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TWENTY-FIFTH WORLD HEALTH ASSEMBLY

COMMITTEE A

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PROVISIONAL SUMMARY RECORD OF THE ELEVENTH MEETING

Palais des Nations, Geneva
Monday, 22 May 1972, at 3.15 p.m.

CHAIRMAN: Dr Marianne A. SILVA (Nigeria)

CONTENTS

Note: Corrections to this provisional summary record should reach the Chief, Editorial Services, World Health Organization, 1211 Geneva 27, Switzerland, before 7 July 1972.

1. REVIEW AND APPROVAL OF THE PROGRAMME AND BUDGET ESTIMATES FOR 1973: Item 2.2 of the Agenda (continued)

Detailed review of the operating programme: Item 2.2.3 of the Agenda (Official Records No. 196; Resolution EB49.R23; Official Records No. 199, Chapter II, paras 36-303 and 313-320; Document A25/39)

Malaria eradication (continued)

Dr TABIBZADEH (Iran) recalled that in the malaria eradication programme the basic measure for control and eradication of the disease had been DDT, which had saved the lives of millions of people. In spite of the proven claim that DDT carried a hazard to the environment, it was still the best available weapon until such time as a new and safe insecticide could be found. Many countries were now facing difficulties because of the limited amounts of DDT on the world market, and because of the rise in price that had followed limitation of production. WHO already had the necessary information concerning the needs of the various countries, and the amounts being produced by factories throughout the world.

In view of the vital importance of DDT to all countries carrying out malaria eradication and control programmes, it was essential to ensure that it would be available in sufficient quantities and at a reasonable price until a new means of control was found. He therefore suggested that WHO should take steps to ensure that the countries concerned were provided with enough DDT for the continuation of their programmes. WHO's assistance in that regard would be greatly appreciated.

In Iran, despite some technical difficulties, particularly in the southern part of the country, the programme had progressed well. Since 1967, the strategy had changed from the classic type of attack to combined measures based on epidemiological conditions. Seventeen million persons were now covered by the consolidation phase, and the annual parasite incidence was less than 0.02 per thousand; for the remainder of the population - about 10 million persons - the rate was 1.3 per thousand, representing an 80% decrease over the past four years.

Dr JURICIC (Chile), referring to Chapter II, paragraph 42, of Official Records No. 199, said he did not agree with the Director-General's view that integration of specialized malaria eradication services into the general health service should be considered only when eradication had reached the maintenance phase, or earlier where programmes had less prospect of success. Malaria was a health problem and thus could not be divorced from the general health services, whatever their degree of development. An "autonomous" service he interpreted as meaning a service with its own organization and budget, subordinate to the authority of the health administration, and on the same level as general health services. If that interpretation were correct, then there would certainly be competition for funds and for resources, both of manpower and material, between the two services; and it was his experience that in such cases the malaria eradication service was always the one to suffer. The Government tended to lose interest in the malaria services because the pressure exerted by the rural population was far less strong than that exerted by the urban population. Another disadvantage was the possible duplication of work, since there would be two state health services with the same aim: the preservation of the health of the community.

It was pointed out in Official Records No. 199, Appendix 10, section 5, that the basic health services did not in themselves offer the solution to the problem of malaria transmission, and that specific antimalaria measures should be devised within the broader health context. That concept did not apply to malaria services alone but to all types of health services; all needed to be linked with the socio-economic services, and in some cases - for example, that of the zoonoses - to work in the closest collaboration with them.

Professor CORRADETTI (Italy) said the information on the world malaria situation contained in document A25/39 and in Official Records No. 197 (pages 42-51) gave a realistic picture of the problem involved.

In document A25/39, section 3, last paragraph, it was stated that in African countries south of the Sahara, and in some Asian countries, eradication was not practicable at present. Those areas, with the addition of some jungle areas of America, contained some 480 million people, and thus the task of control and prophylaxis necessary to reduce malaria transmission in those areas was immense.

He agreed with the Director-General's conclusion in the introduction to Official Records No. 197 that the best approach to the problem of parasitic diseases such as schistosomiasis and filariasis was an intensification of the search for new knowledge through carefully planned and coordinated research programmes. That conclusion also applied to malaria. WHO at present showed a tendency to pay more attention to basic research in malaria than it had done in the past; that tendency should be encouraged and extended, since there was no doubt that it would achieve important practical results, though the benefits would be long-term rather than short-term. The chances of finding new methods for combating malaria were in direct proportion to the number of scientists actively working on malaria research, and he suggested that pure scientists in different fields should be persuaded to employ malaria material for their basic research.

Since the struggle against malaria was likely to be long, expert malariologists would need to be provided for the future. That task was not easy, since the various subjects connected with malaria (parasitology, pathology, entomology, epidemiology and ecology) had gradually ceased to be taught at universities and schools over the past 20 years.

A matter of particular concern that emerged from the report was the slow progress of the programme in respect to areas passing from the attack to the consolidation phase, or from the consolidation to the maintenance phase. Governments should keep in mind that, once they had reached the stage of consolidation or maintenance, malaria eradication was feasible, and they should make every effort to achieve it. Any slackening of effort might result in the recrudescence of foci, and the emergence of resistance in Plasmodia to drugs and in Anopheles to insecticides, thus making the goal of eradication much more difficult to reach.

In highly endemic areas, the reduction of the incidence of malaria to a tolerable level was a prerequisite for any socio-economic development. In those areas, therefore, substantial aid against malaria was needed. It was a matter of concern that international assistance to malaria programmes was tending to fall, and the decision by the Executive Board of UNICEF to phase out aid towards the end of 1973 gave cause for apprehension. In many areas, not even the simplest basic health service could be established if malaria were not first reduced, and the help provided by UNICEF in the past to combat the disease had been greatly appreciated. He hoped that UNICEF would reconsider its decision in view of the fact that malaria was responsible for most of the high infant mortality in malarious areas.

Dr BUSTAMANTE (Mexico) said the eradication programme in his country was in a similar situation to that in other countries. There had been a drop in number of cases and in mortality: cases had fallen from 2 500 000 to 50 000 diagnosed, and deaths had fallen from 25 000 to 42 annually. The malarious areas of the Gulf showed progress, though those of the Pacific continued to be active, and there was a constant flow of people from the malarious areas into areas clear of the disease. A general feeling of optimism was perceptible among the inhabitants of cities and rural areas that were free from the disease, and many doctors who never saw cases believed that malaria no longer existed. However, it was prevalent in areas where communications were difficult and where economic and social conditions were poor. After 15 years, eradication had not been attained, nor did it seem to be approaching. That fact made it difficult to obtain funds for the campaign, although the Federal Government had set aside the largest allocation ever for that purpose.

In 1971 a technical council, an evaluation office and a research headquarters had been brought into being, and the strategy of the campaign had been modified. However, local cooperation had been lacking, and also cooperation from medical organizations and other international bodies. The Pan American Sanitary Bureau and WHO had, however, provided help in the form of consultants.

He regretted the statement of the Director-General that eradication had been unsuccessful, because it was a matter in which the prestige of WHO was at stake. Those countries that had undertaken eradication had made progress; it was true that there had been economic, political and social difficulties, but they were not insuperable. It was up to WHO to maintain its leadership, otherwise the cooperation between countries in combating the disease could not be maintained. The regional committees would certainly continue to receive requests for help, and the cooperation of WHO in all aspects would be sought.

He supported the remarks made by the delegates of Chile and Italy.

Dr ALAN (Turkey) referred to the statement in document A25/39 (page 10, first paragraph) that new ecological studies were to be carried out to obtain more knowledge about the details of the host-parasite relationship and man-mosquito contact. He asked when and where those studies would be carried out, and what type of investigation they would comprise. Referring also to the indication in document A25/39 (page 3, first paragraph) that malathion had been used for focal spraying in certain areas of Turkey where Anopheles sacharovi was resistant to DDT and dieldrin, he pointed out that malathion was expensive and that it was probably for that reason that spraying had been focal. He would like to know what was the state of advancement of research in new insecticides, and in particular in the chemiotherapy of long-acting drugs.

Dr CUMMINGS (Sierra Leone) referred to the recommendation in Official Records No. 199, Appendix 10, section 3, that extensive malaria control activities should be undertaken with a view to eradicating the vector Anopheles gambiae from the banks of the Nile. Taken at its face value, that recommendation seemed to represent a departure from conventional practice. He would like to know whether the statement in fact represented a change in the basic approach to malaria eradication, or whether it should be regarded as referring to a special case requiring special treatment.

He also wondered what the effect would be on the countries of the African Region, which had earlier been advised by WHO to abandon their pre-eradication programmes and concentrate on the development of basic health services, of being told that the answer no longer lay in the development of basic health services. His delegation would appreciate some clarification on these points.

Dr GUEYE (Senegal) said that in the African Region the eradication of malaria could not be envisaged in the immediate future because of administrative and financial difficulties, and of technical problems such as the resistance of vectors to organochloride insecticides. WHO had given valuable assistance to the fight against malaria both in the urban and rural areas. However, it was disquieting to learn from Table 3 of the document A25/39 that between 1966 and 1971 expenditure on malaria eradication under the regular budget had fallen by more than a fifth. Malaria was still one of the basic endemic diseases in Africa south of the Sahara, where it caused most of the infant mortality and a very large part of general morbidity. Although it was true that expenditure on malaria work in rural areas was now integrated into basic health service expenditure, the priority nature of the disease made it necessary for malaria work to be clearly distinguished from other health activities, and the funds allocated for that purpose clearly specified.

He suggested that WHO should recommend that other organizations, such as UNICEF, renew their assistance for the prevention and treatment of malaria in countries such as those where the mortality rate from that disease was still 355 per thousand in infants under the age of five.

Dr KIVITS (Belgium) said that his delegation had on several previous occasions expressed concern over the situation in Africa where it had not been possible to apply eradication programmes because of financial, administrative or technical difficulties. Many delegations had expressed their anxiety over the statement made at the end of document A25/39 that malaria eradication was not practicable in African countries south of the Sahara and in some Asian countries.

He shared the concern of the delegate of Senegal regarding the reduction in manpower and resources devoted by WHO to eradication, particularly so far as Africa was concerned. Table 2 of document A25/39 showed that personnel assigned to malaria eradication in Africa had fallen from 96 in 1966 to 25 in 1971; and Table 3 showed that the funds made available had fallen from $ 1 726 000 in 1966 to $ 260 000 in 1971, whereas there was still a sum of $ 482 000 available for eradication in Europe. Nevertheless Africa was a key sector for malaria, and he suggested that a special fund might be created for the eradication of the disease there. Shortage of qualified personnel - malariologists, entomologists, health engineers and technicians, etc. - was another vital problem, and he wished to know what steps the Secretariat was taking to solve it.

Dr MUSA (Brazil) said that the malaria eradication programme in his country had begun in 1959. Initially, owing to various technical problems, activities had been concentrated on a few priority areas only, but the programme had been gradually extended to other sectors and now the whole malarious area was covered by the programme. That area had originally been 6 800 000 square kilometres in extent and had a population of 333 600 000. Out of that total, 12 000 000 were living in areas where transmission of the disease had been checked due to the programme's activities. Areas bordering on neighbouring countries were always given high priority, and activities were being intensified in those areas, particularly the Amazon region. Efforts were being made to provide adequate protection for all those involved in the construction of the Amazonian network of highways and in the colonization of the Amazon region.

Dr ROASHAN (Afghanistan) said that the malaria programme in his country had been revised after some years following investigation by a special assessment team; it now took the form of a crash programme. Although some technical and financial difficulties were still experienced, the Government was putting greater emphasis on the programme and had doubled the budgetary allocation for it. He was grateful to the Union of Soviet Socialist Republics for its assistance in the northern part of the country, and urged that international aid should not decrease as a result of the increased provision made by the Government.

He did not think that integration of the malaria programme into the basic health services at an early stage would be useful, but close cooperation with other health services was obviously needed. He supported what had been said by the Italian delegate concerning the follow-up of what had already been achieved in the attack phase.

Dr VALVERDE (Bolivia) expressed alarm at the reduction in the funds allocated to the malaria eradication programme, and stressed that it was a mistaken policy for WHO to follow. The considerable success that had already been achieved proved that WHO had the potential to solve the problem. Bolivia, his own country, had succeeded in controlling the disease in 70% of its territory, and the efforts made hitherto must be sustained. Unless WHO revised its policy all the attempts that had been made to control the disease would end in failure because of lack of sufficient resources. He agreed with the delegate of Egypt on the difficulty of reaching highly malarious areas if the necessary transport facilities were not provided. Many countries relied to a great extent on services provided by external sources. He strongly urged WHO to review the budgetary allocation that had been made for malaria control and eradication.

Dr RESTREPO (Colombia) said that Colombia had undoubtedly made progress against malaria. The morbidity rate had decreased dramatically and areas, which until recent years could not be used for productive purposes because of the high incidence of the disease, were now productive. However, he believed that Colombia was far from attaining the target of eradication, in spite of the great efforts made and the high percentage of the health budget devoted to the malaria eradication programme. He drew attention to the aspects which were of particular concern to his Government at the present time and the cause of the persistence of important foci in the country. Firstly, the presence in some regions of Anopheles whose living habits were different made the generally used methods for dealing with them far from effective. Secondly, the movement of population to settlement areas where such Anopheles were present made the problem more difficult.

A positive element in the malaria eradication campaign in Colombia was that, since it had been widely carried out in rural areas, it had been decided two years ago to use its infrastructure for the implementation of other public health programmes, e.g. different types of immunization. The results of those programmes had so far proved satisfactory.

Lastly, he drew attention to the excellent collaboration of international organizations such as WHO and UNICEF in the programme, and the importance of continuing such collaboration, particularly as regards the production of insecticides.

Dr HASSAN (Egypt) asked whether the Organization and its Member States were concerned only with achievements in the classical malaria eradication programme and its various phases; or were they interested also in other malaria control activities that were giving results? There was a tendency to consider countries that were carrying on the latter activities as being at the pre-eradication stage, where they would remain indefinitely if interest was concentrated on eradication. There were countries which had integrated malaria control into their national health services and which needed technical or material guidance in enforcing and supporting such control work. They should be given an assurance that they could rely on WHO to provide assistance.

Another important question was whether and when to integrate malaria eradication activities into the national health services. In many countries when the malaria eradication programme was initiated there had been no efficient national health services; hence, it had been necessary to set up a separate administration. On the other hand, where there was an effective national health service, there was no reason why the eradication programme should not be integrated with it. At what level should integration come in such cases: at ministerial level or at the level of functioning units in rural areas? In his opinion malaria was a problem whose control should be the responsibility of the national health administration.

Dr BAIDYA (Nepal) said that the malaria programme was one of the most successful programmes in Nepal. Its problem at the present time was how to maintain the results achieved and continue operations in the future, since the United States Agency for International Development was discontinuing its aid to the programme after 1973.

At the request of his Government, WHO had sent a team of experts to study the situation and plan and advise on future strategy. He expressed appreciation of that prompt and timely action, and thanked the United States Agency for International Development for its assistance.

Dr SENCER (United States of America) noted that the Director-General had commented on the slowing down of the malaria eradication programme and had laid the blame on insufficient resources and inaedquate management. The slowing down of progress, might however be beneficial: in some countries it was due to the new strategy, which encouraged a more realistic epidemiological approach. However, for that approach to be effective, renewed

emphasis must be placed on training malariologists. Many malariologists had not been trained as specialists in the disease but had rather been trained in aspects of the eradication programme. With the new strategy, it was not enough merely to know how to organize a spraying programme; a knowledge of the epidemiology, parasitology and entomology of malaria was required. He hoped that the Organization was planning measures to help meet that need.

He shared the concern of the delegate of Iran that DDT should continue to be available. It was however important that delegates, as health workers, should do all that they could to ensure that pesticides were appropriately used. He called attention to the Director-General's study of the use of DDT, made in 1970, in which he had reached the conclusion that the control of malaria and typhus were the only cases in which the use of DDT was justified.

Finally, when the Director-General said that the programme was a failure, it was a recognition of the real situation and not necessarily a denial of the great successes which had been achieved. He hoped the Director-General had meant that global eradication was not now feasible, but that great gains had been made and must be maintained; and that further success could be expected if programmes were planned on the basis of epidemiological realities.

Professor RODRIGUEZ CASTELLS (Argentina) strongly supported the proposals made by earlier speakers and in particular that of the delegate of Bolivia that WHO should not reduce its assistance to programmes in process of implementation that needed its assistance. Argentina did not need either technical or financial assistance at the present time because its services were adequate, but the existence of malarious areas on its borders constituted a constant danger.

Dr TATOČENKO (Union of Soviet Socialist Republics) recalled that his delegation's point of view as regards the malaria eradication programme had been put forward during the debate on the proposed programme and budget estimates.

He agreed with the delegate of Egypt that it was necessary to determine what WHO's attitude should be: should eradication continue to be the target or should more attention be devoted to control measures? When the programme had been initiated, a mass attack on the vector involving considerable capital investment had been envisaged, since in the long run it would lead to great economies. However, it had now been recognized that in many countries eradication was not feasible. The measures originally envisaged might prove to be very costly if they had to continue for decades. Governments should be aware of the financial consequences of continuing the eradication programme, and WHO's role should be made clear.

His delegation had pointed out on many occasions in the past that the tabular data showing expenditure on malaria eradication should not contain items that were in fact intended to strengthen the basic health services. The latter should be shown separately.

Dr AKIM (Tanzania) requested information from the Secretariat as to the present position of research on the use of medicated salt. The medicated salt project in Tanzania had been held up because the long-term effects of chloroquine were not known.

Referring to the remarks of the delegate of the United States on the training of malariologists, he wondered whether it was realistic to train such highly specialized experts in developing countries. He would like to know whether WHO did not consider that, in those countries, specialists should be trained in a number of diseases simultaneously.

Dr LEPES, Director, Division of Malaria Eradication, on the question of financing, said that, as far as Africa was concerned, only funds specifically for malaria eradication had been included in Table 3; this explained the decline in the sums shown. The budget for basic health services was much larger.

It was difficult to find a general prescription for the integration of single-disease campaign into the basic health services. In cases where the malaria eradication programme had been so integrated, it had a specific allocation and personnel responsible for the campaign. Much depended on the development of basic health services in a given country, and WHO would certainly assist in finding or proposing a workable solution.

A great deal of research was being done. Two items were of particular interest - research on new drugs and that on new insecticides. In the United States alone in the past few years more than 175 000 compounds had been tested to see if they were promising antimalaria compounds, but only a very few had shown any promise. Research was continuing on the synthesis and testing of new compounds that might have antiplasmodial activity, but the 4-aminoquinolines were still the most important drugs being used as antimalarials.

Replying to the question raised by the delegate of Tanzania, he said that, in an area of Tanzania where for nine years medicated salt had been distributed to the population, oculographic studies had been carried out but there had been no signs of chronic intoxication by chloroquine. In the treatment of other diseases, where chloroquine had been administered in very large doses, the chronic toxic effect of chloroquine in the form of retinopathy had been observed.

He regretted that the report made no specific reference to the progress made in Cuba. However, the fact that a team had been sent there for the purpose of certifying achieved eradication implied that great progress had been made. In Cuba, the total population previously at risk had entered the maintenance phase in 1970. The health service had collected a large number of slides, and only five imported cases had been detected.

As far as ecological studies were concerned, they should be undertaken by any government in accordance with ecological indications. WHO was ready to assist countries when they needed such studies. In the case of Colombia, for instance, reference had been made to a very particular ecological situation, which, in addition to human behaviour, was one of the reasons for the persistent transmission there. In areas newly reclaimed for agricultural purposes, transmission would have occurred before any action could be taken against it.

As regards the attitude that WHO should adopt with regard to malaria eradication or malaria control, it was very difficult to adopt a single attitude. Where eradication was feasible as a time-limited programme, WHO would continue to do whatever was possible to bring the programme to a successful conclusion. The ecological situation was the key factor.

The training of future malariologists was an important question. Over the past 15 years a number of malariologists had been trained in different training centres for the purposes of the eradication programme, but he appreciated the fact that "all round" malariologists would be needed. Public health workers well acquainted with parasitic or tropical diseases, and with experience of laboratory work on the causative agent and the ecology of the vector would be suitable. At a recent informal consultation, the importance of previous special training in malaria had been recognized; but the need for training medical officers or entomologists to deal with other diseases as required had also been stressed, bearing in mind that such specialists would need to provide, on a continuing basis, both diagnostic and epidemiological services to the public health services; and that they must also take part in the organization of campaigns as and when required. It might be possible in the near future to utilize existing teaching facilities in the world, along with certain facilities provided by WHO, to provide such training.

He thanked those who had contributed to the correct interpretation of the Director-General's statement a few days previously, since it referred to the past rather than to the concept of malaria work itself or to the future of such work.

Communicable diseases

Dr EHRLICH, representative of the Executive Board, said that during the review of the proposed programme and budget estimates for 1973 by the Executive Board, at the request of one of its members, the Director-General had submitted a report on the present cholera situation and on the strategy to be applied in its control. That report appeared as Appendix II to Official Records No. 199, the Board's discussions of the subject was reported in Official Records No. 199, paragraphs 53 and 54.

At the Board, several members had referred to resolution WHA24.26 of the Twenty-fourth World Health Assembly, which included a request that the Director-General should undertake a study of the implications of removing cholera from the International Health Regulations. The Director-General had informed the Board that the matter was under study; a consultation would be held at Geneva to prepare a report for the Committee on International Surveillance of Communicable Diseases, which planned to meet in November 1972. It was one of the functions of that Committee to consider possible amendments to the International Health Regulations; its report would be brought before the Twenty-sixth World Health Assembly for its consideration.

Professor LECHAT (Belgium), referring to section 4.2.7 of Official Records No. 196, was well aware of the importance of the research programme developed or supported by WHO in leprosy. But of even greater significance than the size of the programme was the relevance of the research topics sponsored by WHO, particularly those on the cultivation of Mycobacterium leprae and the production of vaccine. Success in that field would change the face of leprosy control. He drew attention to the participation of Belgian university centres in that research programme and stressed in that context the essential role of WHO in ensuring international cooperation.

There was however another aspect of research on leprosy which, perhaps somewhat surprisingly, had escaped the attention of many research workers until very recently. He was referring to operational research, which was of vital importance. The epidemiological principles on which leprosy control activities were based were well known but very often it was not known how those principles should be applied. What was the cost and the effectiveness of the various strategies for case-finding as treatment? What were the indices for evaluating results? Was it possible to predict the dynamics of the disease in a population? And - even more important - how could leprosy activities be integrated into the general health services? To prevent the present leprosy control measures falling into unwarranted discredit and being replaced by other costly methods of doubtful efficacy (e.g. the isolation of leprosy patients, which was again being advocated by some) an answer to those questions had to be found. In addition to its long-term research on the microbiology of leprosy, WHO should also promote research on the operational aspects.

Dr DONA (Romania) said that better coordination was needed between all countries in tuberculosis control. In Romania there were constant budgetary, organizational and research efforts to ensure effective control of the disease. The control programme comprised a series of prophylactic and curative measures, including radiological screening, compulsory BCG vaccination, chemoprophylaxis and chemotherapy, all of which were provided free of charge by the State. The programme took into account changes in demographic structure, industrial development and urbanization that were likely to affect the strategy. Longitudinal epidemiological studies were being carried out, with cost/benefit investigations and systems analysis to enable optimum decisions to be taken. The participants in a training course in health planning organized by WHO had been able to observe how the problem of regional tuberculosis control programmes was approached in Romania.

There had been many organizational and technical improvements in tuberculosis control in Romania in recent years. Health units had access to bacteriological testing and in 1971 the number of cultures to detect the Koch baccillus represented about 4% of the population. Long-term programmes had been improved on the basis of research. The quality of nationally produced BCG vaccines had been appraised with the assistance of WHO and the International Reference Centre in Copenhagen. Another large-scale research project in 1971 had involved the administration of rifampicin and ethambutol to chronic tuberculosis patients throughout an area with a population of 2 500 000. In collaboration with the International Union against Tuberculosis, studies had been conducted to establish the value of chemoprophylaxis in subjects with small lesions of indeterminate growth potential.

As a result of the numerous preventive and curative measures there had been a regression in the incidence of tuberculosis and in resulting mortality, particularly in the last decade. The problem of integrating tuberculosis control programmes was currently being

investigated and a comparative study was being made of the tuberculosis work being carried out (1) by the specialized services, (2) by general practitioners and (3) in the context of progressive integration.

Dr SULIANTI SAROSO (Indonesia) stressed that parasitic diseases were still a major problem in the developing countries. The Indonesian delegation had welcomed the meeting on training in the epidemiology and control of parasitic diseases held in London in 1971, and asked what further steps the Organization proposed to take.

Dr ELOM (Cameroon) recalled that his delegation had spoken on many occasions in previous Health Assemblies on the serious public health problem posed by trypanosomiasis in Cameroon and in other countries of Central Africa. In his country all ethnic groups were affected by the disease, particularly in the area surrounding Yaoundé. In this part of the country 10-30% of the children were carriers of haemoglobin S. He hoped that WHO would continue to provide assistance, which should be directed to three main areas: (1) extensive surveys to assess the magnitude of the problem in different regions of the country; (2) the training of personnel for research, diagnosis, and treatment; (3) the provision of laboratory equipment. He was also of the opinion that research should be continued in the developed countries, and the results of this research communicated to the health authorities in developing countries.

Dr HASSAN (Egypt) said that the question of removing cholera from the list of diseases subject to the International Health Regulations was often raised. He felt that such action would be premature, in view of the environmental conditions prevailing in many countries where cholera was present or liable to be introduced. The comparative ineffectiveness of the vaccine at present available was not a sufficient reason to justify the action proposed. The vaccine had a certain protective value, and in any case a more effective vaccine might eventually be developed. Inclusion in the list of diseases subject to the Regulations should be based on epidemiological considerations, not simply on the availability of an effective vaccine. He pointed out that there was no effective vaccine for plague, but that disease was subject to the Regulations because protective measures other than vaccination could effectively reduce its spread.

Professor RODRIGUEZ CASTELLS (Argentina) welcomed the meeting of an expert committee on tuberculosis planned for 1973, in view of the considerable progress in methods and techniques since the last meeting in 1964. There had been staggering progress in chemotherapy in recent years; the methods of treatment referred to by the delegate of Romania were unquestionably effective, but were too expensive for many developing countries. He hoped that the Expert Committee would suggest more effective methods, within the reach of all countries, that would improve population coverage in rural areas. It should also consider the development of a network of laboratories for bacteriological diagnosis.

Dr ECHEZURIA (Venezuela) said that the delegations of Venezuela and Colombia had agreed to suggest to the Health Assembly that it recommend that the Committee on International Surveillance of Communicable Diseases reconsider the need for keeping yellow fever on the list of diseases requiring special surveillance, especially as means were now available to contain any outbreak.

Dr SENGUPTA (India) recalled that a short-term consultant who visited India in 1967 had observed that the existing facilities for the production of rehydration fluid for cholera patients were inadequate, and had recommended the replacement of glass bottles by plastic containers and the introduction of disposable infusion sets. WHO had been approached to assist in obtaining automatic plant for producing, filling and sealing such plastic containers in order to increase local production, but no action had yet been taken.

Dr SENCER (United States of America) asked what was the current thinking with regard to the use of oral rehydration therapy in cholera.

Dr VIOLAKI (Greece) said that, in view of the possibility of cholera being imported into Greece, an intensive surveillance programme for all enteric diseases had been instituted in 1970, under which seven diagnostic laboratories received specimens from all over the country. Persons at high risk were vaccinated yearly, although it was appreciated that the most important preventive measures were sanitation and personal hygiene.

Dr BERNARD, Assistant Director-General, said that the suggestions made concerning the international health aspects of cholera and yellow fever would be passed on to the Committee on International Surveillance of Communicable Diseases, which would make recommendations in its report to the Health Assembly.

In reply to the delegate of Indonesia, he said that the report of the meeting on training in parasitic diseases was now ready and that further steps were being considered. It was planned to hold courses on the epidemiology of parasitic diseases and the methodology of control as well as on the serology of parasitic diseases. There were also plans to select a number of leading centres to provide training in parasitology and malariology, so as to prepare specialists able to deal with a wide range of parasitic tropical diseases.

He thanked the delegate of Belgium for his remarks about the leprosy programme. It was essential to continue laboratory and operational research in leprosy control so as to find the cheapest and most effective methods of reducing morbidity, which had shown no improvement throughout the world in recent years.

Dr CVJETANOVIC (Bacterial Diseases), replying to the delegate of the United States of America, said that several research projects had been conducted on the use of oral rehydration fluids and that they had proved it effective. Oral fluids had been used extensively in recent years in Africa and Asia, but in severe cases it was generally necessary to begin treatment with intravenous fluids.

In reply to the delegate of India, he pointed out that the provision of rehydration fluid production plant required considerable funds. In the past the Organization had been able to assist in such projects only with the cooperation of other agencies such as UNICEF.

Vector biology and control

There were no comments.

Environmental health

The CHAIRMAN drew attention to the following draft resolution on water quality in international bodies of water, proposed by the delegations of Argentina, Austria, Belgium, Federal Republic of Germany, France, Italy, Netherlands, Romania, Sweden and Yugoslavia:

The Twenty-fifth World Health Assembly,

Having considered the report of the Director-General on the adverse effects on health of the increasing pollution of water resources;

Considering the conclusions of the European Regional Conference on the Accidental Pollution of Inland Waters, as well as the conclusions and recommendations of meetings organized by WHO in this field;

Aware that the pollution of rivers and other bodies of water that traverse or constitute national boundaries represents a problem of great concern to public health authorities and one that cannot be satisfactorily solved without international cooperation,

1. EMPHASIZES the importance of ensuring the protection of bodies of water against pollution;

2. STRESSES the need for the health authorities of Member States to take appropriate action to monitor water quality, with special reference to bodies of water utilized as sources of drinking supplies; and

3. REQUESTS the Director-General:

(i) to explore ways and means of promoting agreement on uniform methods for measuring and monitoring water quality in bodies of surface and ground water, and facilitating the exchange and comparison of water quality data;

(ii) to provide technical assistance to Member States for pilot projects on the surveillance of water quality in order to provide a basis for public health action;

(iii) to collaborate with Member governments and appropriate international bodies in developing a system of surveillance of water quality and other measures that would enable the competent authorities to deal effectively with international water pollution problems, with particular emphasis on the public health aspects.

Dr RACOVEANU (Romania) stressed that the draft resolution dealt with a matter of great importance to the Organization, since the problem of pollution of rivers and other bodies of water that crossed international boundaries could not be solved without international cooperation.

Dr TATOČENKO (Union of Soviet Socialist Republics) welcomed the appointment of a medical officer to the Environmental Pollution unit. The medical officer's functions were outlined in Official Records No. 199, Chapter II, paragraph 70, and his appointment would benefit the activities of the unit.

Dr AUJOULAT (France) suggested that the term "bodies of water" used in the draft resolution should be changed to "water resources". In operative paragraph 3 (ii) the words "as requested" should be inserted after "provide".

Dr GERRITSEN (Netherlands) expressed his delegation's support for the draft resolution. The pollution of rivers by chemicals, heavy metals, pesticides and chlorine was growing. Where rivers crossed national boundaries, international cooperation was necessary. He felt that WHO should participate in such cooperation, since polluted water could endanger public health.

Dr KLIVAROVÁ (Czechoslovakia) asked what resources would be used to implement the measures proposed in the draft resolution.

Professor PACCAGNELLA (Italy) expressed his delegation's appreciation of the programme in environmental health, and particularly in occupational health. He realized the need for WHO to cooperate with other United Nations agencies, especially the International Labour Organisation, but he believed that in many countries it was advisable to combine the public health services and the occupational health services. Recent Italian legislation required health protection and environmental control measures in factories, with epidemiological studies and medical evaluation of human exposure to multiple stress, including stress outside places of work. It was well known that noise levels in many residential areas were higher than those in some factories. Moreover, many gastric and respiratory diseases were at least partly due to noxious nutritional and behavioural factors rather than to occupational hazards. Man's health was indivisable, and health services should not be needlessly subdivided. He expressed the hope that WHO's programme in occupational health would be expanded.

Dr PAVLOV, Assistant Director-General, said that a considerable reorganization of the Division of Environmental Health had been carried out in 1971. The Organization assisted developing countries with various aspects of environmental sanitation; in addition to practical help, it now provided assistance with scientific research. The appointment of the medical officer referred to by the delegate of the Union of Soviet Socialist Republics was intended to strengthen the preparation of criteria of pollution and of possible biological repercussions.

WHO worked in close cooperation with the international reference centre for community water supply in The Hague, and with 20 other collaborating institutes. Recommendations on the quality of drinking-water had recently been prepared.

The CHAIRMAN invited the Committee to consider the draft resolution on water quality in international bodies of water, with the amendments suggested by Dr Aujoulat.

Decision: The draft resolution, as amended, was approved.

Organization of health services

Dr TATOČENKO (Union of Soviet Socialist Republics) said he wished to record his delegation's appreciation of the valuable work carried out by the Health Legislation Unit.

The meeting rose at 5.55 p.m.