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President: Mr. ESCHAUZIER (Netherlands)

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* GC(VIII)/268.

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GENERAL DEBATE AND REPORT OF THE BOARD OF GOVERNORS FOR 1963-64 (GC(VIII)/270, 270/Corr.1, 270/Add.1, 2 and 3, 280) (continued)

1. Mr. NADJAKOV (Bulgaria) extended a welcome to the new Member States.

2. He was pleased to note that the efforts made by the Agency had produced results which had enhanced its prestige and proved that it was capable of playing an important part in the further development of science and technology. He wished to mention particularly the drawing up of codes and standards, the awarding of fellowships, the organization of symposia and conferences on the peaceful uses of atomic energy and, above all, the organization of the Third International Conference on the Peaceful Uses of Atomic Energy[1/], which had been an event of major importance in the scientific world.

3. The activities of the Agency were bound to become even more extensive in the future and, in that connection, he wished to make a number of suggestions.

4. The Agency's efforts in regard to the use of radioisotopes in medicine, agriculture, radiobiology, hydrology, chemistry and physics had already borne fruit. However, his delegation considered that the Agency, while continuing those activities within the limits of its material and technical resources, should nevertheless address itself with greater determination to a thorough study of all aspects of nuclear power production, the increasing possibilities of which should be borne clearly in mind.

5. The training of experts had always been, and must remain, one of the fundamental tasks of the Agency. He regretted, therefore, that the sums available for that purpose had decreased steadily since 1962. His delegation wished to suggest that more fellowships be offered and to point out that the candidates of certain countries, including Bulgaria, were at a disadvantage in relation to the candidates of countries receiving assistance under the Expanded Programme of Technical Assistance; one should not confuse pure technical assistance, which consisted in supplying equipment to laboratories or medical centres, with the awarding of fellowships, the main object of which was to train experts.

1/ Held at Geneva from 31 August to 9 September 1964.

6. In order to solve the problems encountered in various branches of nuclear science - for example, in nuclear power generation and in nuclear fusion, or the direct conversion of atomic into electrical energy - all countries needed highly qualified experts, and here the Agency had an essential part to play. For that reason it was important that the Agency should not dissipate its efforts or continue, for example, to extend the activities of the Agency's Laboratory, which had been set up to serve Member States and not in order that it might become another new research centre.

7. His delegation was also of the opinion that the number of research contracts should be reduced and that efforts should be made to establish even closer collaboration with national institutes, some of which had already offered to place at the Agency's disposal, free of charge, the results of research in the field of the peaceful uses of atomic energy. The resources freed in that way could enable a larger number of fellowships to be offered to Member States.

8. With regard to safeguards and inspections, the Bulgarian delegation considered that the Agency was undertaking tasks which it had no business to assume and it could not approve the expenditure involved.

9. The Agency's activities in the field of technical assistance appeared on the whole to be satisfactory, but they would have been even more effective if the Secretariat had made full use of the sums intended for that purpose. Only 70% of the money available had been used, so restriction by the Agency of its technical assistance activities could not be put down to lack of funds. In that connection, his delegation could not approve the proposal to introduce a system of assessed contributions by Members of the Agency to the Operational Budget. Finally, he wished to draw attention to the programme of technical assistance to developing countries proposed by the socialist countries[2/] and to note that that programme had been welcomed by a number of countries.

10. He did not wish to conclude without referring to the Third Geneva Conference, which had focussed attention on the prospects which the peaceful uses of atomic energy would offer to mankind in a world from which war and the weapons of war had been banished. The signing in Moscow of the Partial Nuclear Test Ban Treaty represented a step in the right direction, as did the action taken

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2/ GC(VI)/COM.1/67/Rev.1.

by the Agency in response to the request of the Secretary-General of the United Nations regarding the study of the economic and social consequences of disarmament[3/]. He hoped that the International Atomic Energy Agency would place its authority and prestige in the service of that cause.

11. Mr. CABRERA MACIA (Mexico) expressed appreciation to the Director General and the Secretariat for the excellent work done by the Agency in organizing the Third Geneva Conference.

12. Referring to the annual report of the Board of Governors (GC(VIII)/270, 270/Corr.1 and Add.1, 2 and 3, 280), which attached particular importance to the subject of research and services in the life sciences of medicine, agriculture and radiobiology, he thought that similar emphasis should be placed on the Agency's work in the physical sciences, particularly in the field of hydrology. He was pleased to note the advances made in work on nuclear power generation and nuclear technology. Progress made in connection with these problems, particularly on the economic side, was of obvious benefit to Member States.

13. His delegation shared the views expressed in the report of the Board on the development of nuclear power production over the next fifteen years. Because of the geographical conditions obtaining in Mexico, his country was particularly interested in any advances in connection with dual-purpose power plants, especially those capable of generating electricity and producing fresh water by desalting sea water. Mexico, whose territory included vast areas of arid land, placed great hopes in the possibilities of utilizing nuclear energy for that purpose and therefore attached particular importance to the constructive work being carried out by the Agency.

14. He wished to express his Government's appreciation for the technical assistance received from the Agency in the form of the provision of fellowships abroad, the seconding of experts and the supply of specialized equipment. Referring to the International Centre for Theoretical Physics at Trieste, he noted that his delegation had from the very beginning supported the project for the establishment of such an institution. Now that the Centre had come into being, his delegation

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3/ GC(VIII)/INF/77.

was convinced that it would achieve the purposes for which it had been set up and that it would help to create in the developing countries that scientific tradition which was a necessary condition for their proper utilization of atomic energy for peaceful purposes.

15. In Mexico work had begun on the construction and installation of the country's first nuclear research centre. Preparatory work had already been going on for several years and over a hundred experts had received special training in the advanced countries. The centre would possess a TRIGA III research reactor and a van de Graaff tandem accelerator, which would help to provide scientific and technological training in various branches of the nuclear sciences.

16. In conclusion, he expressed the hope that the valuable work done by the Agency would continue undiminished and that it would have every success in carrying out its vital task of developing the peaceful uses of atomic energy for the benefit of mankind.

17. Mr. HULUBEI (Romania) said that the General Conference was taking place in a mood of optimism that would certainly facilitate the task of devising solutions to the problems of economic and social development, general and complete disarmament and the elimination of the threat of thermonuclear war. However complex those problems might be, Romania was convinced that they could be settled by peaceful means and was working unceasingly for peaceful co-existence between all countries, without distinction of social or political regime. He recalled in particular his country's proposals relating to the establishment of the Balkans as a missile- and nuclear-free zone.

18. The past year had seen encouraging progress: a joint declaration by the three major nuclear Powers to reduce plutonium production for military purposes; a resolution of the General Assembly of the United Nations banning the launching of satellites carrying nuclear warheads[4/]; and the signing of the Partial Nuclear Test Ban Treaty. Efforts should be made to conclude treaties banning underground nuclear explosions and the spread of nuclear weapons, etc., with the ultimate aim of obtaining an agreement on general disarmament.

4/ General Assembly resolution 1884(XVIII).

19. The Agency was in a position to make a contribution to facilitate the progress of the present disarmament discussions. It could appoint groups of experts to undertake scientific studies of the problems involved and to examine how the economic resources released as a result of disarmament could be best used to help the developing countries.

20. The previous year, the General Assembly of the United Nations had unanimously adopted a resolution concerning the International Co-operation Year.[5/] The Agency should not disregard that resolution and the Romanian delegation, together with the delegations of Algeria, Ceylon, India, Ghana, Indonesia, Nigeria, the United Arab Republic and Yugoslavia, had submitted to the Conference a draft resolution relating to the International Co-operation Year and the twentieth anniversary of the United Nations.[6/]

21. The Agency was making constant efforts to reduce the gap that existed between the advanced and the developing countries. It was pledged to keep track of new developments in the peaceful uses of atomic energy, as well as to study those developments and make information available on them. It had on the whole succeeded in performing that task within the limits of its possibilities but it was faced with numerous difficulties that were a direct result of the role played by atomic energy in world politics.

22. Under its Statute, the Agency was obliged to ensure that those nuclear power projects which it helped to co-ordinate were devoted exclusively to peaceful purposes. In that connection, praiseworthy efforts had been made to improve the safeguards system. It was important that the Agency should continue to work out a safeguards system that was politically, technically and economically acceptable to all countries and that would not hold up the development of the peaceful uses of atomic energy.

23. The Third Geneva Conference had shown how necessary it was for the Agency to evolve suitable machinery to enable it to promote nuclear research and the large-scale use of atomic energy in scientific and technical establishments throughout the world.

5/ General Assembly resolution 1907(XVIII).

6/ GC(VIII)/COM.1/88 and Corr.1 (adopted as GC(VIII)/RES/175).

24. The Agency's efforts in organizing and maintaining regional projects of the NORA type and regional centres such as those in Trieste, Cairo and elsewhere should be continued. Co-ordination of the Agency's activities with those of specialized agencies like the World Health Organization (WHO), and the Food and Agriculture Organization of the United Nations (FAO) was also useful and effective.

25. Radioisotopes could be used for a multiplicity of purposes. As far as atomic energy generally was concerned, one of the most important uses was for the desalination of sea water. The implications of nuclear desalting techniques were considerable and the dangers of fresh-water shortages, not only in arid regions, lent particular significance to them. It was to be hoped that the Agency would continue to pay close attention to that problem.

26. He wished to emphasize the value of the work done in the fields of agriculture, food preservation and pest control, the importance of which was obvious to everyone.

27. Participants were unanimously agreed that the work done at the Third Geneva Conference had been of considerable importance. Nuclear power stations would be in a position to offer the world the energy it would need in the very near future, when enormous power requirements and a shortage of conventional fuels could be expected. More than 50% of the energy used towards the end of the twentieth century would, without doubt, be provided by nuclear fuels. The Agency had already accomplished a great deal in that field and would increase its efforts when it had had time to study all the implications of the Geneva Conference.

28. The information given on the Agency's technical assistance during the past year[7/] showed a marked improvement in those activities in comparison with previous years, and he was pleased to note that that tendency was being maintained. The resources at the Agency's disposal were too limited for it to be able to embark on a really large-scale assistance programme, but existing possibilities had not yet been completely exhausted.

29. The Romanian delegation approved the recommendation made by the Board at the request of certain of the developing countries to the effect that greater

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7/ GC(VIII)/INF/72.

flexibility should be displayed in connection with the provision of equipment and that there should be a reduction in the amounts payable for the services of experts, who would only be provided at the express request of the receiving States.

30. In the Board's report, as well as in the Agency's Programme for 1965-66[8], particular importance was attached to the need for providing Member States, and especially the developing countries, with personnel trained in the uses of atomic energy. It was imperative, as U Thant had pointed out at the opening of the Geneva Conference, that those countries should have precedence. Romania took pleasure in announcing its intention of awarding five more five-year fellowships, as from 1965, as a contribution to the programme for providing trained personnel for the developing countries.

31. The Agency was to be congratulated on the useful work it had done in elaborating regulations and standards governing work with radioactive substances, the dosimetric control of personnel and the transport of radioactive materials. Experience would show the extent to which the standards that had been laid down required amendment. As they stood, they were of unquestionable utility. However, radioactive waste disposal into the sea presented difficulties, and the standards established by the Agency failed to take sufficient account of the pollution of rivers and streams.

32. Romania had had a certain amount of success in nuclear research and in making practical use of nuclear energy, especially in the field of metallurgy and mineral oil prospection. It had thus been able to effect considerable savings and to improve working conditions. Fundamental research work had also produced very satisfactory results. Furthermore, teams of physicists, chemists, engineers and technicians were ready to embark on comprehensive studies with a view to the utilization of nuclear energy for the production of power and for use in agriculture, hydrology and pest control.

33. Romania wished to co-operate fully in the Agency's activities and it thought that the Agency was to be congratulated on the way it had discharged its duties during the past year.

8/ GC(VIII)/275.

34. Sir William PENNEY (United Kingdom) said that, while it was too early to draw conclusions about the value and the effects of the Third Geneva Conference, the United Kingdom shared the view that nuclear power was entering a new phase where, in favourable circumstances, it could be competitive with conventional power. However, it also felt that much hard work still remained to be done, in the form of eliciting definite figures for costs in various circumstances, before free rein was given to optimism about the near future. Looking further ahead, the United Kingdom had absolutely no doubt about the important contribution nuclear power would make in adding to the energy available to all countries.

35. The Third Geneva Conference had certainly been of great value in affording the opportunity for meetings between nuclear scientists, engineers, economists and administrators from many countries. In particular, the Agency staff who had attended would have greatly added to their experience and that would materially assist them in the performance of their important duties.

36. Future international conferences on nuclear power and related problems should form part of the Agency's normal programme of conferences and symposia. However, the occasional large conference under United Nations auspices on scientific matters of significance in the world scene should not be precluded and some of the reactor systems now in the early stages of development might provide a suitable topic in due course.

37. Turning to the annual report of the Board of Governors, he said that his Government considered that it reflected a satisfactory state of affairs; the Agency had successfully continued with its many normal activities, besides having shouldered the additional heavy burden laid upon it by the Geneva Conference.

38. The important work done by the Agency in the matter of safeguards was well regarded in the United Kingdom. Everyone was aware that one of the great problems of the time was how to achieve growth in the peaceful uses of atomic energy while avoiding the military risks inherent in possible misuse of the reactors and plants that were a necessary constituent of such growth. The problems were more political than scientific, but the contributions which the Agency was making in regard to safeguards methods would help the world in using and controlling atomic energy.

39. The Partial Nuclear Test Ban Treaty had been warmly welcomed by the British Government and people. The connection between the objectives of that treaty and the objectives of safeguards must be recognized by all. The United Kingdom was continuing scientific work on fissile material control and on the monitoring of nuclear tests, with particular emphasis on discrimination between underground tests and certain types of earthquake. As information improved, it would from time to time publish the results obtained.

40. The United Kingdom well understood the political objections to the Agency's safeguards system; but that was not tantamount to agreeing that the system constituted a hindrance to or imposed restrictions on the development of atomic energy in the developing countries or elsewhere. Those beliefs had been examined and disproved on a number of occasions. If it was to carry out effectively its duties under the Statute, the Agency had to have available a detailed and up-to-date set of procedures for doing so, which would cover projects established by the Agency itself or else brought within its safeguards system at the request of Member States. Furthermore, the system must be capable of being easily understood, so that the States asking for its application and the inspectors applying it would know precisely what their obligations and duties were. It was for that reason that the United Kingdom had welcomed the extension of the system in 1963 to power reactors of over 100 MW and was happy to participate in the review at present being carried out under Resolution GC(VII)/RES/144.

41. As the use of nuclear power became more widespread, more and more attention would have to be paid to well-devised waste management procedures. The Agency had a duty to ensure that, in bringing the benefits of nuclear power to a greater number of people, it did nothing that would endanger the health of man or prejudice his environment. The United Kingdom welcomed the work done on the subject by the Ad hoc Panel on Radioactive Waste Disposal into the Sea and felt that the time had come when the results of scientific investigations into waste disposal procedures should be brought together for the further guidance of Member States.

42. On a similar theme, the United Kingdom had been closely involved in the review of the Agency's Regulations for the Safe Transport of Radioactive Materials. The length of time taken to complete that task was a measure of

the rate of technical progress and the thoroughness with which new methods and information had been evaluated. Publication of the new Regulations would be an important milestone in the development of sound transport practice and would encourage the harmonization of regulations in the international transport field.

43. Exciting possibilities were opening up for using nuclear power simultaneously for the generation of electricity and other purposes. Much attention had recently been paid to its use for desalting sea and brackish water. The technology of distillation plants using conventional fuels had made substantial advances over the past decade, in which British industry had taken a leading part. The United Kingdom was now examining how distillation plants could be linked with nuclear power stations. The Agency had become a focus of international discussion on the subject. The United Kingdom had been glad to co-operate and would continue to give the Agency the benefit of its practical engineering experience. Also, it might in the future co-operate with various countries in further studies of the matter. It would be several years before it was known whether fresh water could be produced from salt water at a price acceptable for agriculture.

44. There was one change in the internal organization of the Agency which he particularly welcomed, namely the action taken to bring the various Secretariat divisions concerned with technical assistance more closely together, pursuant to the resolution adopted by the General Conference in 1963 on co-ordination of atomic energy activities[9/].

45. The United Kingdom could claim to have supported the Agency's technical assistance programme to the full, quite apart from its contribution to the General Fund. Since 1962, it had received 106 fellows and 22 more were due in the current year; during that time, too, it had run a training course for hospital physicists, attended by 15 students. Furthermore, the United Kingdom Atomic Energy Authority, at its laboratory at Wantage, and the Central Electricity Generating Board, at its nuclear power stations in various parts of Britain, had offered special fellowships, of which 13 had been taken up since 1958. Those facilities were, of course, free of charge to the Agency.

9/ GC(VII)/RES/149.

46. In the broader field of Agency panels and the provision of individual experts to help the developing countries, from 1962 to date the United Kingdom had made available the services of 31 technical experts. In addition, a considerable number of United Kingdom nationals were employed by the Agency in its own technical projects in those countries.

47. His Government had also continued to support the Agency's research programme and the work going on in its laboratories. However, it would be a retrograde step if the placing of research contracts were to be regarded as a form of technical assistance. The subjects of those contracts should be governed by the Agency's agreed research objectives and the contracts should be placed with institutions which could effectively undertake the work, though preference should, of course, be given where possible to research institutions in the less developed countries.

48. He wished that he could be optimistic about the resources available for technical assistance - a subject of concern to the General Conference and the Board of Governors for more than two years past and one that, regrettably, was no nearer to a solution than at the beginning. The United Kingdom position was clear: the Agency's operational activities should be supported by contributions from Member States in such a form that the Agency would be free to use them in whatever way it chose and in whatever part of the world. Unfortunately it had not proved possible to obtain the agreement of a sufficient number of Member States to make contributions of that kind, either on a voluntary basis or under assessment. A situation therefore existed in which the funds available for the Operational Budget fell short of the target, whereas the demands on it were growing.

49. Among those demands, the commitments which the Agency undertook whenever the establishment of a regional centre was approved had to be borne in mind. Although those centres were intended to be a response to the desires of the countries concerned and, as such, to depend for their main financial support on contributions from those countries, the Agency had, among other obligations, undertaken to provide a number of fellowships at the centres for some years ahead.

50. It would be necessary to consider the cumulative effect on the budget of proposals for expenditure of that kind. One possible procedure might be that, where a region wished to establish a centre with Agency assistance, the

individual members of the region would have to be prepared to accept some reduction in the assistance they received as individual States. Regional centres might be the most effective method whereby the Agency could provide technical assistance to the less developed countries; nevertheless, the financial aspects could not be disregarded.

51. For its part, the United Kingdom proposed to continue its support for the Agency's operational activities in the coming year as in the past. It would pledge itself to make a voluntary contribution to the Operational Budget for 1965 in the same proportion as that of its assessed contribution to the Regular Budget. But he had to warn the Conference that the United Kingdom would have to consider its position carefully the following year, if adequate support was not forthcoming from the Member States. The plan approved in 1963 for the Agency's activities over the period 1965-70 involved a considerable expansion. The Agency was doing a good job and its status was steadily increasing. The opportunities offered by the peaceful uses of atomic energy were immense. The Agency would be able to make its proper contribution only if Member States provided the necessary finance.

52. Mr. RAHMOUNI (Algeria) thanked all Member States of the Agency for having admitted his country to their number. As Algeria wanted all countries to join the Agency and to contribute to the development of nuclear science, it welcomed the admission of Kuwait, Kenya, Madagascar and Cyprus.

53. It had greeted with relief the signature of the Moscow Partial Nuclear Test Ban Treaty and was striving for a total ban. The second advance towards that goal had been the first Conference on Denuclearization of the Mediterranean Area, held at Algiers on 5 July 1964. It was the Agency's duty to participate in such efforts to achieve world peace.

54. At the Third Geneva Conference the Algerian delegation had noted the widening gap between the advanced and the developing countries. The industrialized countries were certainly to be congratulated on the enormous advances which had been made in so few years and deserved thanks for contributing a large part of the Agency's budget, but it was surprising that they should disregard the research projects of general interest which the developing countries were endeavouring to carry out with the Agency's assistance. Similarly, the Algerian

delegation regretted that the Agency concluded contracts with the advanced countries for research in limited fields, instead of devoting its resources to research contracts with regional centres and the developing countries.

55. In 1964 Algeria had devoted its main attention to the training of scientific staff. It had not requested fellowships from the Agency, as it much preferred to carry out training on the spot, so as to bring together the students with the technicians who were already in posts, and would not leave them for long periods. His country therefore intended asking the Agency to send teaching staff. The Algiers Nuclear Research Institute, which was continuing to instal new equipment, offered all the material prerequisites for training in various branches of nuclear science. The prospective teachers would achieve better results if they could stay for fairly long periods.

56. The Algiers Nuclear Research Institute had in 1964 established a Department of Nuclear Applications which was intended to provide the theoretical infrastructure for all atomic energy applications in medicine, agriculture and hydrology in particular. The Cancer Research Centre at Algiers was using its cobalt bomb for research purposes and Oran hospital had, through the Agency, been supplied by Czechoslovakia with cobalt teletherapy equipment for use in tumour research.

57. In the sphere of agriculture, Algeria was planning to use gamma-rays for food preservation and for insect studies. The irradiation centre was already built, but an expert was needed to advise on the internal arrangements and safety.

58. In hydrology, Algeria was continuing to devote attention to the low moisture absorption of forest soils. The severe climatic conditions in the north of the Sahara made forest survival very difficult. However, hydrological research carried out with the help of tritium supplied by the Agency had borne fruit and would be extended to studying the waters of the salt lakes in southern Algeria. Algeria was thus endeavouring to collaborate in the Agency's work to the maximum of its ability.

59. It hoped that the Agency would simplify the procedures and composition of the Board of Governors, so as to enable numerous States to acquire a better understanding of their responsibilities within the Agency. Algeria could not

understand why the "floating" seat on the Board of Governors was always allotted to a European country; it would prefer the seat to be "rotating" rather than "floating". The desire for responsibility was not a desire for power, but a desire that all the countries of the world should, in accordance with the Agency's Statute, participate in efforts in the field of atomic energy research and application.

60. Algeria, as one of the newly independent countries, was carefully seeking the best methods of work and of collaboration. The Agency, a body devoted to science and peace, was an exemplary model for a young country.

61. Mr. YUN (Republic of Korea) expressed his sincere gratitude to the Director General and his staff, and to the Board of Governors, for their vigorous and constant efforts to develop the Agency's programme and for the care given to meeting the needs of the developing countries.

62. In its atomic energy programme, his Government was endeavouring to develop means of making the maximum possible use in industry of Korea's TRIGA Mark II reactor, which had come into operation in March 1962. Great emphasis was also being placed on the application of radioisotopes in current production (19 different kinds) to agriculture, which constituted an important part of the country's economy. In that way, Korea was endeavouring to do its share, to the best of its technical capacity, in promoting the peaceful uses of atomic energy.

63. As to developments concerning radioisotope applications in medicine, the Division of Nuclear Medicine, which had been set up in the previous year at the Korean Atomic Energy Research Institute, had been expanded to become the Radiology Research Institute. Extensive research work was being conducted on radioisotope applications in the treatment of cancer, thyroid disorders, etc., with the help of the Institute's cobalt-60 teletherapy unit. The results obtained had brought significant progress in medical science in Korea.

64. To give a fillip to agricultural technology, it was planned to set up a radioisotope centre for agriculture in 1965; the programme for recruiting and training the necessary technical personnel was already established, and the constructional work for the centre was to start in 1965 under Korea's two-year plan. The centre was expected to facilitate progress in the utilization of radioisotopes in Korean agriculture.

65. Another project in hand was for the construction of a nuclear power plant with a capacity of 150 MW, which was expected to be completed around 1970. The Agency had sent out a preliminary survey mission in October 1963 in connection with that project and his Government was planning, on the basis of the preliminary mission's report, to request that a site survey mission be sent out in 1965. It hoped that the request would be given favourable consideration, and the Agency could be assured that any assistance provided in the matter would be highly appreciated.

66. Under the Agency's regular programme of technical assistance, three experts, in nuclear physics, electronic engineering and nuclear medicine, were at present serving in Korea. Their advice and helpful co-operation was much appreciated by Korean research workers at the Atomic Energy Research Institute and the College of Medicine of Seoul National University.

67. In the light of his country's experience, he had come to realize that full training of the required number of scientific and technical personnel was the most effective way of promoting a developing country's atomic energy programme; the provision of technical know-how could hardly be over-valued as far as the advancement of such countries was concerned. It was to be hoped that greater emphasis would be placed upon the training programme rather than the provision of expert services, since the former was of superior importance for the developing countries.

68. In line with its consistent stand, his delegation again urged that a regional training centre be established in the Asian and Pacific region and that research contracts be awarded mainly to the developing countries. It trusted that action would be taken as soon as possible to set up such a centre under Agency auspices.

69. The four research contracts awarded to Korea under the 1962-63 programme had given great encouragement to the research workers concerned and had served to generate even greater enthusiasm for the peaceful utilization of atomic energy. He accordingly made a plea that the further seven research contracts for which Korea had applied be awarded to it. He also hoped that the current contracts would all be renewed to cover completion of the programme.

70. It was hoped that the Asia and Far East Regional Study Group on Research Reactor Utilization would facilitate co-operation among the participants, especially in the matters of reactor operation and radioisotope production. His delegation would be glad if a future meeting of the Group could be held in Korea.

71. It further hoped that the Agency and the Regional Officer for the area would take an active part in encouraging and promoting the regular exchange of up-to-date scientific and technological data and information on current developments and activities under the programme; such an exchange would be highly beneficial to developing countries in their efforts to raise their technological standards.

72. In conclusion, he once again thanked the Agency for the work it had accomplished and for its continued efforts to promote the peaceful uses of atomic energy.

73. Mr. HAYMERLE (Austria) welcomed the delegations which were participating in the General Conference for the first time; he expressed his delegation's satisfaction that the General Conference had approved the applications for membership submitted by Cyprus, Kenya, Kuwait and Madagascar.

74. After the recent review of achievements and of the challenging problems remaining to be solved which had taken place at the Third Geneva Conference, delegations would be in a position to examine the Agency's activities with perhaps an even keener appreciation of their responsibilities than before. His delegation wished to congratulate the Director General on the inspiration and guidance he had given to the Agency during the past year. It had been impressed by the progress made in the fields of medicine, agriculture and radiobiology. The Austrian Government was particularly interested in the Agency's programme on food irradiation, and he was pleased to be able to inform the Conference that an agreement had been signed the previous day between the Agency, the European Nuclear Energy Agency and the Österreichische Studiengesellschaft für Atomenergie on a programme of international co-operation in that field.

75. Although serious accidents in the operation of nuclear facilities were rare because of the precautions taken, his Government was greatly interested in

the Agency's offer to act as an intermediary in transmitting requests for, or offers of, assistance in an emergency, and to send staff members to the site of any accident. It was also carefully studying the Nordic Mutual Emergency Assistance Agreement referred to in the report of the Board of Governors.

76. The principles laid down by the Board and the Director General in the joint memorandum on Long Term Planning[10/] were acceptable to the Austrian delegation, which also supported the Agency's increased efforts in the various fields in which nuclear energy could be practically applied, such as medicine, agriculture, radiobiology, power generation and water desalting. Those efforts should be complemented by increased co-operation between the Agency, the United Nations and the specialized agencies to ensure greater efficiency and co-ordination of effort. The Agency should play a leading part in all activities involving the use of atomic energy, and the Austrian delegation therefore welcomed the setting up of a joint IAEA/FAO Division, which was an important step towards better co-ordination of the activities of the various organizations in the United Nations family.

77. The Agency's scientific and training programmes had been very useful and substantial results had been achieved. The Austrian Government's plans for co-operating more closely in those programmes had been put before the General Conference at its last session. Since then, the facilities of the Seibersdorf Reactor Centre, including the 5-MW ASTRA reactor, had been put at the Agency's disposal on a part-time basis. During the first eighteen-month course, which had been inaugurated in October 1963, some 20 post-graduate students from several countries had received training. Those efforts would be supported to an even larger extent during 1964. Three fellowships were to be awarded, and it was hoped that the post-graduate fellows concerned would arrive in Vienna within the next month. Furthermore, subject to Parliamentary approval, Austria's contribution to the General Fund would be greater than hitherto; the Austrian Government hoped that in future it would be able to contribute in accordance with its assessed contribution.

10/ GC(VII)/277.

78. The Austrian delegation had been pleased to note, from paragraph 181 of the proposed Programme[8], that the co-operative efforts of the Agency and the Österreichische Studiengesellschaft für Atomenergie at the Seibersdorf Reactor Centre had led to practical investigations in non-destructive determination of nuclear fuel burn-up. The work carried out had been partly financed by the Agency.

79. On the question of safeguards, he was pleased to be able to say that Austria had been one of the first countries operating a reactor to accept international safeguards. The advantage of international safeguards over bilateral agreements had already been mentioned during the debate, and his delegation hoped that the review of the Agency's safeguards system which was being undertaken would lead to a generally acceptable system.

80. On 28 July 1964, he had been privileged to sign, on behalf of the Austrian Government, an agreement between the Agency, the Government of the United States of America and the Government of Austria on the transfer of the responsibility for administering safeguards from the United States of America to the Agency. The Austrian delegation believed that the signing of that agreement had a symbolic significance: the fact that authority in such a delicate matter could be transferred to an international body, and that it could be transferred with the consent of all Great Powers, reflected the existing international détente and the increased co-operation between East and West. He hoped that the Agency's work would continue to be marked by that spirit of mutual understanding and co-operation, which was indispensable to the attainment of the high objectives and ideals embodied in the Statute.

81. Mr. GRANT (Ghana) said that the Third Geneva Conference had provided a splendid example of inter-agency co-operation, and that credit for its outstanding success was due to the Director General and staff of the Agency. The Conference had thrown light on the more spectacular and highly sophisticated uses of atomic energy, and though not all the new developments were within easy reach of the developing countries they provided a stimulus. It had been interesting to learn from the papers presented to the Conference that nuclear power was on the way to becoming competitive with conventional forms of power, and in view of the increasing number of reactors in use, he was glad to note that the Director General had established within the Agency an Inspectorate-General to provide an umbrella for the operation of its health, safety and safeguards systems and for the development of nuclear law and order.

82. The growing interest of the African peoples in the work of the Agency was indicated by the fact that seven of the nine new Members mentioned in the report of the Board of Governors were African countries. The African Members were eagerly looking forward to the early establishment of links between the Agency and the Scientific, Technical and Research Commission of the Organisation of African Unity (OAU).

83. With regard to the vexed question of African representation on the Board of Governors, he expressed his delegation's strong disapproval of the nomination of South Africa as a Member of the Board and its full support of the declaration made on that subject[11/]. The Government of South Africa was not a member of OAU, which comprised more than two thirds of the Continent, nor did it have good relations with the other independent African States; that being so, it was difficult to see how the Board could expect it to represent the interests of the majority of independent African States. The policy of apartheid merely highlighted the fact that the South African Government was of an origin alien to Africa. The need of the atomic age was integration, friendship and harmony. He appealed to the South African Government to renounce the policy of apartheid once and for all.

84. He welcomed the efforts made to secure equitable geographical distribution of staff by adopting a new policy of rotation by nations. That policy would, in the long run, give every Member State experience of the Agency from the inside, and although it presented some problems, he felt sure that the Director General would be able to deal with them. He welcomed the Director General's appeal to scientists to acquire experience of the technical branches of the Agency - an appeal to which the developing countries were certain to respond.

85. With regard to constitutional matters, he hoped it would be possible to revise the Statute so that the safeguards system under Article XII would no longer extend to equipment and supplies of source material. There was a growing feeling that such extension was unnecessary, cumbersome and likely to prove discriminatory to developing countries. The safeguards system should be confined to nuclear reactors, to ensure that they would not be used for military

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11/ GC(VIII)/OR.84, para. 3.

purposes. Another constitutional issue concerned Article VI.A.2 of the Statute, which provided that

> "the outgoing Board of Governors . . . shall designate for membership on the Board two members from among the following other producers of source materials: Belgium, Czechoslovakia, Poland and Portugal . . . ."

It was anomalous that all the countries mentioned as "other producers" were in Europe, though it was known that there were significant quantities of source material in other continents, particularly in Africa. The words "other producers" should refer to territories in whose geographical areas source materials existed, not to absentee metropolitan contractors engaged on the exploitation of those source materials by reason of their technical knowledge. The acceptance of that view would assure dependent territories of their sovereignty over their national resources at all times. If that matter were fairly examined, the outcome would certainly be that Congo (Leopoldville) would replace Belgium and Angola would replace Portugal.

86. Referring to the peaceful use of atomic energy in Ghana, he said that the atomic energy programme would be centred round a research reactor and the radiochemical laboratory of the new Nuclear Research Institute. Work on the construction of a 2-MW research reactor of the swimming-pool type, which was being built with Soviet assistance, had reached the second phase and the reactor was expected to go into operation shortly after the end of 1965. As a result the Government had found it necessary to ask for an abnormal number of fellowships for 1964 and 1965. He hoped that it would be possible to obtain the necessary aid.

87. The Ghana reactor would incorporate all improvements resulting from the experience gained in operating the first heterogeneous thermal reactor of that type in the Soviet Union. It was designed for research in nuclear and molecular physics, radiation chemistry and biology, as well as for the production of radioisotopes and the study of the properties of materials irradiated in neutron and gamma-ray fluxes. It would also be used to train scientists. The programme of the proposed institute envisaged the closest possible collaboration with higher educational and research institutions in Ghana. The presence of the reactor would greatly facilitate existing research programmes involving the use of radioisotope techniques. Ghana was particularly interested in research in radiobiology and activation analysis.

88. The programme of work on the use of radioisotopes for tree-killing and root-feeding, carried out by the agricultural research institutes, was aimed at raising Ghana's agricultural output. The National Institute of Health and Medical Research was carrying out various studies on blood, using radio-chromium and radio-iron. Changes in moisture and soil density under roads were also being studied. The Health Physics and Radioisotope Unit of the Physics Department of the University of Ghana was responsible for health problems connected with the use of atomic energy.

89. Ghana greatly appreciated the interest the Agency had shown in its programme and the advice and assistance it had rendered.

90. With regard to the establishment of a Regional Centre for Tropical Africa in the Congo (Leopoldville), he reaffirmed that his Government had no objection, provided that the matter was first referred to the Scientific, Technical and Research Commission of OAU.

91. Mr. BHABHA (India) welcomed the four new Member States: Cyprus, Kenya, Kuwait and Madagascar.

92. With regard to South Africa's position in the Agency, India's attitude was well known and he did not need to re-state it at that juncture.

93. Those who had attended the Third Geneva Conference had heard of the enormous progress made since the Second Conference in making nuclear power commercially competitive. Since the First Conference had been held in 1955, a vast amount of knowledge acquired in secret by a few countries had been shared with others for the universal good.

94. Nuclear technology had developed from the initial discoveries to large-scale applications in an astonishingly short time, but there were still fresh achievements to look forward to. Although breeder power reactors were a possibility, their economics were subject to the kind of uncertainties associated with converter power reactors some years previously. In view of the progress in work on nuclear fusion reported at the Third Geneva Conference, he believed that a break-through might be achieved in that field within the next ten years, and there might be sufficient justification for a fourth international conference organized by the United Nations in, say, five years' time.

95. It was dangerous to generalize about the competitiveness of nuclear power: in some developed countries it was already competitive, while in others it would not be so for a long time, and the same applied to under-developed areas. A careful study of India's energy and power problems had produced solid data on which to base future plans. It had been accepted that nuclear power was competitive with conventional power in two thirds or three quarters of the country, and the nuclear power programme for the next ten years was accordingly taking more concrete shape.

96. Following India's decision to build a nuclear power station of 400 MW(e) with the assistance of the United States, agreement had been reached with the Government of Canada to build another of the same size using reactors of the CANDU type with heavy-water moderator and coolant. A technical co-operation agreement had also been concluded with Atomic Energy of Canada for the exchange of information relating to reactors with heavy-water moderator. By the time all the approved current projects had been completed, about the end of 1970, India would have approximately 1.2 million kilowatts of installed nuclear power. That would constitute barely 5% of the total installed electrical capacity in India by 1970, but it was expected that within 20 years atomic energy would be providing at least one quarter of the country's electric power. The capacity to be installed was so great that large nuclear power stations would clearly be the most suitable, both economically and technically. They would increase competitiveness and the nuclear content of India's over-all power programme might well exceed the figures envisaged at present.

97. With regard to world energy requirements, many of the under-developed areas would have to rely increasingly on nuclear power. Those areas, the development of which was a challenge to the world, could obtain the necessary large-scale assistance in only three ways: by non-repayable aid, by loans in aid, or by trade. Since loans had to be repaid, however, and this could only be done through trade, there were in fact only two possibilities. Large populations living at mere subsistence level were a danger to the moral and physical peace of the world, and atomic energy could play a great part in helping to remove that blot on modern civilization.

98. The Agency's role consisted not only in giving assistance, but in doing so in such a way as to catalyze greater effort and co-operation on the part of Member States. An example of what could be done along those lines was the project being conducted at the Philippines Atomic Energy Research Centre, in which India was participating. Many such projects could be suggested, and he hoped the Agency would increase its activity in that direction. India was discussing such co-operation with a number of countries, and joint projects with the United Arab Republic and Poland, and with Afghanistan, were under consideration.

99. India now possessed complete facilities for producing radioisotopes and labelled compounds, and would be happy to assist other developing countries, either directly or through the Agency; it had in fact offered the Agency a number of fellowships in those subjects.

100. A special feature of the co-operation agreement with Canada for the construction of a nuclear power station was that the Canadian Government had agreed that, in return for the right to ensure that the installation was not used for non-peaceful purposes, a Canadian nuclear power station would be made subject to reciprocal safeguard procedures to be carried out by India. That met objections regarding the discriminatory incidence of safeguards, which, in the absence of a universal safeguards system, fell most heavily on the developing countries. India was glad that the present Agency safeguards system was being reviewed, and he hoped that safeguards would no longer be applied to equipment.

101. India had welcomed and acceded to the Partial Nuclear Test Ban Treaty as a step towards disarmament. There was, however, no reason why the benefits of using atomic explosions in civil engineering works should be denied to mankind, so long as such explosions were subject to international supervision. India welcomed that new peaceful use of atomic energy, which might contribute to the realization of an open world.

102. India's decision, announced at the seventh regular session, to contribute $25 000 a year to the Agency's Operational Budget for three years had been intended to enable the Agency to plan its activities on a longer-term basis instead of facing uncertainty from year to year. It had been hoped that other

Member States would follow that example. Although it understood the reasons for combining the Regular and Operational Budgets, India was opposed to that measure. In his Government's view Member States should continue to contribute voluntarily, and not on an assessed basis, to the Agency's Operational Budget. To show its sincerity, India would increase its voluntary contribution in the present year to $35 000 in Indian currency.

103. In conclusion he said his delegation was pleased to note that the Agency's activities were growing constructively, that more attention was being paid to those areas which needed help most, and that the Agency was continuing its policy of holding conferences, symposia and seminars in more widely dispersed areas. The codes and procedures which the Agency had drawn up would be of great importance in the healthy and safe development of atomic energy and should acquire the force of international law. He wished to congratulate the Agency on the progress it had made and assure it of his country's full support and co-operation.

The meeting rose at 1 p.m.