conseil supérieur d’Hygiène publique de France

**Joint FAO/WHO Expert Committee on Food Additives (Evaluation of the Carcinogenic Hazards of Food Additives)**

*Geneva, 12-19 December 1960*

Dr. Eldon M. Boyd, Professor of Pharmacology, Queen’s University, Kingston, Ont., Canada

Professor E. Boyland, Chester Beatty Research Institute, London, England

Mr. H. Cheftel, Director, Research Laboratory, Etablissements Carnaud et Forges de Basse-Indre, Boulogne-Billancourt (Seine), France

Professor H. Druckrey, Laboratory of the University Surgical Clinic, Freiburg-im-Breisgau, Federal Republic of Germany

Professor A. C. Frazer, Department of Medical Biochemistry and Pharmacology, University of Birmingham, England

Mr. H. van Genderen, Chief, Laboratory of Pharmacology and Toxicology, National Institute of Public Health, Utrecht, Netherlands

Dr. J. A. Miller, Professor of Oncology, McArdle Memorial Laboratory for Cancer Research, University of Wisconsin, Madison, Wis., United States of America

Dr. B. L. Oser, Food and Drug Research Laboratories, Inc., New York City, N.Y., United States of America

Professor L. Shabad, Deputy Director, Institute of Experimental and Clinical Oncology, Academy of Medical Sciences of the USSR, Moscow, Union of Soviet Socialist Republics

Dr. P. Shubik, Professor of Oncology, Chicago Medical School, Chicago, Ill., United States of America

Dr. A. Tannenbaum, Department of Cancer Research, Michael Reese Hospital and Medical Center, Chicago, Ill., United States of America

Professor R. C. J. Truhaut, Professor of Toxicology and Industrial Health, Faculty of Pharmacy, University of Paris, France; Member of the Conseil supérieur d’Hygiène publique de France

**Joint FAO/WHO Expert Committee on Food Additives (Evaluation of the Toxicity of a Number of Antimicrobials and Antioxidants)**

*Geneva, 5-12 June 1961*

Dr. E. L. Abramson, Professor of Food Hygiene, State Institute for Public Health, Stockholm, Sweden

Professor F. E. Budagyan, Department of Food Hygiene, Institute for Advanced Training of Physicians, Moscow, Union of Soviet Socialist Republics

Dr. S. Daigaard-Mikkelsen, Professor of Pharmacology and Toxicology, Royal Veterinary and Agricultural College, Copenhagen, Denmark

Professor H. Druckrey, Laboratory of the University Surgical Clinic, Freiburg-im-Breisgau, Federal Republic of Germany

Dr. Garth Fitzhugh, Food and Drug Administration, Department of Health, Education and Welfare, Washington, D.C., United States of America

Professor A. C. Frazer, Department of Medical Biochemistry and Pharmacology, University of Birmingham, England

Mr. H. van Genderen, Chief, Laboratory of Pharmacology and Toxicology, National Institute of Public Health, Utrecht, Netherlands

Dr. F. C. Lu, Food and Drug Directorate, Department of National Health and Welfare, Ottawa, Ont., Canada

Dr. P. N. Magee, Toxicology Research Unit, Medical Research Council Laboratories, Carshalton, Surrey, England

Dr. B. Mukerji, Director, Central Drug Research Institute, Lucknow, India

Dr. H. C. Spencer, Biochemical Research Laboratory, Dow Chemical Company, Midland, Mich., United States of America

Professor R. C. J. Truhaut, Professor of Toxicology and Industrial Health, Faculty of Pharmacy, University of Paris, France; Member of the Conseil supérieur d’Hygiène publique de France

Professor R. T. Williams, Professor of Biochemistry, St Mary’s Hospital Medical School, London, England

**Joint FAO/WHO Expert Committee on Meat Hygiene**

*Rome, 18-25 September 1961*

Dr. J. P. W. Anemaet, Veterinary Officer of the State Veterinary Service, Ministry of Agriculture and Fisheries, The Hague, Netherlands

Professor H. Drieux, National Veterinary School, Maisons-Alfort (Seine), France

Professor A. Jepsen, Royal Veterinary and Agricultural College, Copenhagen, Denmark

Professor A. A. Ressang, Head, Institute for Pathology and Food Hygiene, Faculty of Veterinary Science, University of Indonesia, Bogor, Indonesia

Professor F. Schönberg, Institute for Food and Milk Hygiene, Veterinary College, Hanover, Federal Republic of Germany

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2 Unable to attend.
Dr M. G. Shevchenko, Chief Inspector of Food Hygiene, State Sanitary Inspectorate of the Union of Soviet Socialist Republics, Moscow, Union of Soviet Socialist Republics

Dr H. Thornton, Chief Veterinary Officer, Town Hall, Newcastle-upon-Tyne, England

Dr R. E. Willie, Chief, Inspection Branch, Poultry Division, United States Department of Agriculture, Agricultural Marketing Service, Washington, D.C., United States of America

Dr F. Aylward, Head of the Department of Chemistry and Food Technology, Borough Polytechnic, London, England

Dr R. Barakat, Professor of Nutrition, High Institute of Public Health, Alexandria, United Arab Republic

Professor W. J. Darby, Professor of Biochemistry; Director, Division of Nutrition, Vanderbilt University School of Medicine, Nashville, Tenn., United States of America

Professor M. J. L. Dols, General Adviser, Ministry of Agriculture and Fisheries, The Hague, Netherlands

Dr C. Gopalan, Director, Nutrition Research Laboratories, Indian Council of Medical Research, Hyderabad, India

Dr J. Mašek, Professeur agrégé, Faculty of Hygiene, Charles University, Prague, Czechoslovakia

Dr J. Mayer, Associate Professor of Nutrition, Harvard University School of Public Health, Boston, Mass., United States of America

Dr M. K. Afridi, Vice-Chancellor, University of Peshawar, Pakistan

Dr J. C. Azurin, Director of Quarantine of the Philippines, Manila, Philippines

Dr B. M. Clark, Secretary for Health and Chief Health Officer, Pretoria, South Africa

Dr A. El Guebaly, Director-General, Quarantine Administration, Ministry of Health, Cairo, United Arab Republic

Professor E. G. Nauck, Director, Institute of Tropical Medicine, Hamburg, Federal Republic of Germany

Mr K. D. Quarterman, Chief, Technical Development Laboratories, Communicable Diseases Center, United States Public Health Service, Savannah, Ga., United States of America

Dr A. P. Sackett, Chief, Division of Foreign Quarantine, United States Public Health Service, Washington, D.C., United States of America

Sir Harold Whittingham, formerly Director of Medical Services, Royal Air Force, United Kingdom of Great Britain and Northern Ireland

Professor B. S. Platt, Director, Human Nutrition Research Unit, National Institute for Medical Research, London, England

Dr Hazel K. Stiebeling, Director, Institute of Home Economics, Agricultural Research Service, Department of Agriculture, Washington, D.C., United States of America

Professor E. F. Terroine, Director, National Centre for the Co-ordination of Studies and Research on Nutrition and Food, Paris, France

Joint FAO/WHO Expert Committee on Nutrition

Geneva, 18-25 April 1961

Dr F. Aylward, Head of the Department of Chemistry and Food Technology, Borough Polytechnic, London, England

Dr R. Barakat, Professor of Nutrition, High Institute of Public Health, Alexandria, United Arab Republic

Professor W. J. Darby, Professor of Biochemistry; Director, Division of Nutrition, Vanderbilt University School of Medicine, Nashville, Tenn., United States of America

Professor M. J. L. Dols, General Adviser, Ministry of Agriculture and Fisheries, The Hague, Netherlands

Dr C. Gopalan, Director, Nutrition Research Laboratories, Indian Council of Medical Research, Hyderabad, India

Dr J. Mašek, Professeur agrégé, Faculty of Hygiene, Charles University, Prague, Czechoslovakia

Dr J. Mayer, Associate Professor of Nutrition, Harvard University School of Public Health, Boston, Mass., United States of America

3. COMMITTEE ON INTERNATIONAL QUARANTINE

Geneva, 17-22 October 1960

Dr M. K. Afridi, Vice-Chancellor, University of Peshawar, Pakistan

Dr J. C. Azurin, Director of Quarantine of the Philippines, Manila, Philippines

Dr B. M. Clark, Secretary for Health and Chief Health Officer, Pretoria, South Africa

Dr A. El Guebaly, Director-General, Quarantine Administration, Ministry of Health, Cairo, United Arab Republic

Professor E. G. Nauck, Director, Institute of Tropical Medicine, Hamburg, Federal Republic of Germany

Mr K. D. Quarterman, Chief, Technical Development Laboratories, Communicable Diseases Center, United States Public Health Service, Savannah, Ga., United States of America

Dr A. P. Sackett, Chief, Division of Foreign Quarantine, United States Public Health Service, Washington, D.C., United States of America

Sir Harold Whittingham, formerly Director of Medical Services, Royal Air Force, United Kingdom of Great Britain and Northern Ireland

Geneva, 6-10 November 1961

Dr M. K. Afridi, Vice-Chancellor, University of Peshawar, Pakistan

Dr J. C. Azurin, Director of Quarantine of the Philippines, Manila, Philippines

Dr J. A. Bell, Chief, Epidemiological Section, Laboratory of Infectious Diseases, National Institutes of Health, Bethesda, Md., United States of America

Mr R. W. Bonhoff, Facilitation Representative, Deutsche Luft Hansa A.G., Frankfurt-am-Main, Federal Republic of Germany

Dr W. A. Karunaratne, Director of Health Services, Department of Health, Colombo, Ceylon

Dr L. H. Murray, Principal Medical Officer, Ministry of Health, London, England

Dr H. M. Penido, Superintendent, Special Public Health Service, Rio de Janeiro, Brazil

Dr J. N. Robertson, Principal Medical Officer, Ministry of Health, Accra, Ghana


2 Unable to attend.
4. ADVISORY COMMITTEE ON MEDICAL RESEARCH

The Advisory Committee on Medical Research was established pursuant to resolution WHA12.17.

Third Session
Geneva, 26-30 June 1961
Professor D. Bovet, Director, Department of Therapeutic Chemistry, Istituto Superiore di Sanità, Rome, Italy
Professor L. Bugnard, Member of the Academy of Medicine; Director, Institut national d'Hygiène, Paris, France
Sir Macfarlane Burnet, Director, Walter and Eliza Hall Institute of Medical Research, Melbourne, Australia
Professor C. Chagas, Director, Institute of Biophysics, University of Brazil, Rio de Janeiro, Brazil
Professor J. Charvat, Director, Third Department of Medicine, Charles University, Prague, Czechoslovakia
Professor H. Chiari, Director, Institute of Pathological Anatomy, University of Vienna, Austria
Dr Z. Ermolieva, Professor of Medical Microbiology, Institute for Advanced Training of Physicians, Moscow, Union of Soviet Socialist Republics
Professor C. Heymans, Director, Institute of Pharmacology and Therapeutics, National University, Ghent, Belgium
Sir Harold Himsworth, Secretary, Medical Research Council, London, England
Professor V. R. Khanolkar, Director, Indian Cancer Research Centre, Tata Memorial Hospital, Bombay, India
Professor A. Lacassagne, Member of the Institut de France; Emeritus Professor, Collège de France; Director of Research Laboratory, Radium Institute, University of Paris, France
Dr R. F. Loeb, Emeritus Bard Professor of Medicine, Columbia University, New York, N.Y., United States of America
Dr W. Löffler, Emeritus Professor of Medicine, Zurich University, Switzerland
Professor P. G. Sergiev, Director, Institute of Medical Parasitology and Tropical Diseases, Moscow, Union of Soviet Socialist Republics
Dr J. A. Shannon, Director, National Institutes of Health, Bethesda, Md., United States of America
Dr A. J. Wallgren, Emeritus Professor of Paediatrics, Paediatrics Clinic, Karolinska Hospital, Stockholm, Sweden (Chairman)

Members of the Committee unable to attend the third session:
Professor L. van den Berghe, Department of Tropical Medicine and Public Health, School of Medicine, Tulane University, New Orleans, La. United States of America
Professor A. Bradford Hill, Director, Department of Medical Statistics and Epidemiology, London School of Hygiene and Tropical Medicine, London, England
Professor I. Chavez, Director, National Institute of Cardiology, Mexico, D.F., Mexico

Annex 4

ORGANIZATIONAL MEETINGS AND MEETINGS OF EXPERT COMMITTEES AND ADVISORY GROUPS

1 October 1960 - 31 December 1961

- Expert Committee on Mental Health (Programme Development in the Mental Health Field)
- Scientific Group on Research in Comparative Medicine (Cardiovascular Diseases of Animals)
- Expert Committee on Chronic Cor Pulmonale
- Expert Committee on Addiction-producing Drugs
- Meeting of Pathologists: Combined Epidemiological and Pathological Studies of Atherosclerosis in Europe
- IAEA/WHO: Scientific Meeting on Diagnosis and Treatment of Acute Radiation Injury
- Committee on International Quarantine, eighth session
- Executive Board, twenty-sixth session

Geneva, 3-8 October 1960
Geneva, 3-8 October 1960
Geneva, 10-15 October 1960
Geneva, 10-15 October 1960
Prague, 17-20 October 1960
Geneva, 17-21 October 1960
Geneva, 17-22 October 1960

1 Details of seminars and training courses organized by WHO in co-operation with governments or with other organizations are given in the Project List in Part IV.
Executive Board, twenty-sixth session: Standing Committee on Administration and Finance
Study Group on Requirements for Oral Poliomyelitis Vaccine (Live Polio Virus Vaccine)
Technical Meeting on Chemotherapy of Malaria
Inter-regional Smallpox Conference
Expert Committee on Maternal and Child Health (Public Health Aspects of Low Birth Weight)
Scientific Meeting on Rehabilitation in Leprosy
Expert Committee on Specifications for Pharmaceutical Preparations
Expert Committee on Health Statistics
Symposium on Laboratory and Epidemiological Studies of Streptococcal Infections in Central Europe (European Region)
Inter-regional Conference on Techniques of Surveys on the Epidemiology of Mental Disorders
IAEA/WHO: Symposium on the Use of Radioisotopes in the Study of Endemic and Tropical Diseases
Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel (Recommended Requirements for Schools of Public Health)
FAO/WHO: Joint Expert Committee on Food Additives (Evaluation of the Carcinogenic Hazards of Food Additives)
Symposium on the Epidemiological Aspects of Air Pollution (European Region)
Mental Health Group Meeting (Eastern Mediterranean)
First Indo-Nepal Border Antimalaria Co-ordination Conference (South-East Asia Region)
Meeting on Combined Epidemiological and Pathological Studies of Atherosclerosis in Europe
First Meeting of the Antimalaria Co-ordination Board for South-East Africa
Executive Board, twenty-seventh session
Fourteenth World Health Assembly
ECE/FAO/IAEA/WHO: Conference on Water Pollution Problems in Europe (European Region)
Conference on Comparative Studies in Leukaemias
IAEA/ICRU/WHO: Meeting on Standardization of Radiological Dosimetry for Radiation Beams
FAO/WHO: Joint Expert Committee on Nutrition
Antimalaria Co-ordination Meeting for West Africa
ILO/WHO: Joint Committee on the Hygiene of Seafarers
Scientific Group on Research in Public Health Practice
Meeting on Rabies Research
FAO/WHO: Expert Group on Calcium Requirements
Executive Board, twenty-eighth session
European Technical Meeting on the Quality Control of Pharmaceutical Preparations (European Region)
FAO/WHO: Joint Expert Committee on Food Additives (Evaluation of the Toxicity of a Number of Antibiotics and Antioxidants)
Protein Advisory Group
Second Conference on Onchocerciasis in Africa (African Region)
Expert Committee on the Public Health Aspects of Housing
Advisory Committee on Medical Research, third session
Symposium on Maternal and Child Health Problems in Europe (European Region)
Technical Meeting on the Epidemiological Aspects of Mental Disorders (European Region)
Expert Committee on Filariasis
Scientific Group on Research in Bilharziasis (Immunological Diagnosis of Bilharziasis)
Scientific Group on Virus Diseases

Geneva, 26 October - 3 November 1960
Geneva, 7-12 November 1960
Geneva, 14-19 November 1960
New Delhi, 14-19 November 1960
Geneva, 21-26 November 1960
Vellore (India), 21-29 November 1960
Geneva, 5-9 December 1960
Geneva, 5-10 December 1960
Prague, 6-10 December 1960
Naples, 6-15 December 1960
Bangkok, 12-16 December 1960
Geneva, 12-16 December 1960
Geneva, 12-19 December 1960
Copenhagen, 13-16 December 1960
Alexandria, 19-23 December 1960
Lucknow, 3-5 January 1961
Malmo, 23-28 January 1961
Salisbury, 25-26 January 1961
New Delhi, 30 January - 2 February 1961
New Delhi, 7-24 February 1961
Geneva, 22 February - 3 March 1961
Philadelphia, 27 February - 3 March 1961
Geneva, 17-21 April 1961
Geneva, 18-25 April 1961
Lomé, 20-22 April 1961
Geneva, 1-4 May 1961
Geneva, 1-8 May 1961
Paris, 9-13 May 1961
Rome, 23-30 May 1961
Geneva, 29 May - 1 June 1961
Warsaw, 29 May - 2 June 1961
Geneva, 5-12 June 1961
New York, 7-9 June 1961
Brazzaville, 12-17 June 1961
Geneva, 19-26 June 1961
Geneva, 26-30 June 1961
Berne, 26 June - 5 July 1961
Copenhagen, 18-21 July 1961
Geneva, 25 July - 1 August 1961
Geneva, 7-12 August 1961
Geneva, 15-21 August 1961
Regional Committee for the Eastern Mediterranean, eleventh session:
  - Sub-Committee B
  - Sub-Committee A

Scientific Group on Trachoma Research
CCTA/WHO: African Conference on Ancylostomiasis
Expert Committee on Trachoma
Regional Committee for the Western Pacific, twelfth session
CCTA/FAO/WHO: Fourth Inter-African Conference on Food and Nutrition
Regional Committee for Europe, eleventh session
Expert Committee on Chemotherapy of Cancer
FAO/WHO: Joint Expert Committee on Meat Hygiene
Regional Committee for South-East Asia, fourteenth session
Conference on the Training of the Doctor for his Work in the Community (European Region)

Scientific Group on Insect Biochemical and Physiological Research
Regional Committee for Africa, eleventh session
Inter-regional Leprosy Conference (European and Eastern Mediterranean Regions)
Regional Committee for the Americas, thirteenth session, and XIII Meeting of the Directing Council of PAHO
European Symposium on Planning and Administration of National Environmental Sanitation Programmes (European Region)
Expert Committee on Pesticide Residues (Joint Meeting with an FAO Panel of Experts on the Use of Pesticides in Agriculture)
Expert Committee on Arterial Hypertension and Ischaemic Heart Disease (Public Health Aspects)
European Technical Conference on Mortality Statistics (European Region)
Expert Committee on Insecticides (Toxic Hazards of Pesticides to Man)
Informal Meeting of Advisers on Yellow-Fever Research
Expert Committee on Radiation (Radiation Hazards in Perspective)
Second Asian Conference on Yaws
Expert Committee on Arterial Hypertension and Ischaemic Heart Disease (Public Health Aspects)
Second Conference of Directors of Schools of Public Health in Latin America (Region of the Americas)
Committee on International Quarantine, ninth session
Expert Committee on Health Laboratory Services (Planning, Organization and Administration of a National Health Laboratory Service)
Expert Committee on Specifications for Pharmaceutical Preparations: Sub-Committee on Non-Proprietary Names
Informal Meeting on Measles Vaccine Studies
Technical Conference on the Control of Communicable Eye Diseases (European Region)
Expert Committee on Health Statistics: Sub-Committee on Classification of Diseases
Expert Committee on Dental Health (Standardization of Reporting of Dental Diseases and Conditions)
Technical Conference on the Role of the Nurse in Mental Health Practice (European Region)
Conference on Nursing Administration (South-East Asia Region)
Expert Committee on Addiction-producing Drugs
FAO/IAEA/WHO: Conference on the Use of Radioisotopes in Animal Biology and the Medical Sciences
Fifth Indo-Burma-Pakistan Border Antimalaria Co-ordination Conference (South-East Asia and Eastern Mediterranean Regions)
Expert Committee on Specifications for Pharmaceutical Preparations

Geneva, 21-22 August 1961
Chfaura (Lebanon), 28 August - 1 Sept. 1961
Geneva, 22-28 August 1961
Brazzaville, 22-29 August 1961
Geneva, 29 August - 4 September 1961
Wellington, 31 August - 5 September 1961
Douala, 4-13 September 1961
Luxembourg, 12-15 September 1961
Geneva, 18-22 September 1961
Rome, 18-25 September 1961
Ootacamund (India), 19-25 September 1961

Edinburgh, 21-29 September 1961
Geneva, 25-29 September 1961
Brazzaville, 25 September - 4 October 1961
Istanbul, 2-7 October 1961
Washington, D.C., 3-13 October 1961
Dublin, 9-14 October 1961
Rome, 9-16 October 1961
Geneva, 16-23 October 1961
Asnières-sur-Oise (France), 23-28 October 1961
Geneva, 23-30 October 1961
Geneva, 25-27 October 1961
Brussels, 23-30 October 1961
Geneva, 24-30 October 1961
Bandung, 30 October - 10 November 1961
Geneva, 31 October - 7 November 1961
Puerto Azul, Caracas, 1-11 November 1961
Geneva, 6-10 November 1961
Geneva, 6-13 November 1961
Geneva, 8-11 November 1961
Washington, D.C., 10 November 1961
Istanbul, 13-18 November 1961
Geneva, 13-21 November 1961
Geneva, 14-20 November 1961
Copenhagen, 15-24 November 1961
Kandy (Ceylon), 20 November - 3 Dec. 1961
Geneva, 21-27 November 1961
Mexico City, 21 November - 1 Dec. 1961
Aijal (Assam), 27-29 November 1961
Geneva, 27 November - 1 December 1961
EXPERT COMMITTEE ON HUMAN GENETICS (THE TEACHING OF GENETICS IN THE UNDERGRADUATE MEDICAL CURRICULUM AND IN POST-GRADUATE TRAINING)

FAO/WHO: JOINT NUTRITION COMMITTEE FOR SOUTH AND EAST ASIA

INFORMAL MEETING OF ADVISERS ON LABORATORY METHODS FOR THE DRUG SENSITIVITY/RESISTANCE DETERMINATION OF MYCOBACTERIA

STUDY GROUP ON INTERNATIONALLY ACCEPTABLE MINIMUM STANDARDS OF MEDICAL EDUCATION

SCIENTIFIC GROUP ON COMPARABLE METHODOLOGY FOR THE EPIDEMIOLOGICAL STUDY OF HYPERTENSION AND ISCHAEMIC HEART DISEASE

UNESCO/WHO: EUROPEAN SYMPOSIUM ON THE PREPARATION OF TEACHERS FOR HEALTH EDUCATION

FIFTH MEETING OF THE ANTIMALARIA CO-ORDINATION BOARD FOR BURMA, CAMBODIA, LAOS, MALAYA, THAILAND AND VIET-NAM

INTER-REGIONAL CONFERENCE ON THE TRAINING OF HEALTH AUXILIARY PERSONNEL

MEETING OF INVESTIGATORS IN THE FIELD OF STUDIES IN AREAS OF HIGH NATURAL RADIATION

SCIENTIFIC GROUP ON RESEARCH IN LEUKAEMIAS AND OTHER NEOPLASTIC CONDITIONS OF THE HAEMATOPOIETIC CELLS

EXPERT COMMITTEE ON CANCER (REVIEWING NOMINATIONS FOR UNITED NATIONS AWARD)

ANNEX 5

TENTATIVE SCHEDULE OF WHO ORGANIZATIONAL MEETINGS IN 1962

EXECUTIVE BOARD, TWENTY-NINTH SESSION: STANDING COMMITTEE ON ADMINISTRATION AND FINANCE

EXECUTIVE BOARD, TWENTY-NINTH SESSION

FIFTEENTH WORLD HEALTH ASSEMBLY

EXECUTIVE BOARD, THIRTIETH SESSION

REGIONAL COMMITTEE FOR AFRICA, TWELFTH SESSION

REGIONAL COMMITTEE FOR THE AMERICAS, FOURTEENTH SESSION AND XVI PAN-AMERICAN SANITARY CONFERENCE

REGIONAL COMMITTEE FOR SOUTH-EAST ASIA, FIFTEENTH SESSION

REGIONAL COMMITTEE FOR EUROPE, TWELFTH SESSION

REGIONAL COMMITTEE FOR THE EASTERN MEDITERRANEAN, TWELFTH SESSION

SUB-COMMITTEE A

SUB-COMMITTEE B

REGIONAL COMMITTEE FOR THE WESTERN PACIFIC, THIRTEENTH SESSION

ANNEX 6

NON-GOVERNMENTAL ORGANIZATIONS IN OFFICIAL RELATIONSHIP WITH WHO

AT 31 DECEMBER 1961

BIOMETRIC SOCIETY

CENTRAL COUNCIL FOR HEALTH EDUCATION

COUNCIL FOR INTERNATIONAL ORGANIZATIONS OF MEDICAL SCIENCES

FÉDÉRATION INTERNATIONALE DE MÉDECINE SPORTIVE

INTER-AMERICAN ASSOCIATION OF SANITARY ENGINEERING

INTERNATIONAL ACADEMY OF LEGAL MEDICINE AND OF SOCIAL MEDICINE

INTERNATIONAL AIR TRANSPORT ASSOCIATION

INTERNATIONAL ASSOCIATION FOR CHILD PSYCHIATRY AND ALLIED PROFESSIONS

INTERNATIONAL ASSOCIATION OF MICROBIOLOGICAL SOCIETIES

INTERNATIONAL ASSOCIATION FOR PREVENTION OF BLINDNESS

INTERNATIONAL COMMISSION ON RADIOLOGICAL PROTECTION

INTERNATIONAL COMMISSION ON RADIOLOGICAL UNITS AND MEASUREMENTS

INTERNATIONAL COMMITTEE OF CATHOLIC NURSES

INTERNATIONAL COMMITTEE OF THE RED CROSS

INTERNATIONAL CONFEDERATION OF MIDWIVES

INTERNATIONAL CONFERENCE OF SOCIAL WORK

INTERNATIONAL COUNCIL OF NURSES

INTERNATIONAL DENTAL FEDERATION

INTERNATIONAL DIABETES FEDERATION

INTERNATIONAL FEDERATION OF GYNECOLOGY AND OBSTETRICS

INTERNATIONAL FEDERATION FOR HOUSING AND TOWN PLANNING

INTERNATIONAL FEDERATION OF SURGICAL COLLEGES

INTERNATIONAL FERTILITY ASSOCIATION

INTERNATIONAL HOSPITAL FEDERATION

INTERNATIONAL HYDATIDIOLOGICAL ASSOCIATION

INTERNATIONAL LEAGUE OF DERMATOLOGICAL SOCIETIES

INTERNATIONAL LEAGUE AGAINST RHEUMATISM

INTERNATIONAL LEPROSY ASSOCIATION
Annex 7

REGULAR BUDGET FOR 1961

<table>
<thead>
<tr>
<th>Appropriation section</th>
<th>Purpose of appropriation</th>
<th>Original amount voted</th>
<th>Transfers concurred in by the Executive Board</th>
<th>Supplementary estimates</th>
<th>Further transfers concurred in by the Executive Board</th>
<th>Revised appropriations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part I: Organizational Meetings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. World Health Assembly</td>
<td></td>
<td>294,370</td>
<td>(2,750)</td>
<td>-</td>
<td>-</td>
<td>291,620</td>
</tr>
<tr>
<td>2. Executive Board and its Committees</td>
<td></td>
<td>145,620</td>
<td>-</td>
<td>7,090</td>
<td>-</td>
<td>152,710</td>
</tr>
<tr>
<td>3. Regional Committees</td>
<td></td>
<td>73,100</td>
<td>3,800</td>
<td>-</td>
<td>-</td>
<td>76,900</td>
</tr>
<tr>
<td>Total — Part I</td>
<td></td>
<td>513,090</td>
<td>1,050</td>
<td>7,090</td>
<td>-</td>
<td>521,230</td>
</tr>
<tr>
<td>Part II: Operating Programme</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Programme Activities</td>
<td></td>
<td>10,721,911</td>
<td>(105,414)</td>
<td>307,492</td>
<td>(30,000)</td>
<td>10,893,989</td>
</tr>
<tr>
<td>5. Regional Offices</td>
<td></td>
<td>1,865,148</td>
<td>70,594</td>
<td>187,251</td>
<td>48,000</td>
<td>2,170,993</td>
</tr>
<tr>
<td>6. Expert Committees</td>
<td></td>
<td>219,300</td>
<td>500</td>
<td>-</td>
<td>-</td>
<td>219,800</td>
</tr>
<tr>
<td>7. Other Statutory Staff Costs</td>
<td></td>
<td>3,466,402</td>
<td>2,254</td>
<td>183,643</td>
<td>(83,000)</td>
<td>3,569,299</td>
</tr>
<tr>
<td>Total — Part II</td>
<td></td>
<td>16,272,761</td>
<td>(32,066)</td>
<td>678,386</td>
<td>(65,000)</td>
<td>16,854,081</td>
</tr>
<tr>
<td>Part III: Administrative Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Administrative Services</td>
<td></td>
<td>1,310,437</td>
<td>31,985</td>
<td>78,933</td>
<td>22,500</td>
<td>1,443,855</td>
</tr>
<tr>
<td>9. Other Statutory Staff Costs</td>
<td></td>
<td>379,066</td>
<td>(969)</td>
<td>40,685</td>
<td>42,500</td>
<td>461,282</td>
</tr>
<tr>
<td>Total — Part III</td>
<td></td>
<td>1,689,503</td>
<td>31,016</td>
<td>119,618</td>
<td>65,000</td>
<td>1,905,137</td>
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<tr>
<td>Part IV: Other Purposes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Headquarters Building Fund</td>
<td></td>
<td>500,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>500,000</td>
</tr>
<tr>
<td>Total — Part IV</td>
<td></td>
<td>500,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>500,000</td>
</tr>
<tr>
<td>Total — Parts I, II, III and IV</td>
<td></td>
<td>18,975,354</td>
<td>-</td>
<td>805,094</td>
<td>-</td>
<td>19,780,448</td>
</tr>
<tr>
<td>Part V: Reserve</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Undistributed Reserve</td>
<td></td>
<td>1,333,900</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1,333,900</td>
</tr>
<tr>
<td>Total — Part V</td>
<td></td>
<td>1,333,900</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1,333,900</td>
</tr>
<tr>
<td>Total — All Parts</td>
<td></td>
<td>20,309,254</td>
<td>-</td>
<td>805,094</td>
<td>-</td>
<td>21,114,348</td>
</tr>
</tbody>
</table>

1 Resolution WHA13.38.
4 Resolution EB28.R17 and prior written concurrence of majority of Board in accordance with Financial Regulation 4.5.
Annex 8

STRUCTURE OF THE HEADQUARTERS SECRETARIAT AT 31 DECEMBER 1961

THE DIRECTOR-GENERAL — Office of the Director-General

Divisions

Public Information

Malaria Eradication

Communicable Diseases

Environmental Health

Assistant Director-General
(Dr P. M. Kaul)

Assistant Director-General
(Dr F. Grundy)

Assistant Director-General
(Dr O. Baroyan)

Assistant Director-General
(Mr M. P. Siegel)

Budget and Finance

—External Relations
—Liaison with the United Nations
—Programme Co-ordination
—Programme Evaluation
—Research Planning and Co-ordination

—Epidemiological Assessment
—Planning and Programme
—Research and Technical Intelligence

—Bacterial Diseases
—International Quarantine
—Leprosy
—Parasitic Diseases
—Tuberculosis
—Venerable Diseases and Treponematoses
—Veterinary Public Health
—Virus Diseases

—Air and Water Pollution
—Community Sanitation and Housing
—Environmental Biology
—Vector Control
—Water and Wastes

—Health Education
—Health Laboratory Services
—Maternal and Child Health
—Nursing
—Organization of Medical Care
—Public Health Administration

—Cancer
—Cardiovascular Diseases
—Dental Health
—Mental Health
—Nutrition
—Radiation and Isotopes
—Social and Occupational Health

—Education in Medicine and Allied Subjects
—Fellowships
—Public Health Education and Training

—Development of Health Statistical Services
—Dissemination of Statistical Information
—Epidemiological Studies
—Health Statistical Methodology

—Addiction-producing Drugs
—Biological Standardization
—Pharmaceuticals

—Health Legislation
—Library and Reference Services
—Official Records
—Technical Publications
—Translation

—Administrative Management
—Conference and Office Services
—Joint Medical Service
—Personnel
—Supply Services

—Budget
—Finance and Accounts

—Internal Audit
—Legal Office
Annex 9

NUMBERS AND DISTRIBUTION OF THE STAFF ¹

at 30 September 1960 and 30 November 1961

<table>
<thead>
<tr>
<th>Distribution</th>
<th>Staff as at 30 September 1960</th>
<th>Staff as at 30 November 1961</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Regular Budget</td>
</tr>
<tr>
<td>Headquarters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internationally recruited</td>
<td>320</td>
<td>596</td>
</tr>
<tr>
<td>Locally recruited</td>
<td>319</td>
<td></td>
</tr>
<tr>
<td>Regional Offices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Africa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internationally recruited</td>
<td>26</td>
<td>80</td>
</tr>
<tr>
<td>Locally recruited</td>
<td>71</td>
<td></td>
</tr>
<tr>
<td>The Americas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internationally recruited</td>
<td>31</td>
<td>67</td>
</tr>
<tr>
<td>Locally recruited</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>South-East Asia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internationally recruited</td>
<td>29</td>
<td>123</td>
</tr>
<tr>
<td>Locally recruited</td>
<td>114</td>
<td></td>
</tr>
<tr>
<td>Europe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internationally recruited</td>
<td>38</td>
<td>95</td>
</tr>
<tr>
<td>Locally recruited</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>Eastern Mediterranean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internationally recruited</td>
<td>37</td>
<td>105</td>
</tr>
<tr>
<td>Locally recruited</td>
<td>83</td>
<td></td>
</tr>
<tr>
<td>Western Pacific</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internationally recruited</td>
<td>30</td>
<td>81</td>
</tr>
<tr>
<td>Locally recruited</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td>Area and Zone Offices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internationally recruited</td>
<td>12</td>
<td>40</td>
</tr>
<tr>
<td>Locally recruited</td>
<td>28</td>
<td></td>
</tr>
</tbody>
</table>

¹ Excluding consultants.
² Including Liaison Office with the United Nations, New York.
<table>
<thead>
<tr>
<th>Distribution</th>
<th>Staff as at 30 September 1960</th>
<th>Staff as at 30 November 1961</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Regular Budget</td>
</tr>
<tr>
<td>Field Staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internationally recruited</td>
<td>597</td>
<td>204</td>
</tr>
<tr>
<td>Locally recruited</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Other Offices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UNICEF Liaison</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internationally recruited</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Locally recruited</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Tuberculosis Immunization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research Centre, Copenhagen</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>UNRWA</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>International Children’s Centre</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Paris</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff on loan to WHO, or on leave without pay</td>
<td>1944</td>
<td>1405</td>
</tr>
<tr>
<td>WHO GRAND TOTAL</td>
<td>2040</td>
<td></td>
</tr>
<tr>
<td>PAHO GRAND TOTAL</td>
<td>681</td>
<td></td>
</tr>
</tbody>
</table>
Annex 10

COMPOSITION OF THE STAFF BY NATIONALITY

at 30 November 1961

<table>
<thead>
<tr>
<th>Country</th>
<th>WHO</th>
<th>PAHO</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>15</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>Australia</td>
<td>11</td>
<td>-</td>
<td>11</td>
</tr>
<tr>
<td>Austria</td>
<td>10</td>
<td>-</td>
<td>10</td>
</tr>
<tr>
<td>Belgium</td>
<td>13</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Bolivia</td>
<td>8</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>Brazil</td>
<td>21</td>
<td>43</td>
<td>64</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>2</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Burma</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Canada</td>
<td>49</td>
<td>6</td>
<td>55</td>
</tr>
<tr>
<td>Ceylon</td>
<td>2</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Chile</td>
<td>17</td>
<td>25</td>
<td>42</td>
</tr>
<tr>
<td>China</td>
<td>21</td>
<td>1</td>
<td>22</td>
</tr>
<tr>
<td>Colombia</td>
<td>6</td>
<td>13</td>
<td>19</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>1</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Cuba</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Cyprus</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Czechoslovakia</td>
<td>6</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>Denmark</td>
<td>38</td>
<td>-</td>
<td>38</td>
</tr>
<tr>
<td>Dominican Republic</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Ecuador</td>
<td>3</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>El Salvador</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Federation of Rhodesia and Nyasaland</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Finland</td>
<td>3</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>France</td>
<td>79</td>
<td>1</td>
<td>80</td>
</tr>
<tr>
<td>Germany, Federal Republic of</td>
<td>28</td>
<td>3</td>
<td>31</td>
</tr>
<tr>
<td>Ghana</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Greece</td>
<td>15</td>
<td>1</td>
<td>16</td>
</tr>
<tr>
<td>Guatemala</td>
<td>1</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Haiti</td>
<td>27</td>
<td>-</td>
<td>27</td>
</tr>
<tr>
<td>Hungary</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>India</td>
<td>50</td>
<td>2</td>
<td>52</td>
</tr>
<tr>
<td>Indonesia</td>
<td>1</td>
<td>-</td>
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</tr>
<tr>
<td>Iran</td>
<td>10</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Iraq</td>
<td>3</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Ireland</td>
<td>11</td>
<td>-</td>
<td>11</td>
</tr>
<tr>
<td>Israel</td>
<td>11</td>
<td>-</td>
<td>11</td>
</tr>
<tr>
<td>Italy</td>
<td>57</td>
<td>-</td>
<td>57</td>
</tr>
<tr>
<td>Japan</td>
<td>10</td>
<td>-</td>
<td>10</td>
</tr>
<tr>
<td>Jordan</td>
<td>8</td>
<td>-</td>
<td>8</td>
</tr>
<tr>
<td>Korea, Republic of</td>
<td>2</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Lebanon</td>
<td>22</td>
<td>-</td>
<td>22</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>3</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Mexico</td>
<td>11</td>
<td>18</td>
<td>29</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>1221</td>
<td>281</td>
<td>1502</td>
</tr>
</tbody>
</table>

The above table does not include the following:

<table>
<thead>
<tr>
<th>Category</th>
<th>WHO</th>
<th>PAHO</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language staff</td>
<td>73</td>
<td>4</td>
<td>77</td>
</tr>
<tr>
<td>Short-term consultants</td>
<td>102</td>
<td>8</td>
<td>110</td>
</tr>
<tr>
<td>Staff on loan to WHO or on leave without pay</td>
<td>25</td>
<td>-</td>
<td>25</td>
</tr>
<tr>
<td>Staff locally recruited</td>
<td>823</td>
<td>448</td>
<td>1271</td>
</tr>
<tr>
<td><strong>GRAND TOTAL</strong></td>
<td>2244</td>
<td>741</td>
<td>2985</td>
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</tbody>
</table>
### Annex 11

**FELLOWSHIPS AWARDED, BY SUBJECT OF STUDY AND BY REGION**

1 September 1960 - 30 November 1961

<table>
<thead>
<tr>
<th>Subject of Study</th>
<th>Africa</th>
<th>The Americas</th>
<th>South-East Asia</th>
<th>Europe</th>
<th>Eastern Mediterranean</th>
<th>Western Pacific</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health Organization and Services</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PUBLIC HEALTH ADMINISTRATION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public health administration</td>
<td>14</td>
<td>23</td>
<td>11</td>
<td>52</td>
<td>62</td>
<td>31</td>
<td>193</td>
</tr>
<tr>
<td>Hospital and medical care</td>
<td>1</td>
<td>8</td>
<td>1</td>
<td>30</td>
<td>4</td>
<td>5</td>
<td>49</td>
</tr>
<tr>
<td>Hospital buildings</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>5</td>
<td>1</td>
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## Subject of Study

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THE WORK OF WHO, 1961

ANNUAL REPORT OF THE DIRECTOR-GENERAL

TO THE

WORLD HEALTH ASSEMBLY AND TO THE UNITED NATIONS

INDEX
INDEX

Main references by subject, and main references to the project list by country, are in heavy type.

Accident prevention, 36, 52, 84
Addiction-producing drugs, 48

See also Drug addiction
Administrative Committee on Co-ordination, 22, 40, 47, 103, 104, 106
Advisory Committee on Medical Research, 7, 44
membership, 184
Aëdes aegypti eradication, 72, 73
British Guiana and West Indies, 121; Caribbean area, 118;
Chile, 73; Costa Rica, 73; Dominican Republic, 122;
French Antilles and Guiana, 122; Surinam and Netherlands Antilles, 124
Afghanistan, 78, 127-8
Africa, Technical Assistance allocations, 106, 107
African Region, 4, 8, 9, 14, 15, 16, 18, 22, 25, 28, 35, 40, 61-8, 111-17
Air pollution, 21, 31
Poland, 145
symposium, Copenhagen, 21, 138
Aircraft disinsection, 24
Airports, see Aviation
Albania, 141
Alcoholism
film, 53
seminar, Viña del Mar, 70, 118
All-India Institute of Hygiene and Public Health, 132, 133
American Samoa, 97
Americas, Region of the, 9, 12, 14, 15, 22, 25, 29, 31, 32, 35,
52, 69-76, 118-25
Amoebiasis, 6
Anaemia, 35-6
Anaesthesiology, 41
training courses, Copenhagen, 85, 137
Anatomy, Israel, 91
Ancylostomiasis, 16
conference, Brazzaville, 16, 111
Andean Indian mission, 25, 120, 124
Angola, see Portugal
Annual Epidemiological and Vital Statistics, 1938, 47
Antibiotics, 8, 11, 27, 44
Antimalaria co-ordination boards
African Region, 62, 112
Western Pacific Region, 160
Argentina, 9, 11, 69, 70, 71, 120
invitation, Health Assembly, 56
Arthropod-borne viruses, 13
Aspects of Public Health Nursing, 29
Associate Members, 54, 61
list, 173
Atherosclerosis, 32, 47
Australia, 161
Austria, 141-2
Auxiliary health workers (continued)
conferences
auxiliary personnel in sanitation, New Delhi, 133-4
training of health auxiliary personnel, Khartoum, 42, 88
Aviation, hygiene and sanitation, 20
Greece, 143
Auxiliary health workers (continued)
conferences
auxiliary personnel in sanitation, New Delhi, 133-4
training of health auxiliary personnel, Khartoum, 42, 88
Bacterial diseases, 17
Basic Documents, 50
Basic Nursing Education Programmes, 29
Basutoland, 122
Baytex, 4, 62
BCG vaccination programmes, 77, 95, 126
assessment team, South-East Asia Region, 126
See also Tuberculosis
BCG vaccine, 6, 7, 19, 77
Bechuanaland, 63, 112
Belgium, 6, 142
Bilharziasis, 15, 22, 31, 47, 63, 89, 90, 167
Federation of Rhodesia and Nyasaland, 63; Ghana, 16, 63,
India, 132; Iran, 16, 89, 150; Iraq, 16, 89, 151;
Philippines, 15, 25, 164; Tanganyika, 63; Thailand, 136;
United Arab Republic, 16, 89, 158; Yemen, 16, 158
survey (United Nations Mekong River Basin project), 161
Biochemistry study tour, South-East Asia Region, 126
Biological standardization, 48
Birth weight study, 27, 47
Blindness, prevention, 53
Blood transfusion services, 27
Sudan, 155
Bolivia, 120
Brazil, 4, 38, 70, 71, 120-1
British East Africa, 112
British Guiana, 4, 17, 49, 71, 121
British Honduras, 119
British Solomon Islands Protectorate, 96, 160, 161
Brucellosis, 6, 9, 27
Budget
for 1961, 54, 188
for 1962, Region of the Americas, 73
See also Programme and budget estimates
Bulgaria, 139, 142
Bulletin of the World Health Organization, 50
Burma, 17, 25, 77, 78, 80, 126, 128-9
Calcium requirements, joint FAO/WHO expert group, 35
Cambodia, 25, 28, 161-2
Cameroon, 63, 112
Canada, 8, 12, 25, 121
Cancer, 11, 31, 36, 72, 83, 84, 103
See also Leukaemia
Cannabis, 48
Cardiovascular diseases, 11, 32, 46, 72, 83, 140
Caribbean area, 118, 119
Caribbean Commission, 105
Dec 1959
Central African Republic, 113
Centre for Authentic Chemical Substances, 49
Ceylon, 17, 26, 77, 78, 126, 129-30
Chad, 113
Chagas' disease, 72
Uruguay, 124
Children
dental health, Poland, 33, 85, 145; Singapore, 165
mental health, China (Taiwan), 162; Finland, 139, 142;
Greece, 139, 143; Israel, 151; Lebanon, 152; Portugal,
145; Spain, 146
seminar on child guidance, Brussels, 138
training, European Region, 139
rehabilitation, Poland, 144; Spain, 145; Yugoslavia, 147
survey of needs, 28, 103
See also Maternal and child health
Chile, 26, 29, 37, 70, 73, 120, 121
China (Taiwan), 15, 21, 95, 96, 98, 162
Cholera, 6, 77, 90
Chronic diseases, 83, 84
Uruguay, 124
Classification of diseases, 33, 46, 70, 71, 73, 87, 118
course, Caracas, 119
See also Statistics
CODEPID, 7
Colombia, 4, 70, 75, 120, 122
Colombo Plan, 105
Commission for Technical Co-operation in Africa South of the
Sahara, 16, 64, 66, 104
Committee on International Quarantine, 6, 22, 24
membership, 183
Communicable diseases, 6-19, 62, 65, 71, 90
Albania, 141; Republic of Viet-Nam, 166
Communicable eye diseases, 90
Iraq, 151; Jordan, 151; Sudan, 155
course, Istanbul, 139
See also Trachoma
Community development, 25, 78, 79, 89, 94
India, 25, 132, 133, 134; Saudi Arabia, 154; Sudan, 25, 155
training centres, 25, 119, 148
Community water supply, see Water supplies
Comoro Archipelago, 113
Comparative medical studies, 9, 11, 31, 32
Congenital malformations, study, 38
Congo (Brazzaville), 63, 113
Congo (Leopoldville), 40, 52, 54, 57, 64, 113
Constitution, amendments, 54
Contributions, collection, 54
Convention on the Privileges and Immunities of the Specialized
Agencies, accessions, 54
Cook Islands, 96, 160, 162
Co-ordination of work with other organizations, 103-5, 106
See also under names of individual organizations
Cor pulmonale, chronic, 32
Costa Rica, 73, 119
Council of Europe, 105
Coxsakie viruses, 12
Cuba, 26, 71, 119, 122
Cyprus, 26, 149
Czechoslovakia, 10, 11, 12, 26, 32, 139, 142

Dahomey, 63, 111, 113
DDVP, 4, 23, 62
Death certificate, 73, 87
Denmark, 7, 8, 139, 142

Dental Health, 33, 46, 70, 79
French Polynesia, 33; Ghana, 33, 114; Nigeria, 33; Poland,
33, 85, 145; Singapore, 165; Sudan, 33, 155
Development Loan Fund, 70
Diabetes, 37
Diagnosis and Treatment of Acute Radiation Injury, 50
Diarrhoeal diseases, 17, 22, 47, 167
Israel, 17, 47
See also Enteric diseases
Diphtheria, 6
vaccine production, India, 134; Jordan, 152
Dominican Republic, 119, 122
Drug addiction, Greece, 143
Drugs, addiction-producing, 48

Eastern Mediterranean Region, 15, 22, 26, 88-93, 148-59
ECHO viruses, 12
Economic Commission for Africa, 25, 40
Economic Commission for Europe, 21, 26, 47, 137, 139
Economic and Social Council, 22, 48, 106
Ecuador, 120, 122
Education and training, 40-3, 61, 62, 66, 69, 70-1, 79, 83, 88,
90, 95
Federation of Malaya, 98, 164
UNICEF/WHO training programmes, study, 28, 29
See also Auxiliary health workers; Fellowships; Medical edu-
cation; Medical schools; Nursing; Public health schools;
Sanitary engineering
El Salvador, 69, 70, 122
Endemic goitre, 73, 89
Enteric diseases, 6, 27
See also Diarrhoeal diseases
Environmental biology, 22-4
Environmental health, 20-4
Environmental sanitation, see Sanitation
Epidemiological and statistical centre, Eastern Mediterranean
Region, 148
Epidemiological units, 77
Burma, 128; Ceylon, 130; Indonesia, 134
Epidemiological and Vital Statistics Report, 47
Epilepsy, 34
Ethiopia, 6, 13, 88, 89, 149-50
EURATOM, 39, 105
European Coal and Steel Community, 105, 137, 141
European Economic Community, 105
European Federation for the Protection of Water, 137
European League against Rheumatism, 139
European Region, 12, 15, 17, 20, 83-7, 137-47
European Standards for Drinking-Water, 50
Executive Board, membership, 174-6
Expanded Programme of Technical Assistance, 55, 65, 73, 74,
84, 106-7
Expert advisory panels, 176-7
Expert Committee on Addiction-producing Drugs, 48
membership, 177
Expert Committee on Arterial Hypertension and Ischaemic
Heart Disease, 32
membership, 177
Expert Committee on Cancer (Reviewing Nominations for
United Nations Award), membership, 177-8
Expert Committee on Chemotherapy of Cancer, 31
membership, 178
Expert Committee on Chronic Cor Pulmonale, 32
membership, 178
Expert Committee on Dental Health, 33, 46
membership, 178
INDEX

Expert Committee on Filariasis, 17
   membership, 178
Expert Committee on Health Laboratory Services, membership, 178-9
Expert Committee on Health Statistics, 46
   membership, 179
Expert Committee on Human Genetics, 38
   membership, 179
Expert Committee on Insecticides, 24
   membership, 179
Expert Committee on Malaria, 3, 5
Expert Committee on Maternal and Child Health, 27
   membership, 179-80
Expert Committee on Mental Health (Programme Development in the Mental Health Field), 33
   membership, 180
Expert Committee on Mental Health (Role of Public Health Officers and General Practitioners in Mental Health Care), 34
   membership, 180
Expert Committee on Pesticide Residues, 36
   membership, 181-2
Expert Committee on Poliomyelitis, 12
Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel (Recommended Requirements for Schools of Public Health), 41
   membership, 180
Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel (Use and Training of Auxiliary Personnel in Medicine, Nursing, Midwifery and Sanitation), 41
Expert Committee on the Public Health Aspects of Housing, 22
   membership, 180
Expert Committee on Radiation, 37
   membership, 180
Expert Committee on Specifications for Pharmaceutical Preparations, 49
   membership, 181
Expert Committee on Trachoma, 15
   membership, 181
Expert Committee on Venereal Infections and Treponematoses, 8
Expert Committee on Water Quality, 20
Expert committees, meetings, October 1960 - December 1961, 184-7
Export-Import Bank, 70

FAO, see Food and Agriculture Organization
   Federal Republic of Germany, 6, 143
   Federation of Malaya, 25, 26, 94, 98, 163-4
   Federation of Rhodesia and Nyasaland, 62, 63, 113
   Fellowships, 3, 26, 35, 40, 42-3, 61, 62, 65, 69, 71, 78, 84, 88, 90, 95
   awarded September 1960 - November 1961, list, 193-4
   Fiji, 96, 160, 162
   Filariasis, 17, 24, 77
   Burma, 17, 77, 129; Ceylon, 17, 77, 130
   Finland, 31, 139, 142
   Fluoridation of water, 33, 118
   Poland, 85
   Food additives, 36
   Food and Agriculture Organization, 48, 50, 104
   activities jointly assisted with
      nutrition, 34, 35, 36, 64, 69, 78, 89
      various subjects, 9, 16, 22, 122
   participation in meetings, 21, 38, 39, 66, 111, 139, 168, 169, 170
Food hygiene, 9, 79, 119
   Greece, 143
   Fourteenth World Health Assembly, 7, 52, 56
   France, 142
   Algeria, 83, 143
   French Antilles and Guiana, 122
   French Oceania, 97
   French Polynesia, 33, 162
   Gabon, 61, 113
   Garbage disposal, 120
   Genetics, see Human genetics
   Germany, see Federal Republic of Germany
   Ghana, 4, 6, 16, 21, 33, 62, 63, 64, 112, 113-14
   contribution to headquarters, building, 55
   Gilbert and Ellice Islands, 95, 96, 160
   Goa, 130
   Goitre, endemic, 73, 89
   Gonorrhoea, 6, 8
   See also Venereal diseases
   Greece, 21, 83, 139, 143
   Guatemala, 16, 69, 123
   Guinea, 17, 114
Haiti, 71, 119, 123
   Handbook of Resolutions and Decisions, 50
   Headquarters accommodation, 55, 56
   Headquarters Building Fund, 55
   Health demonstration area, El Salvador, 122; Greece, 143; Sudan, 155
   Health education, 26-7, 70, 79, 139, 148
      British Honduras, 119; Burma, 80; Central America, 119;
      Costa Rica, 119; Cuba, 26, 119; Cyprus, 26; Dominican
      Republic, 119; Federation of Malaya, 26; Haiti, 119;
      India, 26, 131, 132; Iraq, 26; Israel, 26; Japan, 26, 163;
      Jordan, 26, 92; Mexico, 26, 119; Morocco, 144; Nigeria, 26;
      Palestine refugees, 93; Panama, 119; Senegal, 116; Sudan, 116; Singapore, 165; Spain, 26, 146; Thailand, 26; Turkey, 26
   symposium on preparation of teachers for health education, Paris, 83
   travelling seminar, USSR, 27, 42, 169
   Health laboratory services, 27
   See also Laboratories
   Health legislation, Federation of Malaya, 99; Ghana, 114; Togo, 67
   Health protection and promotion, 31-9
   Helminthic diseases, 6, 11, 63
   Hepatitis, 6, 13
   Honduras, 123
   Hong Kong, 6, 162
   Hospital administration, Federation of Malaya, 163; Israel, 151; Laos, 163; Lebanon, 152; Republic of Viet-Nam, 166
   See also Medical services administration
   Hospital records, Federation of Malaya, 163; Uganda, 117
   Hospitals, Cameroun, 113; Jordan, 152; Pakistan, 153
   study on utilization, 26
   Houseflies, 23
   Liberia, 115
   Housing, public health aspects, 22
   Human genetics, 37-9, 169
   course on basic techniques of human cell culture and chromosome cytology, Basle, 38
   Hungary, 12
   Hydatid disease, 11
   Cyprus, 149
   Hypertension, 32
INDEX

Leprosy (continued)
conference, Istanbul, 18, 168
scientific meeting on rehabilitation in leprosy, Vellore, 17
training course, Philippines, 18, 167

Leptospirosis, 11, 27

Leukaemia, 31, 39

Maternal and child health, 27, 62, 69, 78, 94, 103

Macao, 6, 163

Madagascar, 21, 64, 112, 115

Malaria, 3-5, 6, 26, 46, 61-2, 71, 73, 77, 79, 83, 84, 88, 95, 96
Afghanistan, 127; Bolivia, 120; Brazil, 4, 71; British East Africa, 112; British Guiana, 4, 71; British Solomon Islands Protectorate, 161; Burma, 128; Cambodia, 161; Cameroun, 112; Ceylon, 126, 130; China (Taiwan), 95, 162; Cuba, 71, 122; Dahomey, 113; Ecuador, 122; Ethiopia, 149; Federation of Malaya, 163; Federation of Rhodesia and Nyasaland, 133; Gabon, 61; Ghana 4, 62, 113, 114; Haiti, 71; India, 126, 133; Indonesia, 134; Iran, 88, 150; Iraq, 88, 148, 150; Israel, 88, 151; Jamaica, 71; Jordan, 88, 91, 148, 151; Lebanon, 88, 148, 152; Liberia, 62, 115; Libya, 88, 153; Madagascar, 115; Mauritius, 62, 115; Mexico, 26, 71, 74, 123; Morocco, 144; Netherlands New Guinea, 4, 94; Nigeria, 116; North Borneo, 94, 95, 97, 164; Pakistan, 88, 153, 154; Peru, 124; Philippines, 95, 164; Portugal (Mozambique), 116; Republic of Korea, 163; Republic of Viet-Nam, 166; Romania, 145; Ryukyu Islands, 95; Sarawak, 94, 95, 165; Saudi Arabia, 88, 154; Somalia, 88, 154; Spain, 146; Sudan, 88, 155; Surinam, 71; Swaziland, 116; Syria, 88, 148, 156; Togo, 117; Trinidad, 71; Tunisia, 88, 157; Turkey, 26, 146; Uganda, 117; United Arab Republic, 88, 158; Upper Volta, 117; Venezuela, 72; Yugoslavia, 147; Zanzibar, 62, 117
administrative advisers, African Region, 111
Animal malaria co-ordination boards
African Region, 62, 112
Western Pacific Region, 160
consultants, 168
financing of eradication programmes, 54, 55, 84
postage stamps, 74, 96, 104
regional evaluation and advisory teams, 3, 111, 126, 148
team for special epidemiological studies, 170
technical publications, 5, 112
training centres, 3, 26, 47, 62, 75, 88, 148, 161, 169
training of international recruits, 3, 168

See also Insecticides

Malaria Eradication Special Account, 55, 65, 74, 96
Malaria Terminology, 5
Malathion, 4, 24, 62
Malaya, see Federation of Malaya
Maldive Islands, 135
Maldives, 63, 111, 115
Malnutrition, see Nutrition
Malta, 9, 144
Maternal and child health, 27, 62, 69, 78, 94, 103
Ceylon, 78, 129; China (Taiwan), 162; Congo (Leopoldville), 65; Ethiopia, 150; Gabon, 113; Ghana, 114; Guinea, 114; India, 78, 81, 132, 133; Jordan, 152; Laos, 163; Libya, 152, 153; Netherlands New Guinea, 164; Nigeria, 116; Palestine refugees, 93; Poland, 144; Republic of Viet-

Maternal and child health (continued)
Nam, 94, 165; Singapore, 163; Somalia, 155; Togo, 117; Tunisia, 156; Turkey, 146; Uganda, 67, 117; Yugoslavia, 147
courses, International Children's Centre, 111, 140, 141
meeting, Ibadan, 112
seminars
child health and the school, Manila, 26, 160
nursing education for child care, Vienna, 140
study meeting on neonatal problems, Paris, 138
symposium, Berne, 33, 83, 139
training for permanent health services, 28, 29
See also Children

Mauritania, 63
Mauritius, 17, 62, 111, 115
Measles vaccine, 6

Meat hygiene, 11
Mecca Pilgrimage, 89

Medical care, 25-6, 70
Argentina, 70; El Salvador, 70; Palestine refugees, 93

Medical education, 40, 41, 88, 118, 141
Argentina, 120; Congo (Leopoldville), 40, 64, 65; South Pacific island territories, 160; Tunisia, 157
conference on training doctors for work in the community, Edinburgh, 137
study tours, biochemistry and pharmacology, South-East Asia Region, 126
See also Education and training; Fellowships; Medical schools; Public health schools

Medical literature, international exchange, 50
Medical records, Argentina, 71

Medical research, 44-5, 72, 78, 90
Federation of Malaya, 163

Medical schools, 62, 70, 78
Afghanistan, 78, 127; Burma, 78, 128; Cambodia, 161; Fiji, 162; India, 41, 78, 131, 132, 133; Indonesia, 134; Iraq, 41, 88, 151; Israel, 88, 91, 151; Morocco, 144; Thailand, 78, 136; Tunisia, 41, 88, 157; Uganda, 67, 117
See also Medical education

Medical services administration
courses, Edinburgh and Brussels, 86, 139
See also Hospital administration

Medical stores, 90
Republic of Viet-Nam, 166

Medical supplies, 57, 90
Medicated salt trials (malaria), 4, 62, 114, 161
Member States, 54, 61
list, 173-4

Mental disorders
classification
conference on survey techniques, Naples, 34, 168
Mental health, 33, 70, 83, 89, 90, 139
Ceylon, 129; China (Taiwan), 162; Denmark, 142; Ethiopia, 150; Finland, 139, 142; Greece, 139, 143; India, 133; Iran, 150; Israel, 34, 151; Japan, 162; Lebanon, 152; Luxembourg, 143; Morocco, 144; Niger, 15; Philippines, 164; Portugal, 145; Spain, 146; Yugoslavia, 147
course on the nurse in mental health practice, Copenhagen, 29, 140
group meeting, Alexandria, 89, 149

seminar on child guidance, Vienna, 140

Milk, 62, 117
Midwifery, 29, 94
Chile, 29, 121; Iran, 150; Nepal, 81; Philippines, 164; Republic of Viet-Nam, 94; Singapore, 165
See also Nursing

Millbank Memorial Fund, 168
INDEX

Monograph Series, 50
Morocco, 83, 86, 144
Mozambique, see Portugal
Mycotic diseases, 16, 47, 90
Yugoslavia, 16

Narcotic drugs, 48
Neonatal problems, study meeting, Paris, 138
Nepal, 28, 81, 135
Netherlands, 144
Netherlands Antilles, 123, 124
Netherlands New Guinea, 4, 94, 164
New Hebrides, 96, 160
New Zealand, 11, 164
Nicaragua, 123
Niger, 115-16
Nigeria, 21, 23, 25, 26, 33, 47, 62, 64, 112, 116, 168
Niue, 97
Nomenclature regulations with respect to diseases and causes of death, see Classification of diseases

Non-governmental organizations, 79, 84, 104 in relationship with WHO, list, 187-8
Non-proprietary names, 49
North Borneo, 94, 95, 97, 164
Norway, 31, 144
Nuffield Foundation, 86

Nutrition, 34-6, 69, 72, 73, 78, 79, 89, 95, 120
Basutoland, 112; Bolivia, 120; Colombia, 120; Ecuador, 120; French Polynesia, 33, 162; India, 78; Kenya, 64, 114; Lebanon, 93; Palestine Refugees, 93; Peru, 120; Thailand, 78

African conference, Douala, 64

Nystatin, 47

Occupational health, 36, 78, 83, 84
Chile, 121; Poland, 145; Yugoslavia, 147

Onchocerciasis, 16, 24, 63
Guatemala, 16; Guinea, 17; Kenya, 66; Venezuela, 17, 124

Organization for Economic Co-operation and Development, 39, 105, 139, 141

Organization meetings
October 1960 - December 1961, 184-7
tentative schedule, 1962, 187

Paediatrics, 28, 41, 62, 78, 94
Ceylon, 78; India, 78, 81, 132, 133; Uganda, 67, 117
See also Maternal and child health

Pakistan, 21, 27, 37, 89, 148, 153-4
Palestine refugees, 93
Pan American Foot and Mouth Disease Center, 69
Pan American Health Organization, 70, 71, 72
programme and budget, 73, 74
special funds, 69, 73, 74, 75
Pan American Zoonoses Center, 69, 72, 118
Panama, 69, 76, 119, 120, 123
Papua and New Guinea, 94, 164

Perinatal morbidity and mortality, classification of causes, 46
Peruvian Commission and International Association on Occupational Health, 105

Persian Gulf, 78
vaccine production, India, 134

Peru, 6, 70, 120, 124
Pesticides
contamination of food, 36
toxicity, 23, 24

Pharmaceuticals, 49
Republic of Viet-Nam, 166; United Arab Republic, 158
meeting on quality control, Warsaw, 141

Pharmacology, 48-9
study tour, South-East Asia Region, 126
Philippines, 6, 15, 25, 94, 95, 164-5
Phytotherapy, Ceylon, 130; Pakistan, 153; Philippines, 165
See also Rehabilitation

Pilgrimage, Mecca, 89

Plague, India and Indonesia, 77
Poland, 12, 17, 33, 49, 85, 139, 144-5

Poliomyelitis, 12
Congo (Brazzaville), 63, 113; Morocco, 86
training course, Prague, 138
vaccine, 6, 12, 49

Portugal, 139, 145

African Provinces, 62, 116
Portuguese Timor, 95

Preventive and social medicine, 141
India, 131; Israel, 151; Republic of Viet-Nam, 166; Saudi Arabia, 154; Thailand, 136

Programme and budget estimates, regional, 65, 73, 79, 84, 90, 96
Programme priorities, 65, 74, 79, 84, 90, 96
Project evaluation, 79, 90, 95
Prosthetic appliances, Pakistan, 154

Protein Advisory Group, 34, 35
INDEX

Psychiatry, Denmark, 142; Ethiopia, 150; Finland, 139, 142; Greece, 139, 143; India, 133; Israel, 151; Morocco, 144; Niger, 115; Spain, 146
See also Mental health

Public health administration, 25-6, 61, 66, 94

Afghanistan, 127; Burma, 25, 128; Cambodia, 162; Congo (Leopoldville), 64; Ethiopia, 149; Federation of Malaya, 98, 164; Ghana, 114; Indonesia, 134; Laos, 163; Maldive Islands, 135; Mali, 115; Nepal, 135; Togo, 66-7, 117; Upper Volta, 117; Yugoslavia, 147
seminar on epidemiology in health administration, Opatija, 140
travelling seminar, USSR, 42, 89, 148-9

Quarantine, see International quarantine

Publications, 50-1

Public health schools, 41, 83, 138

Afghanistan, 128; Argentina, 70; Brazil, 70, 120, 121; Bulgaria, 142; Chile, 70, 121; China (Taiwan), 162; Colombia, 70, 122; Czechoslovakia, 142; Greece, 143; India, 133; Mexico, 70, 123; Pakistan, 153; Philippines, 164; Poland, 145; Portugal, 145; Republic of Korea, 163; Romania, 145; Singapore, 165; Switzerland, 146; Thailand, 135; Turkey, 146; United Arab Republic, 158; Venezuela, 70, 125; Yugoslavia, 147
conference of directors, Caracas, 41, 70, 119

Public health services, 25-30, 69, 78, 90, 120

Argentina, 120; Cameroun, 113; Central America, 76, 120; Chile, 121; Colombia, 122; Cuba, 122; Ecuador, 122; El Salvador, 122; Greece, 143; Guatemala, 123; Haiti, 123; Honduras, 123; India, 25, 132, 133, 134; Mexico, 123; Panama, 76, 120, 123; Paraguay, 69, 75, 123; Peru, 124; Somalia, 154, 155; United States of America, 124; Uruguay, 124; Venezuela, 125; Yemen, 158, 159
See also Public health administration; Rural health services

See also Public health administration; Rural health services

Public information, 52-3

Public health engineering, India, 21, 131, 134
See also Sanitary engineering

Public health laboratories, see Laboratories

Public Health Papers, 50

Rabies, 6, 9, 10, 49

Radiation, 37-9, 70, 78, 90, 104, 119
Poland, 145; Yugoslavia, 147
conference on use of radioisotopes in animal biology and the medical sciences, Mexico City, 38, 169
meetings
diagnosis and treatment of acute radiation injury, Geneva, 38
evaluation of the wholesomeness of irradiated foods, Brussels, 36, 170
standardization of radiological dosimetry for radiation beams, Geneva, 37
studies in areas of high natural radiation, Rio de Janeiro, 38
seminars
public health and agricultural aspects of radioactive contamination, Schveningen, 38
use of statistics for genetic and radiation studies, Geneva, 46, 169
symposium on use of radioisotopes in the study of endemic and tropical diseases, Bangkok, 38, 168
training courses
radiation health and safety, Chiba City, 38, 169
radiation medicine, for teachers in medical schools
London, 138
Paris, 141

Radiation (continued)
training courses (continued)
radiation protection
Bombay, 134
Oxford, 138

Radiography, Ceylon, 126

Reference laboratories and centres
blood-grouping, 27
cancer, 31
tent topacteriaceae, 17
venereal diseases, 9
virus diseases, 12, 13

Reference services, 50-1

Refuse and garbage disposal, 120

Region of the Americas, see Americas
Regional Committee for Africa, 65
Regional Committee for the Americas, 72-4
Regional Committee for the Eastern Mediterranean, 89
Regional Committee for Europe, 84
Regional Committee for South-East Asia, 79
Regional Committee for the Western Pacific, 33, 95-6
Regional Director for the Eastern Mediterranean, 90
Regional Director for Europe, 84
Regional Office for Africa, 51, 65
Regional Office for the Americas, 74
Regional Office for the Eastern Mediterranean 51
Regional Office for Europe, 84, 85
Regional Office for South-East Asia, 50, 79
Rehabilitation, 37, 83
Brazil, 121; Ceylon, 130; Chile, 37, 121; Greece, 143; Iran, 150; Morocco, 83, 86, 144; Pakistan, 37, 153, 154; Philippines, 165; Poland, 144; Spain, 145; Tunisia, 158; Yugoslavia, 147
leprosy patients, 18
scientific meeting, Vellore, 17
training courses
Denmark and the United Kingdom, 141
London, 137

Republic of Korea, 163
Republic of Viet-Nam, 94, 95, 165-6
Research, see Medical research
Respiratory viruses, 13
Resuscitation services, 84
Rheumatic diseases, 37, 84
Rockefeller Foundation, 67
Romania, 139, 145
Ruanda-Urundi, 112

Rural health services, 66, 89, 94, 95, 97
Afghanistan, 127; Cambodia, 25, 162; Federation of Malaya, 25, 94, 99, 163; Kenya, 25; Laos, 25, 94, 163; Lebanon, 152; Nigeria, 116; North Borneo, 94; Papua and New Guinea, 94; Philippines, 25, 94, 164; Republic of Viet-Nam, 94; Sarawak, 94; Sudan, 25, 155; Syria, 156
training courses
for assistant medical officers of the South Pacific, Apia, 161
Soissons, 137
Uusimaa and Helsinki, 138
See also Public health services

Russian publications in, 50, 52
use in Regional Organization for Europe, 84

Ryukyu Islands, 95

Salaries and allowances, 104

Sanitary engineering, 22, 71, 84, 119, 120, 138, 160
Argentina, 120; India, 21, 131, 134; Lebanon, 152; Luxembourg, 143; Mexico, 123; Pakistan, 153; Spain, 146; Syria, 156; United Arab Republic, 158; Yugoslavia, 147

Quarantine, see International quarantines

Rabies, 6, 9, 10, 49

Radiation, 37-9, 70, 78, 90, 104, 119
Poland, 145; Yugoslavia, 147
conference on use of radioisotopes in animal biology and the medical sciences, Mexico City, 38, 169
meetings
diagnosis and treatment of acute radiation injury, Geneva, 38
evaluation of the wholesomeness of irradiated foods, Brussels, 36, 170
standardization of radiological dosimetry for radiation beams, Geneva, 37
studies in areas of high natural radiation, Rio de Janeiro, 38
seminars
public health and agricultural aspects of radioactive contamination, Schveningen, 38
use of statistics for genetic and radiation studies, Geneva, 46, 169
symposium on use of radioisotopes in the study of endemic and tropical diseases, Bangkok, 38, 168
training courses
radiation health and safety, Chiba City, 38, 169
radiation medicine, for teachers in medical schools
London, 138
Paris, 141
Sanitary engineering (continued)

seminars
Lima, 71
Madrid, 83, 137
Tegucigalpa, 71, 118

training courses
water-supply design, Mexico, 71
waterworks design and operation, Lahore, 21, 89, 149

See also Water supplies

Sanitarians, see Auxiliary health workers

Sanitation, community, 21, 63, 70, 73, 78, 89, 95, 120
Afghanistan, 127; Austria, 142; Burma, 80, 128; Caribbean area, 119; Ceylon, 129; China (Taiwan), 162; Colombia, 75; Dahomey, 63, 113; El Salvador, 122; Ghana, 114; Guinea, 114; India, 131; Ivory Coast, 64; Kenya, 67, 114; Liberia, 115; Morocco, 144; Netherlands New Guinea, 164; Pakistan, 153; Palestine refugees, 93; Philippines, 164; Republic of Viet-Nam, 165; Saudi Arabia, 154; Sierra Leone, 63, 116; Syria, 156; Tonga, 165

symposium, Dublin, 21, 83, 141

See also Water supplies

Sarawak, 6, 94, 95, 165
Saudi Arabia, 27, 88, 154
School health, 26
seminar, Manila, 26, 160

Scientific Group on Antibiotics Research, 44
Scientific Group on Comparable Methodology for the Epidemiological Study of Hypertension and Ischaemic Heart Disease, 32
Scientific Group on Research in Bilharziasis, 15, 44
Scientific Group on Research in Comparative Medicine, 32
Scientific Group on Research in Leukaemias and other Neoplastic Conditions of the Haematopoietic Cells, 31
Scientific Group on Research in Public Health Practice, 26, 44
Scientific Group on Trachoma Research, 14
Scientific Group on Virus Diseases, 12
Scientific groups, 44
meetings, October 1960 - December 1961, 184-7
Seafarers, health problems, 36
Seaports, hygiene and sanitation, 20, 22
Sea-water, consumption by castaways, 35
Secretariat, structure, 56, 189
Senegal, 63, 111, 116
Serum reference banks, 14
Sewage disposal, 73, 78
Argentina, 120; Burma, 80, 81; India, 21, 131; Pakistan, 153; Spain, 146
See also Sanitation
Seychelles, 47, 62
Ships, sanitation, 22
Sierra Leone, 27, 63, 116
Singapore, 165
Single Convention on Narcotic Drugs, 48
Sixteenth World Health Assembly, invitations, 56
Smallpox, 6, 13, 63, 73, 77, 79, 89, 90
Cambodia, 162; India, 77; Indonesia, 77; Ivory Coast, 63, 114; Mali, 115; Pakistan, 89, 154; Somalia, 57, 155; Sudan, 89, 155
conference, New Delhi, 167
vaccine, 49

See also Vaccine production
Social and occupational health, see Occupational health
Somalia, 57, 88, 89, 154-5
South Africa, 6, 12, 36, 116
South-East Asia Region, 9, 13, 22, 25, 35, 52, 77-82, 126-36
South Pacific Commission, 104, 161
Spain, 6, 26, 83, 139, 145-6

Specialized agencies, 84, 104
See also under names of individual agencies
Specifications for Pesticides, 50
Staff, 56
collection by nationality, 192
numbers and distribution, 190-1
Staphylococcus infections, 6
Statistics, 46-7, 70, 71, 72, 73, 77, 83, 84, 90, 118, 119
Burma, 128; Ceylon, 130; Greece, 143; India, 133; Morocco, 144; Pakistan, 154; Philippines, 164; Republic of Viet-Nam, 166; Saudi Arabia, 154; Syria, 156; Thailand, 135; Togo, 67; Yugoslavia, 147
conference on mortality statistics, Asnières-sur-Oise, 86, 140
epidemiological and statistical centre, Eastern Mediterranean Region, 148
rural health centres, South-East Asia Region, 126
seminar on use for genetic and radiation studies, Geneva, 46, 169
training courses
application of statistics to medical sciences, São Paulo, 71
vital and health statistics, Manila, 47, 160
See also Classification of diseases
Streptococcal infections, symposium, Prague, 139
Study Group on Epidemiology of Cancer of the Lung, 31
Study Group on Requirements for Oral Poliomyelitis Vaccine, 49
Sub-Committee on Classification of Diseases, 33, 46
membership, 179
Sub-Committee on Non-proprietary Names, 49
membership, 181
Sudan, 17, 25, 28, 33, 88, 89, 155
Sunstroke, 89
Surinam, 71, 124
Swaziland, 116
Sweden, 8, 26, 32, 146
Swedish National Association against Heart and Chest Diseases, 44
Switzerland, 24, 146
Syphilis, 6, 8
Caribbean area, 118; Morocco, 144; Spain, 145
See also Venereal diseases
Syria, 88, 148, 156
Tanganyika, 63, 112, 116
Teaching of Psychiatry and Mental Health, 34
Technical Assistance Board, 106, 139
Technical Assistance Committee, 106, 107
Technical Assistance Programme, see Expanded Programme of Technical Assistance
Technical discussions
regional committees, 33, 65, 74, 78, 79, 84, 90, 96
World Health Assemblies, 7, 34, 52
Technical Report Series, 50
Tetanus vaccine production, India, 134; Jordan, 152
Thailand, 26, 77, 78, 126, 135-6
TOCP poisoning, Morocco, 83, 86, 144
Togo, 63, 66-7, 116-17
Tonga, 95, 97, 165
Trachoma, 6, 14, 77
China (Taiwan), 15, 96, 162; Ethiopia, 149; France (Algeria), 83, 143; India, 77, 132; Morocco, 83, 144; Spain, 83, 145; Thailand, 77, 135; Tunisia, 156, 157; Turkey, 83, 146; Yugoslavia, 147
training course, Bangkok and Korat, 135
vaccine, 6, 14
See also Communicable eye diseases
INDEX

Treponematoses, 8, 47, 63
Comoro Archipelago, 113; Togo, 116
advisory team, 9, 167
assessment team, African Region, 63
See also Yaws
Trichinosis, 11
Trinidad, 71
Tropical medicine and endemic diseases, school, Thailand, 155
Trypanosomiasis, 16, 63
Tsetse fly control, Bechuanaland, 63, 112
Tuberculosis, 6, 7, 62, 72, 73, 83, 88-9, 90, 95, 119, 139
Afghanistan, 128; Argentina, 120; Basutoland, 112; Bechuanaland, 112; Ceylon, 129; China (Taiwan), 162; Comoro Archipelago, 113; Czechoslovakia, 142; Ethiopia, 149; Federation of Rhodesia and Nyasaland, 62; French Polynésia, 162; Gabon, 113; Greece, 143; Guatemala, 123; India, 7, 77, 80, 130, 132; Indonesia, 77, 134; Iraq, 148; Jordan, 148, 151; Kenya, 62, 114; Libya, 148; Madagascar, 115; Mauritius, 115; Mexico, 123; Nigeria, 116; Pakistan, 153; Peru, 124; Philippines, 165; Poland, 143; Portugal (Mozambique), 62; Republic of Viet-Nam, 95, 165; Seychelles, 62; Somalia, 154; Sudan, 155; Syria, 148; Thailand, 77, 135; Tunisia, 89, 148, 156, 157; Turkey, 146; Western Samoa, 95, 166
advisory teams, 63, 161
epidemiological centre, Nairobi, 62, 111
seminar, Nairobi, 111
survey teams, 62, 89, 111, 148
training centre, Eastern Mediterranean Region, 89, 157
training courses
International Children’s Centre, 141
Istanbul, 137
Prague, 7, 170
See also BCG vaccination programmes
Tuberculosis Chemotherapy Centre, Madras, 7, 77, 130
Tunisia, 41, 88, 89, 148, 156-8
Turkey, 26, 83, 146
Typhoid vaccine studies, 17, 49
Typhus, United Arab Republic, 93, 158

Uganda, 67, 112, 117
UNESCO, see United Nations Educational, Scientific and Cultural Organization
UNESCO Courier, 52
UNICEF, see United Nations Children’s Fund
UNICEF/WHO Joint Committee on Health Policy, 28
Union of Soviet Socialist Republics, 6, 8, 9, 10, 12, 32, 50, 139, 146
invitation, Health Assembly, 56
United Arab Republic, 16, 17, 24, 31, 88, 89, 93, 148, 158
United Kingdom, 6, 8, 24, 146
United Kingdom Atomic Energy Research Establishment, 138
United Nations, 47, 79, 103
activities jointly assisted with, 86, 94, 161, 163
programmes of concerted action, 22, 25
participation in meetings, 26, 46, 47, 137, 141, 161
reimbursement for extension to Palais des Nations, 55
United Nations Advisory Committee on Administrative and Budgetary Questions, 104
United Nations Bureau of Social Affairs, 37
United Nations Children’s Fund, 103
activities jointly assisted with
malaria, 73, 74, 77, 91, 97
maternal and child health, 28, 67, 82, 94, 95
nutrition, 24, 35, 36, 64, 69, 78, 89
United Nations Children’s Fund (continued)
activities jointly assisted with (continued)
various subjects, 15 16, 18, 21, 37, 41, 66, 67, 68, 77, 79, 80, 83, 84, 85, 86, 89, 92, 94, 95, 97, 98
participation in meetings, 37, 92, 139, 160
United Nations Committee on Information from Non-Self-Governing Territories, 103
United Nations Drug Supervisory Body, 48
United Nations Educational, Scientific and Cultural Organization, 50, 104
activities jointly assisted with, 22, 25, 40, 94, 122
participation in meetings, 26, 37, 39, 40, 83, 160, 169
United Nations Joint Staff Pension Fund, 54, 104
United Nations Office of Public Information, 53
United Nations Relief and Works Agency for Palestine Refugees in the Near East, 92, 93
United Nations Scientific Committee on the Effects of Atomic Radiation, 39
United Nations Special Fund, 21, 71, 103, 106
United Nations Trusteeship Council, 103
United Nations Visual Information Board, 53
United States, 8, 10, 11, 12, 17, 24, 26, 45, 71, 72, 73, 91, 124, 127, 169
United States International Co-operation Administration, 20, 40, 73, 74, 77, 137, 160
Universal Postal Union, 104
UNRWA, see United Nations Relief and Works Agency for Palestine Refugees in the Near East
Upper Volta, 63, 111, 117
Urbanization, 25
Uruguay, 120, 124
Vaccine production, Afghanistan, 127; Austria, 141; Poland, 145; Yugoslavia, 147
diphtheria-pertussis-tetanus, India, 134; Jordan, 152
smallpox, 14, 73, 89
India, Indonesia and Thailand, 126; Pakistan, 154, United Arab Republic, 158
training courses, Bangkok and Lagos, 14, 167
Vaccines, 118
brucellosis, 6, 9
leptospirosis, 11
measles, 6
poliomyelitis, 6, 12, 49
rabies, 6, 10, 49
smallpox, 49
trachoma, 6, 14
typhoid, 17, 49
See also BCG vaccine
Vector control, 22-4
Venereal diseases, 8, 90
China (Taiwan), 98, 162; Ethiopia, 149; Spain, 145; Sudan, 155; Tunisia, 158
travelling seminar, USSR, 8, 42, 170
See also Syphilis
Venezuela, 17, 36, 69, 70, 72, 124-5
Veterinary public health, 9-12, 72, 104, 119
seminar, Nairobi, 111
Viet-Nam, see Republic of Viet-Nam
Virus diseases, 6, 12-15, 83, 84, 90
Japan, 163; Philippines, 164
training course on laboratory diagnosis, Prague, 138-9
Voluntary Fund for Health Promotion, 55
Water pollution, 21
Poland, 145
conference, Geneva, 21, 139
study, ECE/WHO, 139
Water supplies, community, 20, 70, 73, 78, 89, 90, 95, 148, 161
Burma, 80, 81; China (Taiwan), 21; Colombia, 75; Ghana, 21, 64; Greece, 21; India, 21, 131, 134; Kenya, 21, 64, 67, 114; Madagascar, 21, 64, 115; Nigeria, 21, 64, 116; Pakistan, 21, 153; Palestine refugees, 93; Peru, 70, 124
advisory team, European Region, 141
film, 53
fluoridation, 33, 118
Poland, 85
seminar, Addis Ababa, 20, 89, 168
training courses on administration and financing, Mexico and São Paulo, 71
See also Sanitary engineering; Sanitation
Waterworks design and operation, Argentina, 120; Luxembourg, 143
seminar, Tegucigalpa, 71, 118
training courses
Lahore, 21, 89, 149
Mexico, 71
See also Sanitary engineering; Water supplies
West Indies, 121, 125
Western Pacific Region, 8, 9, 15, 25, 94-9, 160-6
Western Samoa, 95, 96, 160, 166
Working Capital Fund, 55, 56
World Confederation for Physical Therapy, 37, 137
World Council for the Welfare of the Blind, 37
World Directory of Dental Schools, 33, 50
World Directory of Venereal Disease Treatment Centres at Ports, 50
World Federation of Neurology, 34
World Federation of Societies of Anaesthesiologists, 41
World Health, 36, 52
World Health Day, 36, 52, 53
World Meteorological Organization, 104
World Veterans Federation, 137
Xerophthalmia, 36
X-ray technicians, Ceylon, 126
X-rays, 37, 38
Yaws, 8, 63, 72, 95, 97
British Solomon Islands Protectorate, 96, 160; Cambodia, 162; Cameroon, 63, 113; Caribbean area, 118; Comoro Archipelago, 113; Cook Islands, 96, 160; Dahomey, 63, 111; Fiji, 96, 160; Ghana, 63, 114; Gilbert and Ellice Islands, 95, 96, 160; Haiti, 123; Laos, 95; Liberia, 63, 115; Mali, 63, 111; Mauritania, 63; Mauritius, 111; Netherlands New Guinea, 94; New Hebrides, 96, 160; Nigeria, 25, 63, 116; Senegal, 63, 111; Sierra Leone, 63, 116; Thailand, 135; Togo, 63; Tonga, 95, 97; Upper Volta, 63, 111; Western Samoa, 95, 96, 160
conference, Bandung, 9, 168
See also Treponematoses
Yellow fever, 6
Ethiopia, 6, 13, 89
See also Aëdes aegypti eradication
Yemen, 16, 158-9
Yugoslavia, 16, 17, 49, 147
Zanzibar, 62, 112, 117
Zoonoses, 9-11, 72, 104, 118, 119