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COMMITTEE ON PROGRAMME AND BUDGET

PROVISIONAL MINUTES OF THE FOURTEENTH MEETING

Palais des Nations, Geneva
Wednesday, 23 May 1956, at 9.30 a.m.

CHAIRMAN: Dr M. JAFAR (Pakistan)

CONTENTS

Note: Corrections to these provisional minutes should reach the Chief, Documents and Official Records Section, World Health Organization, Palais des Nations, Geneva, by 30 June 1956.

1. DRAFT FOURTH REPORT OF THE COMMITTEE ON PROGRAMME AND BUDGET (Document A9/P&B/32)

Decision: The draft fourth report of the Committee on Programme and Budget was approved without comment.

2. PEACEFUL USES OF ATOMIC ENERGY: Item 6.6 of the Agenda (Handbook of Resolutions and Decisions, 3rd edition, pages 3-4, Resolutions EB15.R21 and WHA8.34, Official Records No. 68, Resolution EB17.R57 and annex 15, Documents A9/P&B/13 and Add.1, A9/P&B/24, A9/P&B/31)

Dr DOROLLE, Deputy Director-General, introduced the report by the Director-General on peaceful uses of atomic energy, document A9/P&B/13.

The document gave a brief account of the different bodies which had been constituted or were being constituted to deal with the question of the peaceful uses of atomic energy. He referred the Committee in particular to the Director-General's report to the seventeenth session of the Executive Board, Annex 15, page 124 of Official Records No. 68.

In accordance with the instructions given to the Director-General, the Organization had participated in the International Conference on the Peaceful Uses of Atomic Energy in August 1955 and had submitted two papers which were to be reproduced in the official reports of the Conference. One dealt with the general problems of protection against radiation from the public health point of view, and the other with education and training in the same field. The Organization had furthermore undertaken a training programme in which the first step had been a course for "health physicists" organized in Stockholm by the Regional Office for Europe jointly with the Government of Sweden and the Atomic Energy Commission of the United States of America. It was hoped to organize similar courses, first in Europe, to which students of all regions would, of course, be welcome.

In the field of scientific information, in accordance with the wishes of the Board a monograph was being prepared containing an analysis of selected papers submitted to the International Conference, supplemented by information gained since that time, for the use of general public health administrators.

An observer of the Organization had followed the debates of the Scientific Committee on Atomic Radiation, taken part in the discussion of the working parties and made a statement in the plenary session which appeared as Annex 2 to document A9/P&B/13.

No official documents were available yet on the creation of the International Atomic Energy Agency. However, a copy of the draft statute which had been received through a United Nations press communiqué had been attached to the document as Annex 1, for information. That final draft statute was established by the governments sponsoring the constitution of the new agency, in February 1956, in Washington, and would be discussed by the constituting conference due to take place in New York on 24 September.

It was hoped that an official invitation to that conference would soon be received by WHO as it was important that the Organization should be able to state, at the time of the constitution of the new agency, the ways in which it could contribute to the agency's work, and thus avoid the risk of overlapping which from a first reading of the draft statutes of the Atomic Energy Agency might seem possible.

He would only add that, in its work in connexion with the peaceful uses of atomic energy, WHO had sought and found the support of the non-governmental organizations interested. It had enjoyed the continued support of the International Commission on Radiological Protection. The Executive Board, in admitting those two long-standing organizations into official relationship with WHO, had strengthened the working relations already existing. The two Commissions had recently met in Geneva, and the Secretariat had taken part in an informal seminar with them. They had also been extremely helpful in the preparation of the study group which the Director-General was at that time setting up. He thought the Committee might be interested to hear a statement by a representative of those organizations on their collaboration with WHO.

The Committee had before it a draft resolution on the peaceful uses of atomic energy (EB17.R57) submitted to the Assembly by the Executive Board, and two proposed amendments (documents A9/P&B/24 and A9/P&B/31). The first (A9/P&B/24), submitted by a group of countries, meant in fact that the attention of Member States should be drawn to the need for stating the problems of public health concerned at the very early stages of the institution of any project of atomic energy, or in other words before it was too late. That reinforced a view which had always been held by the Organization and had been brought up in the document submitted to the International Conference.

The second amendment (A9/P&B/31), proposed by the United States of America, had the advantage of drawing attention to the main points of the work WHO was able to undertake, thus applying a clearer definition of the programme as it was envisaged at the present time.

Professor BUGNARD, representative of the International Commission on Radiological Protection and of the International Commission on Radiological Units, speaking at the invitation of the Chairman, gave an account of the work already carried out by the two commissions he represented, their present aims, and the way in which fruitful collaboration had been established and could be carried on in the future between them and the World Health Organization.

The two commissions had been set up shortly after x-rays had come into general use in medicine. At that time certain radioactive compounds were beginning to be used in industry, and the first signs of dangerous effects from the use of radiations had appeared. Since their first meeting in 1928 in Stockholm, the two commissions, forming one technical committee, had met every three years in association with the International Congress on Radiology, except for an interruption during the last war.

The aim of the two commissions, which were composed of qualified specialists, had been to attempt to fix the levels of radiation that were compatible with the health of persons occupationally exposed, to study ways of defining and measuring radiation doses and to propose suitable units. Their field of work had continually expanded; they had started only with x-rays, but were now dealing with radiations of ever increasing energy.

After their meeting in Copenhagen in 1953, the two commissions had published a collection of recommendations in various languages dealing with protection against radiation. The units they had established, and those recommendations were at the present time the basis of the whole system of protection adopted in the various countries which had been concerned with protection problems. WHO had given very considerable assistance in circulating and making known the latest edition of those recommendations.

Since the two commissions had been officially accepted as non-governmental organizations with consultative status, their interventions in international discussions on radiation and their relations with the United Nations Scientific Committee on the Effects of Atomic Radiation would be greatly facilitated.

The International Commission on Radiological Protection had been presided over for six years by Sir Ernest Rock Carling from London who, on his retirement in April 1956, had been followed by Professor Sievert of Stockholm. Dr Binks, of London, was the secretary of the organization. The International Commission on Radiological Units was presided over by Dr L. S. Taylor, of the Bureau of Standards in Washington. The two commissions were similar in structure: they were composed of a chairman and a maximum of 12 members. Members were nominated on the proposal of national delegations to the International Congress on Radiology, and by members of the commissions. The constitution of the commissions could be revised after each International Congress on Radiology.

At present, the International Commission on Radiological Protection had five special committees, each composed of 12 to 15 members. Those committees were: the committee on permissible doses for external radiation; the committee on permissible doses for internal radiation; the committee on protection against radiation of energy less than 3 MEV (million electron-volts), the committee on protection against radiation of energy exceeding 3 MEV and, finally, the committee on radio-isotopes and radioactive wastes.

The International Commission on Radiological Units had established four committees since its meeting in April 1956: a committee on standards and measurement of radiation for radiological use, a committee on standards and measurement of exposure to radiation, a committee on dosimetry and a committee on methods of measuring the characteristic data of equipment, x-ray apparatus and radio-isotopes.

The method by which members were selected secured complete independence in the work of the two commissions. It was based solely on scientific value and the competence of its members in their respective fields. The commissions naturally worked in close collaboration and held a number of meetings in common at each of their congresses. In most of the countries interested in the question, national commissions on protection against radiation had been set up, and their work was available to the international commissions.

The following were the main suggestions discussed at the last meeting: The International Commission on Radiological Protection had followed two main lines of thought in its work - protection of occupationally exposed workers, and protection against dangers to which the whole population might be exposed as a result of the widespread peaceful use of atomic energy.

With regard to the former, it might appear strange that no fixed standards of admissible doses for occupationally exposed workers had been arrived at after that time, but new difficulties were constantly met with because scientific knowledge was unfortunately insufficient. It was not yet possible to state in an exact and scientific manner at what point weak doses of radiation began to take effect on living beings, and it was therefore very difficult to study the early stages of lesions caused by the action of radiations on life, and particularly on man. A further problem was the time distribution of exposure. Up to date it had only been possible to define the dose occupationally exposed workers could receive weekly without harm. But with new procedures in atomic energy work, fresh difficulties had appeared, and it had been necessary to define the permissible dose for the longer period of thirteen weeks.

The Commission had also considered placing a limit on the total amount of radiations an individual might be exposed to throughout his life. It had attempted

to limit the total dose to be received up to the age of 30, which was the vital age in reproduction, and then by decades until the age of 60.

Another important problem was the increasing danger of internal radiation due to the fact that the dissemination of radioactive dust could lead to internal contamination so that the doses received from the inhalation or ingestion of radioactive material would have to be taken into account. The problem was a tremendous one, it required a definition of the average man, some idea of the average weight of his organs and a study of the way isotopes were distributed inside the body, all matters to which only provisional solutions had been found.

With regard to the second aspect of the problem considered by the International Commission on Radiological Protection, that of the protection of the population as a whole, since it dealt with the infinitely weak doses received through contamination of the air, water and soil, genetic problems had to be considered. Unfortunately very few scientific data were available and it was only possible to recommend measures of prudence. The Commission thought it would be wise to limit doses of radiation received by the genital organs of the populations as a whole to doses of the same order of magnitude as those of the natural background of cosmic rays in the radioactivity of the earth. The part played by that background of radiations in the total evolution of the human species was unfortunately not known scientifically.

Difficulties had also arisen for the International Commission on Radiological Units. In 1928 it had been possible to define the "roentgen" which, for the radiations it had been set up to measure, x-rays and gamma rays of radium, was still as exact and valid as when its definition had been framed, but in face of the infinitely larger scale of radiations, with energies amounting to as much as several

hundred million electron-volts, the Commission had found it necessary to propose new units. Its latest conclusions had been that it should try to bring into general use a unit which would take account solely of the energy absorbed by the tissues, since that energy was responsible for all the lesions that appeared in the body. At its last meeting, accordingly, the International Commission on Radiological Units had recommended the use of a new unit called the "Rad" which measured the energy absorbed by the tissues, and which was defined as the absorption of 100 ergs per gram of tissue irradiated.

Similarly the International Commission on Radiological Units had attempted to generalize methods and standards of measurement which certain national organizations could supply to all countries, thus making possible the use of uniform units and measurements throughout the world. The two commissions had been working in a continually expanding field, yet they had managed to secure some valuable data for international use.

Those who had attended the International Conference on the Peaceful Uses of Atomic Energy and the Scientific Committee on Atomic Radiation had been able to realize how few specialists in the world were thoroughly informed on those questions. It was therefore essential that their efforts should not be dispersed. Close and friendly collaboration between the various national and international bodies dealing with protection against radiation should be assured, as it happily had been between WHO and the two commissions he represented. The commissions had to thank WHO for its help during their meeting in April 1956 and later. During the course of that meeting they had held a joint seminar with WHO on a number of outstanding questions. The International Commission on Radiological Protection had been consulted by WHO in

establishing the working group which had met from 11 to 15 April, to study the problems of protection and standardization of units. It was clear that good relations had already been established between the commissions he represented and WHO, and he felt certain they would continue to develop harmoniously. The admission of the commissions as non-governmental organizations with consultative status was a guarantee of efficient collaboration among the three organizations.

The commissions for their part would continue to develop and improve their recommendations in the light of research. WHO would play a very important part, particularly in the training of personnel, in the diffusion of standards and methods of measurements established by the commissions, which might otherwise remain unapplied, and in the solution of problems of radioactive waste.

It was essential that the whole world should realize the importance of the health problems created by the development of atomic energy. The two commissions he represented had done their best to spread that knowledge; WHO could do far more, and he hoped the collaboration between the three bodies which had begun so well would be strengthened in the future.

The CHAIRMAN, on behalf of the Committee, thanked Professor Bugnard for his statement.

Mr WATSON (United States of America), commenting on the public health aspects of the widespread application of atomic energy to peaceful uses which now faced the world, said that the unplanned use of atomic energy could have a detrimental effect on (i) workers in atomic energy plants, (ii) persons living close to those plants, (iii) persons living at some distance from plants, through long-range contamination of air or water, and (iv) whole populations, through widely scattered and improper uses of atomic energy products; radioactive isotopes were being used more and more extensively for diagnosis and therapeutics by physicians, dentists and veterinary surgeons, for industrial purposes, in all types of research institutions and, recently, in sterilization or preservation of foods.

The first and most obvious control measures were those taken by operators of atomic energy plants in their own interest. Responsible industry and universities should feel bound to use all means at their disposal to ensure the protection of the whole population, and should work with public agencies on research programmes in order to make certain that techniques for avoiding the detrimental effects of radiation on human health were advancing as rapidly as the use of radiation itself.

The administrations of the different countries had the responsibility of taking the measures necessary to protect the health of all their citizens, although in some cases an atomic agency within the State would share that responsibility. That obligation should be fulfilled by stimulating the enactment or application of the proper legislation. Public health agencies should co-operate by proposing

standards, regulations and other measures to ensure the safe operation of radiation operation and should carry out and stimulate research into methods of controlling atomic energy.

The need for a world agency to control radiation activity was apparent, and the United Nations, with its eleven years of experience in world affairs, could fill that gap. Recognizing its responsibility, it had set up the necessary committees with a view to establishing an International Atomic Energy Agency within its framework. The new agency's statute had already been drafted and the meeting which was to consider the actual creation of the agency itself was scheduled for September 1956. The function of the Atomic Energy Agency would be to accelerate and extend the contributions of atomic energy to the peace, health and prosperity of the world.

With those objectives in view, it was ovbious that the new agency should should make full and effective use of sister agencies within the United Nations, and he felt that special mention should be made of the required relationship between that agency and the World Health Organization. The World Health Organization, after almost ten years of work in direct contact with health authorities throughout the world, was in an ideal position to collect and disseminate information on the health aspects of radiation work, including atomic energy, provide training for health personnel, prepare information manuals, give the lead in the establishment of standards, and organize seminars and conferences on the subject. In order to avoid duplication of personnel, the new agency should make full use of WHO in correlating and co-ordinating public health work.

In the two papers it had submitted to the First International Conference on the Peaceful Uses of Atomic Energy, WHO had already shown its awareness of the part it should play. It had also taken the initiative in establishing working contacts with the International Commission on Radiological Protection and the International Commission on Radiological Units, to ensure proper co-ordination in those areas.

He concluded his statement with a few remarks on promising techniques for use by industry and public organizations in preventing the by-products of radiation work from seriously degrading the water resources of the world. The techniques in question, which pertained to engineering, were aimed primarily at the protection of people living close to atomic plants or at a distance where they could be affected by long-range contamination. Some of them were already in use, and their application, it was felt, would be highly effective in protecting the vital resources of the world from radiation. They were as follows:

1. The recovery of by-product isotopes, the main source of radioactive contamination of water resources, from plant wastes.
2. The use of ion exchange, by which the large quantities of pile treated cooling water could be de-activated so that more than one use could be made of the water.
3. Study of the concentration of radioactive wastes with a view to reducing large quantities of radioactive matter to a small volume, which made it easier to dispose of, and sometimes facilitated the recovery of isotopes for further use.

4. A more complete investigation of the possibility of disposing of concentrated radioactive wastes in the deep sea. It might be possible for WHO to take the lead in preparing recommendations on how the oceans could be used for such disposal without serious contamination of their waters.

5. The development of better techniques for making full use of the ion exchange capacity of selected underground strata to absorb radioactivity.

6. A more complete evaluation of the use of biological methods of reducing radioactivity in waste waters.

7. A study of ways of confining radioactive waste materials in order to limit the degree and extent of contamination of the soils or waters in which they were deposited.

8. The development of highly sensitive monitoring and recording devices to detect the first indications of malfunctioning in atomic energy equipment, in order that the plant could be promptly shut down.

9. A continuing programme of research to discover other techniques for reducing radioactivity in waste water.

Finally, he drew attention to his delegation's proposed amendment to resolution EB17.R57 (document A9/P&B/31) which had already been referred to by the Deputy Director-General, remarking that in accordance with WHO terminology he proposed to replace the word "manual" in sub-paragraph (c) by the word "monograph".

Dr EL HALAWANI (Egypt) observed that there was a growing feeling among scientists and the public that the problem of the effects of radiation on man and his environment urgently required investigation. He welcomed the establishment of the United Nations Scientific Committee to deal with the subject and the fact that WHO and ILO had included the subject in their programmes.

The present age, in addition to cosmic rays and natural ground radiation due to the presence of fissionable material, was faced with the effects of artificial radiation from (1) x-rays and (2) from radioactive substances. In the latter category were included "fall-out" radiation, radiation from waste discharged by reactors into the air or water, isotopes such as strontium 90 which affected food chains and those used in medical treatment. The use of radioactive substances was increasing so rapidly that a wide variety of inexpensive radio-isotopes had become available and constituted a potential danger to health where appropriate precautions were not taken. An example was the use of radium or mesothorium mixed with zinc sulfide as a luminous compound for instrument dial painting.

Of the three radiations emitted by radioactive substances, alpha particles, emitted by radium and polonium etc., although of low penetration (they could be stopped by a sheet of paper), had very dangerous effects on the body, and those of the calcium group could become fixed in the bones. He therefore wished to stress the special danger of isotopes in food chains, in particular of strontium 90, from fall-out radiations or from waste material drained into rivers and oceans. Contamination of the air from natural background radiation,

from fall-out radiation, from the smoke and waste material of reactors and from contaminated food chains were hazards to which the human race was exposed. Further, the destructive effects of radon gases on one tissue were well known to health physicists.

The effects of radiation were felt cheifly by the sensitive organs such as the blood-forming organs, and could cause bad skin burns which tended to become cancerous, radiological dermatitis, loss of finger-print patterns, loss of hair, cataract etc. Sterility was also produced by over exposure of the body to radiation. The maximum permissible dose of x-ray or gamma radiation that could be tolerated by the body was 0.5 roentgen. However, the best available information on maximum permissible levels was always open to change since there was still so much to learn about the full biological effects of radiation absorption, and it could not be taken for granted that radiation levels below those indicated were perfectly safe.

It would be clear from his brief statement that it was the duty of all health administrations to set up departments specialized in the effects of radiation, in particular of the following subjects: the effect of a small dose on genetics; the effects of background natural radiation; control by health administrations of safety measures for workers in industry, mining and all establishments dealing with radioactivity; the training of staff to inspect x-ray and atomic plants with re ard to compliance with protection regulations; the training of exposed personnel in methods of protection; the establishment of card indexes to record

the state of health of employees in atomic plants. WHO should be requested to advise health administrations and provide them with all information required on the subject; to provide fellowships in health physics and to follow all the developments, in co-operation with the other international agencies, with a view to co-ordinating protection activities.

The intervention of WHO was also urgently required in the disposal of waste in oceans or rivers which since fish was the main diet of a number of countries, was a vital problem. Accordingly, he supported the two amendments to resolution EB17.R57 and proposed in addition that WHO should study the disposal of radio-active waste material in regional drainage systems.

The CHAIRMAN asked whether the Committee would agree to limit speeches to five minutes in view of the heavy programme still to be covered in the short time at its disposal.

It was so agreed.

Sir Arcot MUDALIAR (India) said he had heard the different speakers on the subject of atomic energy with the utmost interest. In connexion with the increasing use of atomic energy for peaceful purposes, there was no field in which WHO would not have to play its part. As had been said by previous speakers, the Organization bore a great responsibility in matters concerning the effects of radiation on genetics, and in water, air and soil pollution. It should therefore

be given a prominent place in relation to the International Atomic Energy Agency.

He had been informed that some of the meetings held to consider the constitution of the new agency had not been open to representatives of the specialized agencies. He suggested that if that was the case, the representative of WHO should insist on playing his part in all the activities connected with that agency.

He drew attention to the special need for a study of the effects of atomic radiation on animal and plant life. Papers contributed to a recent seminar on the subject showed how greatly plant life was affected by radiation, not only through the soil but through stems and leaves. Plants could be energized by radioactive substances in such a way that their fruits were improved, and with regard to animals it had been shown that the effective yield of cows could be increased twofold by exposure to atomic radiation. It was, however, necessary to study such effects on the human species, and the bad effects should be studied as well as the good ones. He suggested that WHO should act in close co-operation with FAO in a study of the subject.

He endorsed the suggestion of several delegations that the Ogranization should request all governments interested to associate their public health personnel with the problems of the adverse effects of the peaceful uses of atomic radiation. He supported the amendment proposed by the delegation of the United States of America (document A9/P&B/31), and, in conclusion, suggested that it would be desirable for the Director-General to carry out a comprehensive survey of the whole subject and to submit to the following World Health Assembly a proposal for creating a separate section of the Secretariat to deal with the ever-increasing problems of the peaceful uses of atomic energy.

Dr AUJALEU (France) expressed his delegation's satisfaction with the statement of the Director-General that WHO should be effectively represented on all institutions or meetings dealing with the health problems of atomic radiation.

He referred in the first place, to a somewhat unexpected result of the consideration of the development of atomic energy. The meeting had heard that doctors were themselves responsible by the use of x-rays, especially in radio-diagnosis, for exposing the population to a greater risk than resulted from atomic energy installations. He thought that WHO should be closely interested in all research made on that point. Important research was being carried out in Great Britain on the subject. He believed that WHO should warn governments that radio-diagnosis should be used with great prudence and only when it was strictly necessary.

The protection of the professional worker in atomic energy installations was understood and effectively practised. The protection of the population of a country and the individuals of that population was also beginning to be understood, and the proper apprehensions of populations had compelled atomic physicists to find several procedures for diminishing or suppressing harmful radioactive wastes. A solution was being found to the problem in most countries. Most of the information given related to the permissible dose for the individual, but it was not clear whether what was permissible for the individual was permissible also for the human race. A health administrator or hygienist called on to give advice was often in great perplexity because of his doubt whether the doses now regarded as safe for the individual might not be dangerous doses for the human species. His perplexity was all the greater because, if it should be found that the doses had in fact been dangerous for the human species, it would be too late to intervene and the damage would have been done without

possibility of cure. WHO should earnestly collaborate with other international organizations such as UNESCO, and with non-governmental organizations, in the necessary research work.

His third point was that in most countries producers of atomic energy had people trained in protection against radiation. The result was that, as doctors were responsible for public health, they could not criticize the views of the experts because of their own feeling of ignorance. They could only resort to vague arguments which they were not able to prove - an attitude which had little effect upon well-trained mathematicians and physicists. Furthermore, organizations producing atomic energy provided their own controls, of a kind which was not satisfactory for public health services. He therefore thought that public health workers should be trained as rapidly as possible in protection against radiation.

A course had been held recently at Stockholm for training physicians for protection in factories. Such training was essential in order that public health officers might discuss those matters on an equal footing with atomic engineers. The public health organizations should be in a position to provide a control not open to scientific criticism and which could therefore hold its own against atomic institutions. France had followed that line since it had set up a three-week course in March 1956 for industrial and public health doctors. Another was planned for November to which foreign physicians would be welcome.

The problem was not confined to the countries in which atomic installations were in existence. Atomic energy would probably be developed more widely. Some countries

which had so far been under-developed economically would find in atomic energy a source of power lacking in their natural resources and would use it to improve their social and economic development. It would therefore be very dangerous to wait until the atomic installations were set up before training physicians in those countries. The delegation of France was associated with the resolution put forward by several European countries, (A9/P&B/24) which asked that public health services should be associated from the start with the development of atomic projects. One of the essential tasks of WHO was to help all countries to train public health physicians in up-to-date knowledge of health protection against radiation.

Dr ENGEL (Sweden) remarked that the application of atomic energy to peaceful uses was developing rapidly. It was no longer simply the sanitary problems connected with the existence of field atomic reactors or the health problems produced by the various uses of the radio-isotopes that had to be faced. The building of atomic reactors in many urban areas throughout the world, not only in Sweden, was already scheduled. Consequently, the effects of radiation were becoming ever more difficult to supervise. The extended use of nuclear energy in everyday life that was now taking place - nuclear-powered ships and so on - was another factor that increased the difficulty of supervision. Health authorities all over the world were facing those new problems of the atomic age with the utmost interest and a deep sense of responsibility. International co-operation was imperative, particularly with regard to radioactive contamination of the air, transportation of radioactive substances and atomic-powered transportation. It was desirable to have international legislation on all these items.

At the national level steps should be taken to decentralize the environmental sanitation services dealing with atomic radiation by setting up regional organs. In that connexion, there was one detail of what was being done in Sweden that he would like to bring to the Committee's attention. A vehicle had been constructed to carry out continuous registration of atomic radiation and its effects on water, food and human beings.

His delegation recommended the setting-up of an expert committee to study sanitary problems connected with the peaceful uses of atomic energy; the expert group should be composed of public health officers, experts on the protection of industrial workers, nuclear physicists and nuclear engineers. Accordingly, it would support the amendment introduced by the United States delegation (A9/P&B/31) to the draft resolution proposed by the Executive Board in its resolution EB17.R57, and it was one of the sponsors of the amendments to that same draft resolution submitted in document A9/P&B/24.

Mr DJORDJEVIC (Yugoslavia) said his delegation wished to thank the Director-General, the Executive Board and all the bodies that had participated in discussions on the application of atomic energy to peaceful uses, especially in medicine.

The Yugoslav delegation unreservedly supported the two amendments submitted to the Executive Board draft resolution. However, it thought that the United States' amendment should include an additional point to the effect that a special fund should be created to carry out the proposals enumerated. The rapid implementation of the conclusions that had been reached in the earlier discussions mentioned above was indispensable for those countries which had not as yet facilities of their own for

protection against radioactivity nor a sufficient number of experts in that field.

Dr EVANG (Norway) stated that his delegation, too, would support both the United States' amendment and the ten-delegation amendment to the Executive Board's draft resolution.

He would like to draw attention to two points that had been overlooked by previous speakers. The first concerned the genetic aspect of radiation effects in which WHO as a medical body should take a greater interest. At the United Nations Population Conference, held in Rome in 1954, figures had been produced to show that 500 hereditary diseases and defects had been discovered to exist in man. In an advanced community, hereditary disease accounted for the serious disablement of two per cent. to three per cent. of the population and the risk in the case of children was now in the proportion of almost ten per cent. The question therefore arose whether WHO should encourage countries to make a survey of hereditary diseases now, so as to have a starting point for the measurement of developments when atomic radiation increased.

WHO was concerned purely with the application of atomic energy to peaceful uses. It should not be overlooked, however, that explosions of atomic missiles had already resulted in a layer of isotopes circulating around the globe. Ground radiation was also increasing in certain countries; it had not reached dangerous proportions but the situation was nevertheless worrying. Any control measures decided upon should take those facts into consideration.

Lastly, he would stress that the hygienic and medical problems involved came within the scope of environmental sanitation and hence the normal place for WHO's programme on radiation effects was within its environmental sanitation programme.

Professor JULIUS (Netherlands), speaking as a hygienist, said that there were lessons to be learnt in the field of atomic radiation from past experience in epidemiology. The human race had started from a bad position in relation to the epidemic infectious diseases. At the moment it was in a relatively good position in respect of radioactivity, because of the universal recognition of the danger involved. Nevertheless, every development in the use of atomic energy meant a fundamental loss in safety and a greater danger to human life. The need for care in the protection measures taken could not therefore be over-stressed. What was needed were easy detection methods and an organized international health intelligence service such as existed in respect of the epidemic and endemic diseases.

The difference in attitude towards the question of radioactivity as compared with the question of infectious diseases was striking. For infectious diseases, the Organization's objective was eradication, whereas it spoke of tolerance of radioactivity. Why did not the Organization begin from the absolute standpoint on that matter too and give science its chance to work towards complete immunity from the effects of radioactivity? It was that difference in approach that had led his delegation to co-sponsor the amendments proposed in document A9/P&B/24.

Dr GRASSET (Switzerland) said his delegation joined those that had already spoken in expressing its interest in the question of atomic development. In Geneva there was the European centre for nuclear research; Switzerland had besides other institutions working in the matter and had recently obtained a cobalt bomb for use in therapy.

Switzerland had endeavoured to form a working team to carry out the requisite control measures. It was grateful to the Lucerne authorities for their help in those trials. The fact emerged that team work was needed. But before physicians could usefully contribute, they must be initiated into the rapidly developing science, which involved great difficulties for the layman. The start made by WHO in providing training courses for health physicists was especially useful. WHO could with advantage expand the scope of those courses and at the same time organize others open to physicians from all over the world. In that way a documentation on the matter could be established.

Dr MacCORMACK (Ireland) remarked that he was quite satisfied that adequate measures would be taken to control the industrial use of atomic energy and atomic reactors themselves. But he was not so sure about adequate control of the medical profession. If members of the Committee would recall the use made of antibiotics, they would realize that there was real cause for uneasiness unless WHO evolved satisfactory methods of control.

The CHAIRMAN said that since he had no more speakers on his list he would call upon the Deputy Director-General to make some remarks.

Dr DOROLLE, Deputy Director-General, observed that all that had been said in the course of the discussion was valuable in strengthening the position of the Director-General with regard to the programme he had established and which included all the items that had been stressed. The Secretariat had taken due note of all the suggestions made.

Several speakers had mentioned that emphasis should be given to radioactive waste problems or somatic and genetic problems. Those points were included in the present programme. He would accordingly take the liberty of asking the United States delegation to consider completing its amendment by the addition of a paragraph, worded as follows: "(e) The study of public health problems related to the somatic and genetic action of radiation and to radioactive waste disposal." Leaving it out of the amendment might give the impression of excluding it.

It might also be useful to make a reference in the draft resolution to the report submitted to the present session of the Assembly by the Director-General, since the text submitted by the Executive Board mentioned only the report that had been placed before it. He suggested a suitable wording.

Dr CAMERON (Canada) said he completely subscribed to the course WHO had followed in its work on the effects of radiation. He supported the amendments that had been proposed to the Executive Board draft resolution but he would like to be clear on what was intended by the Yugoslav suggestion for the creation of a special fund for that work. He understood that funds were already appropriated for the purpose in the WHO budget.

Dr DJORDJEVIC (Yugoslavia) said that, if the Organization could carry out all the proposals within the funds allocated, he would withdraw his suggestion for a special fund.

Mr WATSON (United States of America) called attention to the fact that the amendment introduced by his delegation covered only the programme that was already under way. The reason for the inclusion of details had been to bring to the notice of the International Atomic Energy Agency that was shortly to be set up, the fact that WHO was already engaged in that field, so that its activities would get due consideration.

The DIRECTOR-GENERAL pointed out that in that case reference would have to be made to all important items included in the 1956 programme as well. The studies undertaken on somatic and genetic effects of atomic radiation, for instance, were not mentioned in the United States amendment.

Mr WATSON (United States of America) said he was in complete agreement that any item of the WHO programme already in operation could be included in the United States amendment.

The CHAIRMAN declared the discussion of the item closed. He noted that there was unanimous support in the Committee for the amendments submitted in documents A9/P&B/24 and A9/P&B/31 to the Executive Board draft resolution as well as for the changes that had been submitted verbally. These changes would be incorporated in the Executive Board's draft resolution and the text would be submitted at a later meeting for the Committee's formal approval.

3. DECISIONS OF UNITED NATIONS AND SPECIALIZED AGENCIES AFFECTING WHO ACTIVITIES: Item 6.18 of the Agenda (Document A9/P&B/10)

Dr DOROLLE, Deputy Director-General, felt there was no point in making a special statement to introduce the report before the Committee (A9/P&B/10) in detail; the Secretariat had endeavoured to make it as comprehensive as possible. He was ready to answer any questions delegations might like to put.

Decision: The Committee unanimously agreed to recommend the adoption of a draft resolution noting the Director-General's report (A9/P&B/10).

4. WHO PARTICIPATION IN THE EXPANDED PROGRAMME OF TECHNICAL ASSISTANCE: Item 6.5 of the Agenda (Resolutions WHA8.32, EB17.R54, EB17.R55, EB17.R56 and annex 14; Official Records No. 69, Chapter II, Section 3, and Chapter IV, Section 8; Documents A9/P&B/12, A9/P&B/12 Add.1)

Dr DOROLLE, Deputy Director-General, said that for discussion of the item it was necessary to refer to Annex 14 of Official Records No. 68 which reproduced the report submitted by the Director-General to the seventeenth session of the Executive Board and also to the later information set out in document A9/P&B/12 and A9/P&B/12 Add.1.

The Director-General had reported to the Executive Board that the financial position of the Expanded Programme of Technical Assistance for 1955 had been satisfactory Unfortunately, that was not the case for 1956. The Technical Assistance Board, at a recent short meeting in Geneva, had decided to maintain the initial earmarking of funds for 1956; that represented only 90 per cent. of the funds required for the approved programme. WHO's representative on the Technical Assistance Board had pressed for a clear decision early in 1956 to adjust downwards the approved programme to the limits of the funds estimated to be available for 1956. Unfortunately, that course had not been adopted and WHO was still uncertain what total funds it would receive from the special fund during the year.

Document A9/P&B/12, read in conjunction with Annex 14 of Official Records No. 68, gave an account of the experience obtained in applying the new system of establishing the annual country programmes. It also showed that the Organization's efforts to have local costs borne out of Technical Assistance funds had come to nothing. The Organization's representative had put forward the view expressed by the delegate of Liberia in the discussion on the work of WHO in 1955 to the Technical Assistance Committee and the Economic and Social Council. By a decision of the Technical Assistance Committee of the Economic and Social Council, however, it had been decided that local costs should be met by the receiving countries.

A further important point arising out of one of the resolutions of the Economic and Social Council concerned the fact that hitherto WHO, while continuing to participat in the Expanded Programme of Technical Assistance, had not formally accepted the amendments which had been made in the basic resolution 222(IX) by the Economic and Social Council concerning procedure and the structure of the Technical Assistance Board The Executive Board had now recommended in its resolution EB17.R54 that the present Health Assembly should note with approval the developments which had so far occurred concerning the amendments to that basic resolution. That was a point on which the Committee would have to take a decision. He was at its disposal for any further explanation that might be needed.

The CHAIRMAN said the issue raised was simple. The Technical Assistance Programm comprised projects of two categories. Thus far it had not been the practice where funds were limited to provide for all the projects listed in category I. WHO considered that efforts should be made to have funds applied to those projects in preference to category II projects.

Most of the receiving countries were protesting against the requirement that they should bear the local costs involved in the carrying out of Technical Assistance projects; they considered that charge to be unfair. WHO had made every effort to get that condition removed but so far without success.

Dr TOGBA (Liberia) began by expressing his appreciation of the endeavours of WHO towards easing the responsibilities of the countries receiving technical assistance. Despite the failure of those efforts up till now, he would like the Organization to continue to bring the matter up with the Technical Assistance Board and the Technical Assistance Committee. Most of the receiving countries were far from wealthy. Obviously, if they already possessed adequate funds they would not be asking for assistance from WHO, the Technical Assistance Board and other helping agencies. Unless the requirement to bear local costs was relaxed, many urgent programmes would not be attempted in those countries. In Liberia a number of reasonable requests on urgently needed developments had had to be withdrawn because the country was unable to meet the obligations involved. Other countries, he was sure, found themselves in a similar position.

Dr SIRI (Argentina) said he would like to support the proposal just made by the delegate of Liberia.

Mr SAITA (Japan) also wished to associate himself with the views of the delegate of Liberia on the question of local costs. Japan had consistently maintained that those costs should be borne out of Technical Assistance funds. WHO had decided to bear the local costs of projects under the regular programme carried out in individual

countries. Hence, the stand taken by the Technical Assistance Committee was inconsistent. In future negotiations WHO might point out to the Committee the need for a consistent approach in the matter.

His delegation deplored the fact that the Technical Assistance Board had failed to take a decision to adjust the 1956 programme to likely estimates of the funds available. That seemed a very risky way in which to handle a world-wide programme. It accordingly fully supported the attitude adopted by the WHO representative in the matter, and would urge that a more cautious approach should be taken in the future in order to balance the programme implementation with the funds available.

Dr ANWAR (Indonesia) said that his delegation also fully endorsed Dr Togba's proposal.

The CHAIRMAN felt it would be most useful if there could be greater co-ordination at the government level on the question of local costs. It seemed very strange that governments represented in the Health Assembly and at the same time in the Economic and Social Council and the Technical Assistance Committee should give their representatives different instructions in the matter. Delegates in the Committee might perhaps bear that in mind and try to elicit uniform instructions from their governments on the question.

Dr van Zile HYDE (United States of America) supported the Chairman's plea for consistency on the part of governments. It was not a happy position for the Organization to have to bring up the question of local costs year after year. There was even a certain feeling among governments that WHO had to some extent acted with

irresponsibility and inconsistency in the matter. His delegation hoped therefore that governments would take the matter up in the proper place - the Technical Assistance Committee of the United Nations - in order to avoid WHO finding itself at odds with other bodies.

Dr TOGBA (Liberia) pointed out that not all Members of the Organization were represented in the Economic and Social Council or the Technical Assistance Committee. That was why some delegations availed themselves of the opportunity to make their appeal in the Health Assembly. He was of course in full agreement with the Chairman's suggestion but still felt that WHO should continue to bring the receiving countries' difficulties to the attention of the Council and the Technical Assistance Committee.

Dr SIRI (Argentina), while fully supporting the Chairman's view thought his suggestion might be extended to apply to the budget of the Organization as well. Perhaps what had occurred in the present Health Assembly, whereby the Director-General was left with a minimum budget, would not have happened if all delegates had endeavoured to get their respective governments to recognize the need for providing the requisite funds to carry out the Organization's basic work. Delegates would be rendering great service, not only to WHO, but to their own peoples, if upon return they endeavoured to interest government officials so as to avoid hampering the work of the Organization through restriction of the budget.

The process of instructing representatives was frequently a matter of routine and the administrative officials responsible for determining policy on the budget were not fully aware of the significance of WHO and its work and of the need for higher contributions from its Members.

Accordingly, the suggestion of the Chairman might be made wider in scope and delegates be asked to take up the matter of the selection and briefing of representatives to the Health Assembly with their respective ministries of public health, finance and foreign affairs, so that conclusions in the future would meet the realities of the situation.

The CHAIRMAN pointed out that the general budget was not under discussion at the present time.

WHO's participation in the Expanded Programme of Technical Assistance had to be in line with the policy laid down for it by another intergovernmental body. Hence, the best way to help WHO to get more favourable results in its representations on the question of local costs would be for governments also represented in the Economic and Social Council and in the Technical Assistance Committee to take an attitude consistent with that they took in the Health Assembly.

Mr SAITA (Japan) fully agreed in principle with the Chairman's views. However, Japan was not represented in those bodies and he sincerely hoped that the governments represented in the Health Assembly which were also members of the Technical Assistance Committee would take due note of the opinions expressed in the present discussion and act accordingly.

The CHAIRMAN declared the discussion closed. He proceeded to read out three draft resolutions on (1) the approved 1956 Technical Assistance Programme and the financial situation for 1956, (2) local costs arrangements - Expanded Programme of Technical Assistance, and (3) planning for the 1957 Technical Assistance Programme.

Dr van Zile HYDE (United States of America) suggested that it might be better to have the texts of the draft resolutions in writing before the Committee took definitive action upon them.

It was so agreed.

5. SUPPLEMENTARY PROGRAMME AND BUDGET ESTIMATES FOR 1956: Item 6.4 of the Agenda (Resolution EB17.R37; Document A9/P&B/15)

The DIRECTOR-GENERAL said that document A9/P&B/15 was self-explanatory. At the time of the Executive Board's seventeenth session, it had been expected that some special requirements might arise in respect of the present Health Assembly and field projects in certain countries. That expectation had not materialized and he had accordingly no supplementary programme and budget estimates to present.

Decision: The Committee agreed to recommend that the Director-General's report (A9/P&B/15) should be noted.

The meeting rose at 11.50 a.m.