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## OFFICIAL RECORD OF THE SEVENTY-SIXTH PLENARY MEETING

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President: Mr. PERERA (Ceylon)

### CONTENTS

<u>Item of the agenda*</u>		<u>Paragraphs</u>
-	Statement by the delegate of Ghana on behalf of the Afro-Asian delegations	1 - 7
10	General debate and report of the Board of Governors for 1962-63 (continued)	8 - 106
	Statements by the delegates of:	
	Finland	8 - 14
	United Arab Republic	15 - 25
	Union of Soviet Socialist Republics	26 - 77
	Pakistan	78 - 90
	Romania	91 - 106

\* GC(VII)/247.

The composition of delegations attending the session is given in  
document GC(VII)/INF/66/Rev.2.

STATEMENT BY THE DELEGATE OF GHANA ON BEHALF OF THE AFRO-ASIAN DELEGATIONS

1. Mr. BAFFOUR (Ghana), speaking on a point of order, said he had been asked to make a statement on behalf of the Afro-Asian delegations in order to dispel any uncertainty that might exist regarding their attitude to the presence at the Conference of certain delegations and, at the same time, to explain in unequivocal terms their position on the issue involved.
2. Although the General Conference was not the appropriate forum in which to discuss the political significance of the situation obtaining in South Africa, that situation nevertheless had important consequences for, and repercussions on, the Agency's activities. Regardless of the country to which they might belong, delegates to the Conference were called upon to foster the progressive development of the peaceful uses of atomic energy for the benefit of all mankind, irrespective of race, colour or creed. All, therefore, had the right to participate on the basis of absolute equality, each contributing to the measure of his ability, and benefiting according to his needs. Presumably, therefore, every Member State represented should be prepared to make such equal representation possible.
3. The Government of South Africa, by its policy of racial discrimination based on colour distinction, rendered all Afro-Asians, scientists or not, unacceptable on South African territory, and hence unacceptable as participants in any seminar, organization or institution within that territory that was designed to promote the peaceful uses of atomic energy. It thus deprived them of the opportunity of benefiting from such activities.
4. It therefore followed, as a consequence of that discrimination towards Afro-Asians participating in the Conference, that the position of South Africa in the Conference was unacceptable. Its continued participation in the Conference and in the Board of Governors was wrong. Members present would, he was sure, agree that that analysis of the situation was sound and irrefutable. Accordingly, the Afro-Asian countries, which had come rather late into the Agency, would like all Member States to note the very serious view they took of the South African racial question, and the effect that that situation had on the usefulness of the Conference.

5. Furthermore, the Afro-Asian Member States constituted a majority of the less-developed countries of the world and had perhaps the greatest need of what the Agency could offer. It was primarily because of their awareness of having so much to gain from participation in the Conference that they had agreed to content themselves with the statement he was now making on their behalf; had that not been so, they would have demonstrated their views in a much more forceful manner.

6. They were also anxious that the Conference should consider amending the Statute in such a way as to permit more active participation of the Afro-Asian group in the Agency.

7. Finally, he wished to assure the Conference of the intense interest the Afro-Asian delegations took in the Agency's future success. In taking their present stand, they were merely working for the good of all nations and for the equality and justice which all mankind expected to reign. If those objectives could not be attained within an organization such as the Agency, then they would have to look elsewhere

GENERAL DEBATE AND REPORT OF THE BOARD OF GOVERNORS FOR 1962-63  
(GC(VII)/228, 243)(continued)1/

8. Mr. LAURILA (Finland) said that, since the idea of establishing the Agency had first been suggested - during the first Geneva Conference - many interesting developments in nuclear science and technology had taken place. Above all, public understanding on the subject had radically improved, and that change of climate was reflected in the Agency's discussions of the many difficult problems that had come up for consideration in the Board and in the General Conference. Finland had not taken part in the actual setting up of the Agency, but had been the first Member State to be elected after its establishment.

9. Although Finland, like other countries, might have availed itself of bilateral arrangements in building up its nuclear establishments, it had deliberately chosen to rely on the Agency's ability to fulfil one of its most important responsibilities - that of supplying fissionable material - and had not been disappointed. Two lots of enriched uranium fuel elements had been

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1/ GC(VII)/OR.75.

supplied through the Agency and were being put into use, one in the FIN-1 reactor and the other in a second sub-critical assembly that was under construction. Thanks were due in the first place to the original suppliers, the United States and the Soviet Union, but the Agency's role in the transaction proved its usefulness as an intermediary in procuring the fissionable material and nuclear devices required by Member States.

10. The study of nuclear power prospects in Finland, carried out jointly by the Agency and the Finnish authorities, had been another noteworthy example of the value of Agency co-operation; it had in fact constituted a pilot investigation of the problems of integrating nuclear power into a national power system.

11. The fact that the application of the Agency's safeguards system to such transactions had not given rise to any difficulties was in itself no proof of the validity of the system, rather had it been due to the reasonable and realistic way in which the Agency's inspectors had carried out their duties. Finland believed that the system must be radically revised before the era of full-scale power reactors arrived. The extension now under consideration offered a practical way of avoiding unnecessary delays in putting full-scale power reactors into operation. Finland's experience indicated, however, that the system should be completely revised as soon as possible and reconstituted solely on a technical basis.

12. Finland had made an active contribution to the Agency's work, providing experts to serve on panels, scientific committees and symposia, and incidentally the first Director of the Monaco Laboratory. The scope of its contribution would be further enlarged, through more immediate technical assistance to the developing countries, in the form of providing more opportunities for scientists and students from those countries to study and train in Finland.

13. The Director General's statement clearly showed that the Agency's work was in competent hands and that it was not only growing quantitatively but improving qualitatively. Its tremendous complexity was due not only to the diversity of scientific and technical problems involved but perhaps even more to the fact that the "peaceful uses of atomic energy" was so ill-defined a concept; that would account for some of the overlapping between the various agencies in borderline cases.

14. On the general principle that the United Nations was itself responsible for handling international questions of a political nature and that the specialized agencies were there to deal with the world's technical problems, questions connected with energy production must obviously be the Agency's main concern, with the emphasis on "energy" rather than on "atomic". The matter was by no means simple, but the United Nations might perhaps consider inviting the Agency to handle general problems connected with energy resources and power production, with a much closer degree of collaboration, or even fusion, between the Agency and the World Power Conference. His delegation did not feel competent to suggest in any detail how that might be done in practice. It was encouraging, however, to note that the importance and complexity of the problems involved were fully appreciated by the Secretariat. The Director General could be assured of Finland's full support in his difficult task.

15. Mr. TOHAMY (United Arab Republic) fully supported the attitude taken by the Afro-Asian States with regard to racial discrimination. At a time when the world was finding solutions to the problems of war and peace, it should also end such discrimination throughout the world.

16. On behalf of his delegation, he congratulated Nigeria, the Ivory Coast and Gabon on their admission to membership of the Agency.

17. All Member States should realize that the advanced countries could go a long way towards closing the gap between themselves and the developing countries by supplying the latter with technical assistance, especially in the all-important field of nuclear power, through the intermediary of the Agency. The developing countries, too, must play their part. The United Arab Republic was doing its best to expand its atomic energy potential for the benefit of its people. The past year had seen the completion of the Atomic Energy Establishment's geology and raw materials department (with facilities for testing, analysing and processing nuclear raw materials), plasma physics laboratory, new engineering and scientific instrumentation laboratories, nuclear chemical research laboratories and radioisotope production units. Steps had also been taken to construct a nuclear power plant of about 150 - 200 MW(e), site selection studies had been made, and technical and economic studies of various reactor systems were under way with a view to preparation of the final specifications.

18. The United Arab Republic's continued co-operation with the Agency during the past year had led, in particular, to the establishment of the Middle Eastern Regional Radioisotope Centre for the Arab Countries, inaugurated in the presence of the Director General on 18 March 1963. The inauguration ceremony had been attended by representatives of the Federation of Nigeria, Somalia and Mali, who had expressed the desire that the Centre's services be extended to African countries. The following day representatives of Algeria, Iraq, Kuwait, Lebanon, Libya, Morocco, Sudan and Tunisia, as participating States, the United Arab Republic, as host State, and the Agency had elected Tunisia, Sudan and Iraq to the governing body of the Centre.

19. The first training course held at the Centre, from 1 June to 26 July 1963, had dealt with the general applications of radioisotopes. Nineteen candidates had been selected from among the thirty-seven applications received from Algeria, Iraq, Libya, Morocco, Tunisia and the United Arab Republic. Technical reports on the course, which had dealt with both the theoretical and the experimental aspects of the numerous and varied topics covered, had been most satisfactory and the course had been adjudged a success. The second training course, which was to be devoted to the application of radioisotopes in agriculture, would open on 5 October 1963. Again 19 participants had been selected from among the 30 applications received from Iraq, Lebanon, Morocco, Sudan, Syria and the United Arab Republic.

20. The experience so far gained made it clear that the Centre was rendering vital service to scientists in the Middle Eastern area. Thanks were due to the Director General for his sympathetic understanding of the Centre's needs. For that reason it was all the more alarming to find that the Agency's financial support for the Centre was to be reduced in the budget for 1964, when in fact support on an increasing scale was required to enable it to discharge its obligations to the area where it was located and fulfil its scientific aims and objectives.

21. His Government realized that its research programme should be complementary to the Centre's training programme, and indicative of the future needs it should be designed to meet; it was already engaged in research into, for example, the movement of water currents and silt in the Suez Canal, the efficiency of certain fertilizers, the irradiation of insect pests and problems relating to sheep-farming.

22. The Agency had also co-operated with his country in advising on the most suitable site for its proposed new power reactor, as well as providing experts and equipment of various kinds. His Government for its part had offered the services of two distinguished scientists to States Members of the Agency and would continue to offer fellowships to African and Arab countries. It was also prepared to make its research reactor and laboratory facilities available to scientists from Member States for research on neutron problems, and so on. The Department of Health and Safety had applied the relevant Agency regulations to shipments of radioactive material passing through the Suez Canal.

23. In the coming year his Government would continue to support the Agency's activities and would pay its annual contribution of £335 000 to the Centre's budget, as well as making a contribution of £E5000 to the General Fund. It welcomed the proposed reorganization of the Secretariat, believing that the developing countries could provide the Secretariat with more staff members, including more senior officials and, in particular, that the appointment of a Deputy Director General from one of the developing countries would help the Agency to serve those countries better. His Government had submitted a list of highly qualified scientists as candidates to serve on the Secretariat at various levels.

24. He also welcomed the long-term programme for technical assistance. On the other hand, he could not support the proposed amendment of Article XIV of the Statute<sup>2/</sup>, the aim of which was apparently to stabilize the financial resources of the Agency, whereas the main justification for any change in the Statute should be that it would result in more assistance being rendered to the countries which so desperately needed it. Nor could he agree to the proposed extension of the safeguards system to large reactor facilities<sup>3/</sup>, which was designed to create a fictitious feeling of security but would in no way limit the ability of the major nuclear Powers to produce nuclear weapons. He suggested that the extension be deferred until the whole system was reviewed in 1964.

25. The limited test ban treaty concluded in Moscow on 5 August 1963 was indeed of transcendent importance. His Government had endorsed that treaty and would continue to play an active and sincere part in the negotiations which

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<sup>2/</sup> GC(VII)/236 and Add.1.

<sup>3/</sup> GC(VII)/235.

were being carried on with a view to complete disarmament. It hoped that the first great step which had thus been taken on the road to peace would be followed by other similar steps and was convinced that those steps would afford the best opportunity for the Agency to play an ever greater part in bringing to fulfilment the dreams of those who had devoted their lives to harnessing atomic energy in the service of mankind.

26. Mr. EMBELYANOV (Union of Soviet Socialist Republics), referring to the statement made by the delegate of Ghana, said that the Soviet delegation understood and fully sympathized with the feelings of representatives of African peoples.

27. The regular seventh session of the General Conference was opening in different circumstances from those that had prevailed in previous years, and for the first time, after long years overshadowed by the "cold war", the Governments of East and West had succeeded in reaching agreement on one of the most vital problems affecting mankind. Two months had elapsed since the Governments of the Soviet Union, the United States and the United Kingdom had signed a treaty in Moscow banning nuclear weapon tests in the atmosphere, in space and under water. Never before had the most destructive weapon ever to have threatened humanity been the subject of an agreement. The treaty had so far been signed by more than one hundred States, including some four fifths of the Agency's Members. For the first time an international agreement initially elaborated by the three nuclear Powers had met with an enormous response and support throughout the world.

28. The treaty had special significance for scientists, the staffs of atomic commissions and persons concerned with the peaceful uses of atomic energy because they knew better than anyone the atom's destructive power and the possibilities it could offer if used for peaceful purposes. The relationship between the military and peaceful uses of atomic energy had frequently been pointed out at the General Conference, as had the exceptionally wide opportunities that would be opened up for the Agency if agreement were reached on general and complete disarmament. Just as splitting the atom released immense power, so would disarmament make available human energy and resources that could be directed to economic development, science, culture, education and health, for the benefit of all peoples.

29. Under its Statute, the Agency was called upon to do everything possible to promote the peaceful uses of atomic energy and to conduct its activities "in conformity with policies of the United Nations furthering the establishment of safeguarded world-wide disarmament and in conformity with any international agreements entered into pursuant to such policies"<sup>4/</sup>. Signature of the Moscow treaty had undoubtedly created a more propitious atmosphere for the work of the Agency, and the Agency should, therefore, welcome the treaty, regarding it as a step towards a relaxation of international tension and towards the creation of more favourable conditions for solving the problems of general and complete disarmament that would lead to atomic energy being used exclusively for peaceful purposes.

30. His delegation considered that the Agency must, in every way, seek to reinforce the success achieved by the conclusion of the treaty and further other measures aimed at diminishing international tension; the Moscow treaty had opened up possibilities of agreement on such measures. Naturally, every effort must be made to induce Governments, which had not already done so, to sign.

31. Mention had been made during the discussion of the need for the Agency to be prepared for the moment when resources would be released by the discontinuance of nuclear tests in accordance with the treaty.

32. His Government was in favour of those resources, both human and material, being used for peaceful economic purposes to raise standards of living. It attached great importance to assisting newly independent countries whose economies were less developed than its own, and accordingly was providing, on a growing scale, a large number of countries in Asia, Africa and Latin America with economic and technical help so that they could lay the foundations of an independent national economy and cast off the heavy inheritance of colonialism.

33. The Soviet Union certainly did not minimize the significance of an agreement banning nuclear tests in the atmosphere, in space and under water, but facts had to be faced. The Moscow treaty did not, of itself, mean disarmament; it had not put a stop to the armaments race and understandably could not bring about noticeable cuts in military expenditure. A real possibility of that burden being removed would only arise when agreement was reached on disarmament,

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<sup>4/</sup> Article III.B.1.

and that, regrettably, had not yet been achieved. It was common knowledge that in 1959 the head of the Soviet Government, N.S. Khrushchev, had submitted to the General Assembly of the United Nations a plan for general and complete disarmament under strict international control. If the Western Powers had acted upon that appeal, perhaps it would now have only been necessary to take the few final steps towards eliminating the remains of the war machine in different countries. As it was, a great deal yet remained to be done.

34. The main task that lay ahead was to strive with greater resolution towards agreement on disarmament and a further lessening of international tension, in which task the United Nations, its specialized agencies and the Agency could play an important part.

35. Six years had passed since the Agency had been set up at the first session of the General Conference; a great deal of useful work had been done during the intervening period, but even more could be said about what the Agency had failed to do and what was expected of it.

36. The reason was that the Agency had not elaborated carefully a workable programme, and the proposals submitted to it had been examined at length but not implemented. He recalled the proposal which had been made by the United Arab Republic for establishment of a regional radioisotope centre. Consideration of that question had from the outset taken on a political tone, and much time had elapsed before the decision to establish the centre in Cairo had finally been taken.

37. The Agency's provision of technical assistance to countries in need of it was unsatisfactory and marked by long delays. As was well known, the Agency's own resources were made up of voluntary monetary contributions and of gifts of kind, in the form of equipment and the provision of experts, fellowships, etc. If bold use were made of those resources, the Agency's technical assistance activities could be of greater benefit than they were at present.

38. The Soviet delegation had already drawn the Board's attention to the fact that the appropriations for technical assistance were not being fully used each year. What explanation could there be, for example, for the fact that the balance of appropriations on 31 December 1962, in other words, the amount that had not in fact been used, amounted to more than 64% of all voluntary contributions for 1962?

39. A further example was offered by research contracts, award of which was now regarded as a type of technical assistance. During its existence the Agency had awarded more than 350 contracts. Their subject-matter covered an exceedingly broad field, and many of them suffered from their academic character and the fact that they had no bearing on the actual requirements of the developing countries. To illustrate that point one had only to draw attention to the contracts awarded for studies on such subjects as the production and destruction of red cells during the first year of life in premature and full-term infants, an apparently identical extra autosome in two severely retarded sisters with multiple malformations, experience in the irradiation of chrysanthemums, etc.

40. For those engaged in such work, those contracts would be of technical or, more exactly, financial assistance. But the work in question would be of as much use to the Agency's Members as hair on a tortoise's back.

41. It was therefore not by chance that the Scientific Advisory Committee (SAC) had recommended that in considering the subject-matter of contracts more stress should be laid on the practical uses of atomic energy and less on purely theoretical research, and that the limited funds available should be devoted to topics which were of special interest. It should be noted that SAC's recommendations in that regard were still a dead letter.

42. The Soviet delegation had already drawn attention to the fact that the Agency had spent a great deal of money sending out missions to various countries in order to investigate their needs on the spot and determine what type of co-operative assistance should be undertaken with them. The Agency had drawn no practical conclusions from the information assembled by those missions, with the result that the money spent had yielded no rational proposals and the States concerned had derived no benefit whatever from the visits of Agency missions.

43. He recalled the difficulties that had arisen in making use of the voluntary contribution offered by the Soviet Union. Several years had been required to use the funds and to apportion the equipment that could be bought with them. In 1962 the Soviet delegation and the delegations of other

socialist countries had proposed that the developing countries be given equipment for radiological centres and physics laboratories, and the Soviet delegation had stated at that time that the socialist countries would assume responsibility for supplying, free of charge, one third of the necessary equipment. But what had been the outcome? Not a single country, including those which were presumably in a position to do so, had declared its willingness to take part in any way in covering the remaining two thirds of the proposed programme.

44. He would not be entirely frank unless he went on to point out that the Secretariat, too, had shown less initiative than was right. Instead of asking the developing countries whether they wished to receive equipment for medical and training centres free of charge, the Secretariat had entered into a lengthy, tedious and useless correspondence, on the pretext of clarifying certain important points of detail regarding that proposal. The Soviet Union had provided exhaustive explanations as to what each centre would comprise, and had given all necessary information. Yet little had been done during the past year to make the necessary trial arrangements for putting the proposal into effect.

45. That also served to explain why the Agency had gradually begun to give the impression of an organization which was not carrying out its main function, that of promoting the peaceful utilization of atomic energy.

46. If he were to refer to the useful work that had been done over the past year, since the sixth regular session of the General Conference, the first point to be mentioned should be the preparation of a long-term programme. From the very outset the Soviet Union had supported the proposal for such a programme, which was a matter of great importance. The long-term programme consisted of a set of recommendations covering the whole range of the Agency's activities. It included basic tasks of a priority nature, which would find their place in the annual programmes, and would make it possible to organize the Agency's work properly. Many sections of the programme had been worked out carefully and in adequate detail by specialists from numerous countries, including the Soviet Union. Other sections were less successful, and the measures recommended in them would require further study before they could be included in the annual programmes.

47. When the Agency had been set up, it had been intended that its activity should be directed to the development of work on the peaceful uses of atomic energy in Member States, and it had been assumed that countries advanced in such work would render assistance to the less advanced through the intermediary of the Agency. The Agency, however, had begun to pay an excessive amount of attention to the establishment of its own scientific basis, as could be seen from the plans for further expansion of the Seibersdorf Laboratory, the extension of the agreement with the Monaco Laboratory and the establishment of a theoretical physics centre at Trieste. That trend was also reflected in the long-term programme.

48. It had to be stated that the establishment of a scientific basis of its own was a task which went far beyond the Agency's means. It would lead to the dissipation of its limited resources and give rise to illusions in the developing countries regarding the usefulness of institutions which would in fact result in their receiving less assistance, thus postponing the date when they could develop programmes for the peaceful use of atomic energy.

49. In his statement at the opening of the session the Director General had referred to the recommendations of Dr. Chagas, Secretary-General of the United Nations Conference on the Application of Science and Technology for the Benefit of the Less Developed Areas, who had said that the main problem at the present time was to build up a scientific infrastructure in the developing countries themselves<sup>5/</sup>. The Director General had pointed out that U Thant, Secretary-General of the United Nations, had also emphasized the need for training specialists, establishing larger research institutes and helping to create a scientific climate in the developing countries themselves.

50. In his opinion, the Agency's policy of setting up a scientific basis of its own ran counter to those recommendations.

51. The Agency could not, nor was there any sense in its trying to, substitute its own work for work performed in individual States. To do so would be to act like the frog that wanted to puff itself up to the size of an ox, and burst apart in the effort.

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<sup>5/</sup> GC(VII)/OR.73, para. 58.

52. The Soviet delegation had already stated that many of the problems covered by the long-term programme could be solved by national atomic centres. Delegates were well aware of the huge amount of scientific research, construction and experimental work going on in the Soviet Union: hundreds of thousands of Soviet scientists and engineers were striving to place the achievements of science and technology, including those of atomic energy, at the service of the people. Thus the Soviet Union, in co-operation with other countries, could contribute to the solution of the problems laid down in the long-term programme and it was prepared to consider assisting in research of interest to the Agency. In its scientific research institutes the Soviet Union could organize experiments and carry out investigations on subjects included in the Agency's long-term programme - on the understanding, of course, that such work was appropriate to the scientific research institutes concerned. That type of international co-operation under the long-term programme would not draw on any of the Agency's resources since it was assumed that each country would pay for its own share of the work.

53. Progress in the peaceful uses of atomic energy varied greatly from country to country. Work in the Soviet Union was very broad in scope; noteworthy developments and discoveries had been made on the theoretical side and important results achieved in practical work. In the preceding year, for example, Soviet scientists at the Kurchatov Atomic Energy Institute had succeeded in obtaining a stable high-temperature plasma with a prolonged lifetime, something that had never been achieved before. The plasma had had a temperature of about 40 million degrees and a density of approximately 10 000 million particles per cm<sup>3</sup>. The confinement time of the plasma had been increased to hundredths of a second. Hitherto, both in the Soviet Union and in other countries, the most successful confinement of a dense, hot plasma had been considered to be one lasting only a few hundred-thousandths of a second. The latest results obtained by Soviet scientists represented the greatest achievement in the physics of high-temperature plasmas during the last few years. A great step had been made towards mastery of controlled thermonuclear reactions.

54. Soviet scientists had recently discovered a new type of radioactive decay - proton radioactivity. Hitherto, scientists had known of five types of radioactive

decay of nuclei. Soviet scientists had predicted that there must be still another type of decay, in which the nucleus ejected a proton. A group of Soviet scientists had recently succeeded in overcoming all the difficulties involved and, by dint of delicate and very complicated experiments, had shown the existence of a new type of radioactive decay.

55. Going hand in hand with the theoretical investigations were the successes that had been achieved in the practical applications of atomic energy. On that subject he merely wished to refer to the operating experience gained with the atomic-powered ice-breaker Lenin, which had already completed three voyages and, over a three-year period, had sailed 50 000 miles, mostly under difficult ice conditions. Its reactors had operated for three years in succession (1960 through 1962) without a reloading of atomic fuel. Nevertheless, it had been decided to reload the reactors before the start of the fourth voyage. During the voyages all the equipment and machinery had operated magnificently.

56. Another reason why the present year was a noteworthy one for the Soviet Union was that it marked the completion of final preparations for the entry into operation of two large atomic power stations, one with a capacity of 210 000 kW and the other 100 000 kW. Once they were working at those capacities, the two stations would be considerably enlarged. In addition, the construction of a number of new atomic power stations was planned.

57. Mention deserved to be made of still another important power project in the Soviet Union, viz. a small atomic power station with a total capacity of 700-750 kW. The station was noteworthy because it was constructed in separate units and could easily be moved by any type of transport: railway, ship, road vehicle or aircraft. The station had already been built and tested and the operation of all its parts had proved to be satisfactory and reliable. The Soviet Union would be building that type of station in remote areas where power requirements were small. Such stations might be of interest to many countries.

58. The Soviet Union was continuing to develop scientific and technological co-operation with other countries in matters relating to nuclear physics and the peaceful use of atomic energy. In the period that had elapsed since the preceding session of the General Conference, new agreements had been concluded with the United States of America, the United Kingdom, Denmark and Afghanistan. Successful negotiations were being carried on with a view to establishing co-operation with Canada and Italy.

59. The new agreement with the United States, concluded at Moscow in May 1963, provided, among other things, for an exchange of specialists on such important subjects as thermonuclear fusion, nuclear power reactors, solid state physics, radiation chemistry and the disposal of radioactive waste. Under that agreement it was also planned to hold joint scientific conferences.

60. The scientific community of the Soviet Union had taken great satisfaction in the visit of a delegation of American scientists in connection with the signing of the agreement. The delegation had been headed by Professor Seaborg, a scientist whose work on the transuranium elements had been honoured with a Nobel Prize. Their visit had served to strengthen contacts between scientists of the two countries. Soviet scientists shared the opinion expressed by Professor Seaborg at the present session on the usefulness of those contacts. The scientists of both countries were confronting great scientific problems, the solutions to which should be used for the benefit of all peoples.

61. A new programme for the exchange of specialists had been drawn up between the Soviet Union and the United Kingdom for the year 1963-64. It provided for an exchange of scientists and specialists on radioactive waste disposal, radioisotope applications, high-energy physics, radiation chemistry, and so on.

62. Just before the General Conference an agreement for co-operation had been signed with Afghanistan, which provided for Soviet scientific and technical assistance in connection with the construction of a sub-critical assembly and a physics laboratory, and also for training in the peaceful uses of atomic energy. The sub-critical assembly would be completed in 1965.

63. During the preceding year, the Soviet Union had given technical assistance, under existing agreements, to 15 countries in Eastern Europe, Asia and Africa. With Soviet help, various atomic installations had been built in those countries, including nine reactors, six accelerators, seven radiochemical and physics laboratories, an electrostatic generator and a sub-critical assembly.

64. Work on the construction of installations of various kinds was continuing in the Democratic People's Republic of Korea, Indonesia, Ghana and other countries. Reactors, and physics, radiochemistry and medical laboratories were being built and would be completed in 1964 and in 1965.

65. The construction of nuclear centres in those countries provided the basis for an extensive range of scientific work on the peaceful uses of atomic energy, to be carried out by nationals trained in the Soviet Union.

66. New forms of collaboration were being developed; in particular, there was a growing trend in favour of joint research projects. At the nuclear centre in Cairo, for instance, Soviet scientists and specialists of the United Arab Republic had been working together for several years on an atomic reactor and an electrostatic generator in accordance with a programme of work that had been planned in joint consultation. A very good team of scientists - most of them young theoretical and experimental physicists from the United Arab Republic - were now working at the nuclear centre in Cairo. Soviet scientists had given more than 250 lectures on various aspects of physics. Collaboration would be developed along similar lines in other countries with which the Soviet Union had signed agreements for scientific and technical co-operation on the peaceful uses of atomic energy.

67. In the economically most advanced countries there were various plans for the building of large-scale power stations. Some had already been built, others were under construction. Wide use was being made of radioactive isotopes. Isotope techniques offered many advantages which could not be assessed solely in terms of money: they were of great use in industrial automation and control, were extremely valuable to scientists, and often provided the best way of diagnosing and treating particular diseases. By making available to the Agency the results of their work and practical achievements, many countries could do a great deal to help the developing countries in the practical use of atomic energy. The Soviet Union, for its part, was making available to the Agency free of charge the results of 43 nuclear research projects, all of them of practical value in hydrology, agriculture, medicine, scientific research and radioactive waste disposal. Expenditure on the projects had been over 230 000 roubles (approximately \$250 000). He would not, however, go into details. A list would be given to the Secretariat with the request that an information document be issued on the subject to the General Conference<sup>6/</sup>. If other countries engaged on similar work followed the example of the Soviet Union, the Agency could offer real advantages to its Members at no additional cost to itself.

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<sup>6/</sup> See document GC(VII)/INF/69.

68. If the establishment of a long-term programme was a constructive measure, the same could certainly not be said of the attempts being made to violate the financial provisions of Article XIV of the Statute. The problem was not new -- it had already been discussed at the sixth regular session of the General Conference. With the supposed aim of improving the programme of technical assistance to the developing countries, it had been proposed that the voluntary principle be abandoned and that technical assistance be financed from the assessed contributions of Member States. The proposal had been adopted during the June meetings of the Board by only twelve votes out of twenty-three, and a recommendation had been made to amend Article XIV of the Statute.

69. Such an amendment was unacceptable for a number of reasons.

70. Technical or economic assistance could only be granted by one State to another on a voluntary basis. That was the general rule and no one questioned its validity. Could an international organization force a State to grant economic or technical assistance to other States? Clearly, it could not. Neither the International Atomic Energy Agency nor any other international organization could oblige a sovereign State to grant such assistance on the basis of a majority vote. Such action on the part of an international organization would be tantamount to direct interference in the internal affairs of a State. The Agency's Statute, like the statutes of other international organizations, categorically prohibited interference in the internal affairs of Member States. Moreover, a decision of the General Conference to accept the recommendation of a majority of the Board of Governors to amend Article XIV would constitute a complete departure from the voluntary principle underlying the granting of technical assistance.

71. There was another important point to be borne in mind. When a State joined the International Atomic Energy Agency it took upon itself certain financial and other responsibilities. At the present time those financial obligations were clearly defined in terms of the proportion of the administrative expenditure of the Agency that was borne by that State. To include technical assistance items in the Agency's budget would make the volume of budgetary expenditure entirely dependent on the will of the majority of the Agency's Members. Such a procedure would open the door to unlimited budgetary increases

and the financial obligations of Member States would no longer be clear. Member States were in fact being asked to sign a blank cheque. It was hardly normal practice to expect a sovereign State to undertake certain financial obligations when it entered an international organization and then arbitrarily to change those obligations by means of a majority vote at a subsequent period. No State with any concern for its independence and sovereignty could possibly accept such a procedure.

72. Although it was opposed to the idea of compulsory contributions, the Soviet Union was entirely in favour of the provision of every possible form of technical assistance on a voluntary basis. One method of providing such assistance had been outlined in the proposal of the Soviet Union and other socialist countries to supply the developing nations with the equipment and apparatus required to fit out six radiological and six physics laboratories and also to make available 300 fellowships to such countries free of charge. The socialist countries had agreed to bear one third of the expenditure involved and hoped that the remaining two thirds would be met by the industrially advanced Western countries. The Soviet Union was helping and would continue to help the developing countries by making available its experts and equipment, by awarding fellowships, by carrying out research on their behalf, etc. The possibilities for enlisting the voluntary co-operation of Member States in such ways had by no means been exhausted.

73. The Soviet Union could not, therefore, as a matter of principle, consider the proposed amendment of the Statute as a legitimate one. He wished to repeat the position of his delegation, which had already been made clear at the sixth regular session of the General Conference: if the proposed change were adopted, the Soviet Union would not feel obliged to pay that part of its contribution which applied to projects hitherto paid for from voluntary contributions. The Soviet Union would not pay one cent towards such projects on a compulsory basis. Needless to say, it would vote against the proposal of the Board of Governors to amend Article XIV of the Statute.

74. Until quite recently - up to two or three years earlier - every attempt to take action in connection with the problem of disarmament had been turned down on the grounds that the Agency was a purely technical and non-political

organization. However, the pressure of outside events had made itself felt within the Agency and those objections had been silenced. A resolution adopted at the sixth regular session of the General Conference had requested the Director General to give full co-operation to the Secretary-General of the United Nations in studying the economic and social consequences of disarmament<sup>7/</sup>. The Director General had informed the General Conference of a communication he had sent to the Secretary-General of the United Nations on the possible effects of an agreement on general and complete disarmament on nuclear energy development<sup>8/</sup>.

75. Strictly speaking, that document, which was only four pages long, was more in the nature of a brief draft than a full report. Nevertheless, even from the approximate and tentative data quoted, it was obvious that an agreement on disarmament could give an enormous impetus to the peaceful uses of atomic energy. They showed, for example, that the available reserves of nuclear fuel which could be switched to peaceful applications would be sufficient to operate power stations for a period of 15 years at a capacity approximately equivalent to the total capacity of all the power stations installed at the present time. The report also dealt with the interesting question of how qualified military nuclear experts might be transferred to non-military work.

76. The problem of disarmament had figured on the agenda of the Economic and Social Council of the United Nations (ECOSOC) for a number of years past. The recent thirty-sixth session of ECOSOC had again examined the problem and had adopted a resolution calling on the specialized agencies of the United Nations and the Agency to co-operate with the Secretary-General of the United Nations by directing their efforts towards an international assessment of the economic and social aspects of disarmament<sup>9/</sup>. The Soviet delegation hoped that the General Conference would clarify the way in which the Agency should implement the ECOSOC resolution.

77. He wished the Conference every success with its work and said that the Soviet delegation would do everything in its power to resolve the questions on the agenda in a spirit of mutual respect for the interests of all countries.

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<sup>7/</sup> GC(VI)/RES/130.

<sup>8/</sup> GC(VII)/OR.73, para. 67. The communication is reproduced in United Nations document E/3736/Add.3, part I.

<sup>9/</sup> ECOSOC Resolution 982 (XXXVI).

78. Mr. USMANI (Pakistan) wished at the outset to associate himself with the remarks made by the delegate of Ghana regarding the policy of racial discrimination pursued by certain Member States.
79. When, several years previously, Pakistan had decided to enter the atomic energy field, the decision had been prompted by a recognition of stark realities connected with its programme of rapid economic development. It firmly believed that a developing country like itself, with a population of 94 million and one of the lowest levels of national income, could not hope to achieve economic growth unless it made the fullest possible use of the means which modern science and technology had placed at man's disposal. Abundant power was a prerequisite for the growth and development of agriculture and industry, and atomic energy offered a promising economic alternative in selected areas of a country like Pakistan that lacked the resources for conventional power production. In addition, there was vast scope for utilizing radioisotopes, the by-products of atomic energy, in solving problems of agriculture, health and industry.
80. It had been realized from the outset that no results could be achieved without a corps of scientists and engineers trained in specialized fields of atomic energy. An extensive training programme had therefore been launched and Pakistan now had nearly 300 young scientists and engineers fully trained or under training abroad. By 1965 the number was expected to grow to 500. It was grateful to the Agency and a number of friendly countries for their help in that work. That nucleus of trained personnel was regarded as the country's greatest asset and gave the necessary confidence for proceeding with the work.
81. During the same period, laboratories and research centres had been planned and established within the country. The Pakistan Institute of Nuclear Science and Technology was under construction and would have a 5 MW swimming-pool type research reactor. The first phase of the work would be completed by 1965 when the reactor was expected to go critical. In addition, there were two big centres fully equipped for training and research work not involving the use of reactors. The one, at Lahore, where a sub-critical assembly was to be coupled with a neutron generator as a pulse source for experimental work, was already in operation. The second, to be inaugurated at Dacca in 1964, would have a

3 MeV Van de Graaff accelerator for low-energy physics work. Two other centres, exclusively for agricultural research, had been established at Tandojam and Dacca. Three medical centres - at Karachi, Lahore and Dacca - were using isotopes and cobalt in the diagnosis and treatment of disease.

82. Studies on the economic feasibility of nuclear power had shown that by 1968 power gaps in Karachi (West Pakistan) and Ruoppur (East Pakistan) would justify the establishment of a 132 MW nuclear power plant for the former and a 70 MW plant for the latter, provided that loans could be secured at less than 4%. Nearly all Pakistan's conventional power projects had been financed through such low-interest loans from friendly countries. The authorities were grateful to the Director General and his colleagues for the guidance given in regard to selection of sites, evaluation of proposals, drawing up of specifications for tender and in particular for the helpful report on the prospects of nuclear power in Pakistan. They were confident that further help would be given subsequently in evaluating bids and in preparing a hazards evaluation report and a training programme.

83. As to the Agency's work and functions, great headway had been made during the past year, thanks to the Director General's leadership and the favourable atmosphere and spirit of collaboration obtaining in the Board of Governors. A long-term programme had been drawn up which provided a framework for operations; the Secretariat had been reorganized to provide the machinery for smooth implementation of the plan, the safeguards procedures had been approved for application to reactors of above 100 MW(t); and moves were afoot towards unifying the Agency's budget and finances. On the scientific side, in addition to the Seibersdorf and Monaco Laboratories, the Agency would have an international centre for theoretical physics, primarily intended for the benefit of the developing countries, and an isotope centre for the Arab countries in Cairo. The scientific seminars and panel discussions organized by the Agency had been of high quality and the publications issued were among the best to be found on the subjects covered. Any international organization might well be proud of such a record, which was due in no small measure to the dedication of the staff at all levels of the Secretariat.

84. As to the future, the Agency's role should go beyond the long-term programme in view of the relaxation of international tension brought about by the Moscow test ban treaty. One of the pillars on which the whole edifice of the Agency was built was the prevention of the proliferation of atomic weapons through a system of safeguards. It was therefore fitting that the great Powers should entrust the enforcement of the treaty to the Agency. Unfortunately, the treaty did not ban the production of atomic weapons and it was to be hoped that the next step would be in that direction.

85. In that connection the world, as Pakistan saw it, was divided into three main groups of countries: (1) Those able to produce, and at present producing, atomic weapons (i.e. the United States of America, the United Kingdom, the Soviet Union and France), (2) Those having an industrial infrastructure and reactors in operation, and therefore able to develop a weapons technology, and (3) Those planning to have power reactors in the future. As a practical proposition, countries falling within the second and third categories should, as a first step, conclude an international treaty agreeing to refrain from producing weapons and to use atomic energy only for peaceful purposes. Sheer weight of international public opinion would then induce the four atomic Powers to join in and cease the production of weapons. The Agency, as an international organ devoted to promoting the peaceful uses of atomic energy, should convene an international conference specifically for that purpose, such action would immediately enhance the respect and prestige it enjoyed.

86. In the same connection, it was noteworthy that, under the Agency's Statute, Members could by-pass its safeguards procedure by getting nuclear fuel or nuclear facilities other than through the Agency. It was due to that lacuna in the Statute that the reactors of all the advanced countries of Europe - countries falling within the second category - were outside the purview of the Agency's safeguards system. That situation was a temptation to countries in the third category to seek also to avoid the Agency's safeguards, and the resulting position of helplessness on the part of the Agency might further the temptation to divert fissionable material to military purposes. The great Powers had a moral obligation and responsibility to strengthen the Agency by action rather than words. They should refuse to enter into bilateral agreements

for the supply of nuclear fuel and facilities unless obtained through the Agency. Further, countries having bilateral agreements, or having set up reactors without seeking the Agency's assistance, should voluntarily follow the excellent example of Japan and attach the Agency's safeguards to their reactors and nuclear facilities.

87. A practical way of preventing the diversion of nuclear materials for military purposes would be to establish regional reprocessing plants under the Agency's auspices. Wherever such plants were being established, as at Mol in Europe, they should be voluntarily placed under the Agency's control. In Asia, provided the plans of Japan, India, Pakistan and the Philippines went through, there might be as much as 2000 MW of nuclear power being generated by 1970, and there was no reason why such countries should not get their fuel elements processed at a common reprocessing facility run by the Agency.

88. It was a matter of deep concern that Member States did not inform the Agency of transfers of source and fissionable material from their territories to other countries, with the result that the Agency had no statistical record of the quantity of fissionable materials available in the various countries at a given moment. Even if countries falling within the first category were excluded, there was no reason why the Agency should not be the custodian of all relevant statistical records of such transfers. Recently, agreement had been reached on the transfer of large quantities of plutonium from the United States and the United Kingdom to France, without any information on the subject being supplied to the Agency, although bilateral safeguards were being applied, such action was tantamount to by-passing the Agency. Pakistan believed in international co-operation, and if a positive lead were given by the great Powers, the path to peace would be ensured. If all Members joined in building up the Agency and giving it the backing it deserved, it would be able to go beyond the limited goals of the present long-term programme.

89. His delegation wished to place on record its disappointment that the Agency's major activities were confined to the continent of Europe. The time had come when it should establish regional offices in Asia, Africa and Latin America. By so doing, technical assistance work could be largely decentralized and routine activities in providing fellowships, equipment and experts dealt

with on the spot, consultations with Headquarters being confined to matters of policy. Regional groups could be encouraged to form organizations similar to the European Atomic Energy Community where problems of common interest could be discussed and research on regional problems undertaken jointly, with Agency help. In the context of regional co-operation, it might be that a number of countries in different regions would be attracted to the Agency if it were possible to get supplies of enriched fuel for power reactors at specially reduced prices, in the same way as Member States received for research purposes enriched uranium that had been donated to the Agency by the United States. Further, under their fuel enrichment policies the Governments of the United States and of the United Kingdom - and perhaps of the Soviet Union - could accept natural uranium for enrichment at special rates, provided the arrangements were made through the Agency. Such steps would cost little, but would pay handsome dividends inasmuch as the Agency would become an international broker in the fuel business.

90. In short, Pakistan envisaged a wider role for the Agency than that implied by the long-term programme. All that was needed was a generous and honest approach on the part of the great Powers; finance would be no problem, as many developing countries would be willing to contribute more if they stood to gain more. If only one tenth of the funds appropriated by the great Powers for atomic weapons could be diverted to the promotion of the peaceful uses of atomic energy through the Agency, the world would be a happier place to live in.

91. Mr. HULUBEI (Romania) said that the seventh regular session was starting in an atmosphere more favourable than heretofore to international relations and a better understanding among peoples. Any measure, even transitional, that served the cause of peace was worth taking. Accordingly, the Romanian Government had been among the first to sign the Moscow treaty - a great advance towards easing international tension, opening the way to lasting peace through universal disarmament, and ending the radioactive pollution that was so dangerous for the present and future of mankind.

92. Under its policy of peaceful co-existence Romania took part in all international activities that aimed at solving the grave problems which faced

mankind. It sought to make of the Balkans a zone of peace, without nuclear weapons or rockets, and was taking an active part in the work of the United Nations, the Disarmament Commission and all other international bodies.

93. As part of the United Nations, and by its very nature, the Agency could and should play an important part in easing international tension. The progressive elimination of the danger of a nuclear flare-up and the utilization of the immense existing nuclear potential in the interests of peoples and for the benefit of science was one of the main reasons for its existence. The climate that could be created at the Agency, and the courses of action that might be found or suggested there, could make a great contribution to the peoples' fight against the nuclear danger and to the development of atomic energy for the good of mankind.

94. The Romanian delegation noted with satisfaction the Agency's achievements since the sixth regular session, particularly in training, the organization of scientific meetings and the exchange of information. The Agency had extended its scope, profited from past experience, and increased its usefulness to Member States. Under an improved research programme, it was successfully tackling problems of more immediate scientific and economic interest. In order to make better use of the results, the Secretariat might periodically prepare detailed and very precise scientific reports on the activities in question. That also held good for the Monaco Laboratory, since the research carried out there could be extremely interesting to Member States if carefully followed up.

95. Those in charge of the centre for theoretical physics that was shortly to be inaugurated would have a very difficult task. The interest of the developing countries in theoretical physics was of a rather special kind, and experience of that type of international institution was limited. The centre's success would depend on the extent to which it was able to group and co-ordinate activities of a highly scientific nature.

96. His delegation congratulated the Director General and the Secretariat on the good results obtained in the circulation of technical and scientific information through conferences, symposia and seminars, and on the constant improvement in the editing.

97. The long-term programme recently approved by the Board was realistic and acceptable. He hoped it would stimulate work on such matters of major importance as nuclear power, the use of isotopes in industry, agriculture and medicine, training and many others of common interest.

98. The detailed programmes must be prepared in close collaboration with Member States and with a special eye to the requirements of the developing countries. To the extent that that was done - due regard being had to technological developments - the long-term programme would render very real services.

99. By using available resources more rationally it should soon be possible to stabilize the budget and so avoid the constant increases expected up to 1970. The socialist countries had made constructive proposals to that end at the sixth regular session. The funds allotted to each activity and to each Member State could be better distributed and the organization and planning of the Secretariat's activities better arranged; that was worth doing. Obligated funds should not be held indefinitely in reserve and outstanding technical assistance obligations should be liquidated. Appropriations for the services of experts continued to exceed those for equipment; under that heading, savings might be made without prejudice to the services rendered by experts.

100. His delegation wished once again to emphasize the vital importance of training. It did not share the view that the training problem was almost solved, at least so far as the Agency was concerned, and was concerned to note that, for the period 1958 to 1962, the percentage of fellowships financed by the Agency had fallen from 83.8% to 37% and that of fellowships offered under the United Nations Expanded Programme of Technical Assistance from 84% to 37%.

101. Without an adequate number of trained specialists, the Agency's assistance would be neither effective nor useful, particularly in the developing States. The success of all the Agency's other activities depended on such training, and by a more rational utilization of the funds available it seemed the problem could be solved. He was stressing that point because, after the reorganization of the Secretariat, the Department dealing with training would have several other tasks to handle. In that connection he wished to pay tribute to Mr. Rylov, the Deputy Director General for Training and Technical Information, for the efficient and thoroughly understanding manner in which he had carried out his duties.

102. Incidentally, many of the advanced States to which Resolution GC(VI)/RES/131 was addressed had not reacted in the spirit of that resolution, although some Member States had been extremely interested in the proposals for technical assistance and training which it contained.

103. The Romanian delegation did not believe that amalgamating the budgets was the only way to take care of the technical assistance and training problems. It was opposed to the proposed amendment to Article XIV of the Statute as being contrary to the Agency's fundamental principles and liable to have an adverse effect on the efficiency of technical assistance.

104. Similarly, the fellowship regulations the Board had adopted were not likely to promote good understanding, involving as they did pointless discrimination against some Member States, and they were incompatible with the very principles laid down in the Statute. The various aspects of that matter should be carefully reconsidered.

105. Fundamental research and the peaceful applications of nuclear energy had the constant attention of the Romanian Government. Such applications were already frequent in the metallurgical and chemical industries, in prospecting and hydrological research, and in medicine, biology and agriculture; they would soon be routine.

106. He was gratified to see present at the General Conference the delegations of six new Member States: Bolivia, Liberia, Libya, Saudi Arabia, the Syrian Arab Republic and Uruguay. He also welcomed the recent admission of Nigeria, the Ivory Coast and Gabon.

The meeting rose at 12.55 p.m.