



International Atomic Energy Agency

# GENERAL CONFERENCE

GC(XXI)/OR.198  
May 1978\*

GENERAL Distr.  
ENGLISH

## TWENTY-FIRST REGULAR SESSION: 26–30 SEPTEMBER 1977

RECORD OF THE ONE HUNDRED AND NINETY-EIGHTH PLENARY MEETING

Held at the Neue Hofburg, Vienna, on Thursday, 29 September 1977, at 3.15 p. m.

President: Mr. ETEMAD (Iran)

Item of the agenda**	Subject	Paragraphs
7	General debate and annual report for 1976 (continued)	1 - 130
	Statements by the delegates of:	
	Ecuador	1 - 9
	South Africa	10 - 27
	Chile	28 - 42
	Ghana	43 - 57
	Mongolia	58 - 62
	Austria	63 - 77
	Byelorussian Soviet Socialist Republic	78 - 90
	Portugal	91 - 97
	Uruguay	98 - 108
	Venezuela	109 - 119
	Thailand	120 - 125
	Greece	126 - 130

\* A provisional version of this document was issued on 4 October 1977.

\*\* GC(XXI)/591.

## THE RECORD

### GENERAL DEBATE AND ANNUAL REPORT FOR 1976 (GC(XXI)/580) (continued)

1. Mr. RODRIGUEZ PALACIOS (Ecuador), after congratulating the Director General and the Secretariat on the spirit of co-operation they had shown in plans and activities carried out jointly by his country and the Agency, which in its 20 years of existence had contributed effectively to the peaceful development of nuclear energy, said that the Ecuadorian authorities were conscious of the need to promote the atomic energy factor as an indispensable element in the socio-economic development of the people of Ecuador.

2. That consideration had been reflected in various measures adopted by the Government designed to strengthen the Ecuadorian Atomic Energy Commission, which had a constitution, which was financed from the general budget of the State and which had experienced staff to implement short-, medium- and long-term programmes.

3. Since he had become President of the Ecuadorian Atomic Energy Commission, efforts had been made to fulfil the country's obligations vis-à-vis the Agency so that the technical assistance coming from that source flowed smoothly in the national institutions that had requested it. Co-operation offered to radio-therapy centres had been started through treatment schedules and radiological protection measures which the Commission's staff had introduced, as emphasis had to be put on the drawing-up of radiological safety regulations which, when revised by officials of institutions involved in that field, would be submitted to the Government for promulgation.

4. The impetus given to the Commission in the last 20 months had already gained it national recognition as an institution which had provided itself with a basic structure and which could direct itself positively in future to accomplishing its special tasks. In that context, it had co-operated with various Ecuadorian institutions, concentrating its activities on the preparation of a new law on mining - with the Ministry of Natural and Energy Resources - and on the setting up of a centre for integrated sampling of renewable and non-renewable natural resources by remote sensor.

5. The technical assistance requested by Ecuador from the Agency for 1978 would be intended, in particular, for institutions in Ecuador's main port, Guayaquil, and would serve to encourage the development of nuclear sciences, especially at the educational level, and of certain technical projects considered to be of high priority.

6. At the last meeting of the Inter-American Nuclear Energy Commission held in Lima, a distinguished Ecuadorian scientist had been appointed a member of that body's Advisory

Committee, which, it was hoped, would be able, with the Agency's support, to prepare specific programmes which would benefit the countries of Latin America.

7. During 1977, technical and economic co-operation agreements had been signed with Argentina and Spain, under which appropriate action was being taken so that Ecuador would have suitable facilities available within the next five years in which the peaceful atom could be used for the benefit of Ecuador and its people. The Commission was grateful for the co-operation of those countries and for the hospitality it was going to be offered by the Spanish Nuclear Energy Board during a visit officials were to make to Spanish facilities.

8. His Government recognized the importance of the Agency's safeguards programmes, but it thought that they should be kept at appropriate levels so that the technical assistance programmes so urgently needed by the less-developed countries in such fields as health, agriculture and nutrition, which would raise the standard of living of their inhabitants, would not suffer.

9. It also suggested that the existing unused balances in the Agency's budget which had been frozen for several years should be used for selected programmes of direct benefit to countries that were starting their activities in the field of nuclear energy. That could result in more funds being available for assistance in the preparation of medium- and long-term programmes and for increasing training of human resources in the many different aspects of scientific research.

10. Mr. VON SCHIRNDING (South Africa) said that it was appropriate on the twentieth anniversary of IAEA that the Conference should reflect on the extent to which the Agency had fulfilled the objectives set forth in its Statute: "... to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world".

11. Evidence of the Agency's achievements in promoting those goals was to be found in its technical assistance programme under which countries less advanced in the field of atomic energy were assisted to develop their own peaceful nuclear capabilities for the benefit of all their peoples. Through such Agency projects as the International Food Irradiation Project, better utilization of the world's agricultural resources was promoted and the safeguards system developed under the auspices of and administered by the Agency provided a strong deterrent to the possible diversion of nuclear material to non-peaceful purposes.

12. The numerous technical meetings organized by the Agency provided an opportunity for the world's nuclear scientists and experts to exchange their ideas freely on various aspects of nuclear science and undoubtedly fostered a spirit of international co-operation in that respect.

13. After paying tribute to the Director General and staff of the Agency, he said that when his Government had been invited in 1954 by the Government of the United States of America to participate in the drafting of the Statute of the Agency, it had responded with enthusiasm. It had done so not because of any direct benefit South Africa could derive from the Agency but rather, as one of the world's major uranium producers, because it wished to make a contribution to the objectives for which the Agency had been envisaged.

14. South Africa had identified itself closely with those objectives and ideals, as was demonstrated by the contribution it had made to the establishment of the Agency's safeguards system, by the tangible support it had given to the technical assistance programme and through its ongoing active participation in various Agency projects including the International Food Irradiation Project. Furthermore, South Africa's scientists, who had regularly attended Agency-sponsored meetings, had contributed constructively to the furtherance of knowledge on nuclear science.

15. South Africa's own nuclear energy programme bore witness to its stated policy of peaceful uses of the atom. It had been in pursuance of that policy that South Africa, a major producer of uranium, had undertaken to supply its uranium to non-nuclear-weapon States only under Agency or equivalent safeguards.

16. The 20-MW research reactor, SAFARI I at Pelindaba, which was fuelled under a Co-operation Agreement with the United States of America, was subject to IAEA safeguards, as was the 2000-MW nuclear power station at present being constructed at Koeberg in the Western Cape Province. It was well known that the SAFARI research reactor was used solely for peaceful scientific research and for the production of radioisotopes for medical diagnostic and therapeutic application in all sections of the South African population and, upon request, in neighbouring African countries. It was also employed in research and development related to the preservation of agricultural products by sterilization.

17. The announcement in 1970 that South Africa had developed its own uranium enrichment process had been accompanied by an expression of willingness to place the proposed commercial enrichment plant under Agency safeguards. Steps towards that end had already been initiated by the South African Atomic Energy Board in conjunction with the IAEA.

18. Notwithstanding repeated assurances about its commitment to peaceful uses of the atom and despite regular inspections by the IAEA inspectors of the South African research reactor SAFARI I at Pelindaba to the full satisfaction of the Agency, tendentious allegations had been made, with tiresome frequency, that South Africa had either developed or was developing a nuclear weapon. It had always been possible, however, to trace such allegations to highly suspect sources seeking political advantage.

19. Such had been the recent patently spurious allegation by the Soviet Union that South Africa was about to explode an atomic device - an allegation made with the utmost cynicism at a time when the Soviet Union itself was engaged in such activities!

20. Once again the South African Government had given assurances that it did not have or intend to develop a nuclear explosive device for any purpose, peaceful or otherwise; that it had no testing facility for nuclear explosives and that there would not be any nuclear explosive testing of any kind in South Africa. But South Africa knew from experience that such allegations would again be made by those who preyed on the fears of mankind.

21. In reflecting on the Agency's achievements, he felt bound to draw attention to those aspects where the Agency had failed to come up to expectations.

22. An important statutory function of the Agency was to promote and further the establishment of safeguarded world-wide disarmament, particularly nuclear disarmament. The lack of progress in that field gave greater cause for concern today than twenty years previously. After twenty years the nuclear armaments race was as active as when the Agency started out on its venture. Tens of thousands of scientists, technicians and workers were reportedly engaged in the production of nuclear weapons and in the development and design of new nuclear weapons. Only recently there had been reports of one such new weapon of destruction which was said to have the curious merit of destroying people while leaving buildings intact; anything further removed from the high principles which had given birth to the Agency was hard to imagine.

23. There had been other developments which had cast a cloud on international efforts to achieve the Agency's objective of non-proliferation and its objective of accelerating and enlarging the contribution of atomic energy to the advantage of mankind.

24. At the recent international conference in Iran on the transfer of nuclear technology, a number of countries, among them parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT)[1], had expressed their disillusionment and frustration at the limitations and restrictions being imposed on their peaceful development of nuclear energy. Many of them considered that those measures, instead of contributing towards the control of nuclear weapons proliferation as intended, would have the exact opposite effect. The South African Government too thought that a genuine commitment to non-proliferation was least served by actions which cast doubt on the reliability of a supplier of material essential to demonstrably peaceful nuclear programmes. It must surely be obvious that the failure of a supplier to live up to solemn

---

[1] Reproduced in document INF/CIRC/140.

treaty commitments in that field was one of the root causes for the decision by countries to have their own facilities so as to be self-reliant. Unilateral action of that kind by certain supplier nations would not only harm the credibility of NPT but would also undermine the Agency's safeguards system.

25. Another development with deeply disturbing implications flowed from the recent failure by the Board of Governors to implement the explicit requirements of Article VI, A, 1 of the Statute. In rejecting the designation of South Africa as the Member in the African area "most advanced in the technology of atomic energy including the production of source materials", the Board had acted illegally and in violation of the Agency's Statute. No suggestion had been advanced that South Africa did not qualify in terms of the requirements of Article VI, A, 1. Indeed, no such suggestion could possibly be made in the face of the overwhelming evidence that South Africa had, since the founding of the Agency, been, and continued to be, the African country most advanced in the technology of atomic energy, including the production of source materials. Reliance had thus been placed on arguments of a purely political nature which were wholly irrelevant.

26. In failing to designate South Africa, the Board had, however, done more than violate the provisions of the Statute; the Agency itself had been done an irreparable injury, for its integrity and its credibility had now been placed in doubt. That was a tragic development for the Agency, which had been assigned, amongst other tasks, an important role in the fields of safeguards and non-proliferation. Its ability to discharge those important tasks under the Statute, as well as under NPT, would inevitably be impaired.

27. Countries which had a sincere commitment to the objectives of the Agency could not be sanguine about that development and were bound to take it into account in the determination of their policies in the atomic energy field. Those disquieting and disturbing developments would have to be faced soberly by the international community if it was to rescue the highly promising venture on which it had embarked twenty years before.

28. Mr. VALDES-MARTINEZ (Chile), after congratulating the President on his election, said that he wished succinctly to describe the work the Chilean Nuclear Energy Commission had accomplished during the year past. The project for the construction of Chile's first nuclear power station was continuing to make progress, particularly in respect of training of staff for the various phases of the work, and Agency fellowships had helped a great deal in that connection. The research reactor of the Lo Aguirre Nuclear Centre had, he was pleased to announce, gone critical on 4 February; ancillary construction was now going forward with a view to bringing the installation up to full power (20 MW). Spain had provided valuable technical assistance in connection with that project, for which he wished to express sincere thanks.

29. In December Chile expected to put a multi-purpose pilot irradiation plant into operation, also at the Lo Aguirre Nuclear Centre.

30. The reactor of the La Reina Centre had continued operating normally at full power, 20 to 30 hours a week for the production of radioisotopes, special research and training. At present the isotopes produced by that reactor were able to cover virtually all the country's increasing demand, and some radioisotopes had been exported to Bolivia and Argentina.

31. The projects already in hand in connection with the nuclear raw materials programme had been completed to the extent of about 50%; in particular, 24 000 km<sup>2</sup> of Chile's territory had been explored. In December 1976 international tenders had been invited in connection with the raw materials programme, and the offers received were at present being evaluated. The United Nations Development Programme (UNDP) was making an important contribution, through the Agency, in the form of experts, equipment and fellowships.

32. As far as the applications of nuclear science to public health were concerned, two pilot centres for radiotherapy and nuclear medicine had been set up by the Commission under the agreement in force with the National Health Service, and those had brought about a significant improvement in the quality of the services offered to Chileans in that special medical field.

33. Through its "training and advanced instruction" programme the Commission had, between September 1976 and August 1977, offered various courses for the benefit of its staff, some of which had been attended by scientists from other institutions as well.

34. In an effort to secure even closer collaboration with other countries, Chile had concluded certain additional agreements with Argentina, viz. a project for co-operation in the use of isotopes in hydrology, a project for co-operation in the applications of atomic energy in industry, and a co-operative radioisotope project.

35. The Third Chilean Seminar on Biology and Nuclear Medicine had been organized and conducted with notable success, both as regards the number of participants and the excellent results obtained.

36. Chile's new legal norms to govern radiation safety were at the stage of codification and final editing, within the context of a Nuclear Law soon to be submitted for governmental approval and subsequent promulgation.

37. A subject that deserved special mention, in the annual report submitted by the Board (GC(XXI)/580), was the success of the Conference on Nuclear Power and its Fuel Cycle (the Salzburg

Conference)[2], which had enabled participants to become familiar with the latest developments in the nuclear power field - developments of vast importance for the present and the future.

38. Chile was very grateful for the assistance it had received, and had tried hard to make the most effective use of that assistance. The country would continue trying to improve its technological capacities and its ability to turn the Agency's help to good account.

39. Turning to safeguards, he said that the most effective way of helping to prevent the spread of nuclear weapons was simply to adopt a firm resolve not to participate in the process of proliferation - a process that had certainly not been unleashed by the countries least developed in the nuclear field. Proliferation was a special concern of those who possessed nuclear weapons and were continually perfecting them and creating new ones. His country, like some others, had had recourse to a type of moral safeguard which offered more effective guarantees than signed documents.

40. Chile nevertheless believed in safeguards, but it felt that the real problem at present lay in the relationship between safeguards and technical assistance. Both were fundamental concerns of the Agency, but the attainment of a harmonious balance between them was obviously difficult. It would be wrong to put a damper on the opportunities of developing countries in the course of confronting the proliferation danger. Chile had accordingly come to the conclusion that technical assistance should not be subjected to safeguards, as that would be in contradiction with the letter and spirit of the Statute. Moreover, it was wrong to divide countries into two categories - those which had signed the main non-proliferation treaties such as NPT and the Treaty on the Non-Proliferation of Nuclear Weapons in Latin America (the Tlatelolco Treaty)[3], and those which had not. There could be good reasons - other than an intention of contributing to proliferation - for a country's failure to sign.

41. Chile would be happy to place its own nuclear infrastructure at the disposal of other developing countries, preferably from the region of Latin America, for purposes of training.

42. Before concluding, he wished to convey the gratitude of his Government to all friendly countries which had lent loyal support and co-operation to Chile in furtherance of its nuclear programme. In particular he wished to thank the Director General for the Agency's invaluable assistance.

43. Mr. ALLOTEY (Ghana) said that the present session of the General Conference was significant,

first, because it marked the twentieth anniversary of the Agency's existence, and second, because it marked the twenty-first meeting in an unbroken chain of sessions of the General Conference initiated in September 1957. The Agency could therefore be considered, in human terms, to have reached maturity.

44. It was gratifying to note the expansion that had taken place in the Agency's main activities since the first session of the General Conference. The application of safeguards, the encouragement of nuclear power development, the promotion of nuclear safety and environmental protection, and the establishment of the International Nuclear Information System (INIS), were all pointers to the Agency's efforts to gear its activities to the development trends in the peaceful application of nuclear energy for the benefit of mankind.

45. That those activities had been so successful was indicated by the results described by the Director General in such areas as the use of radioisotope techniques and radiation in agriculture, industry and water resources development, and the economic viability of electricity produced by nuclear energy.

46. In all those areas the Agency deserved the commendation of all Member States for the calm and unruffled approach it had adopted in fulfilling its functions. At the same time, it was essential for the Agency to carry out periodic stock-taking to ensure continued and efficient service to the cause to which it was dedicated. It was therefore desirable to take a fresh look at its Statute and to see whether some modification might not be necessary to enable it to attune itself more finely to the realities of the current world situation. That referred in particular to the matter of Article VI, A, 2 of the Statute. The proposed amendment to that Article, of which Ghana was one of the many co-authors, should be considered in that light so as to elicit a positive response from the entire Agency membership during the current session.

47. With regard to the Agency's budget for 1978[4], his delegation shared the concern expressed by many others at the inordinate rate of increase in budgetary appropriations from year to year. It was to be hoped that the Agency would look into ways and means of making such increases commensurate with actual needs.

48. Another matter of concern was the obvious imbalance between budgetary allocations for the regulatory functions of the Agency and its promotional activities. It was desirable that steps be taken by the Agency to remove that disparity and match the increases for safeguards with a corresponding increase in the funds allotted for technical assistance. That recommendation did not in any way detract from his country's support for the Agency's activities in the field of safe-

[2] Held in Salzburg in May 1977.

[3] United Nations Treaty Series, Vol. 634, No. 9068.

[4] GC(XXI)/582.

guards. Indeed, as a party to NPT, Ghana supported the measures taken to promote that essential aspect of the Agency's functions. The problem of safeguards, however, was basically a political one, and should not be given undue budgetary emphasis to the detriment of technical assistance activities.

49. Another aspect of the matter calling for urgent review was the undesirable situation by which safeguards activities were funded from the Regular Budget, while technical assistance, of greatest concern to developing countries, was financed from voluntary contributions which, by their very nature, were uncertain and on that account limited the scope of the programmes that the Agency was able to support.

50. With regard to Ghana's own nuclear programme, the main thrust of the current research programme was still directed towards the reactivation of the nuclear research reactor project, the primary objective of which was to lay a firm basis for the introduction of nuclear science and technology in a way that would make the most impact on the life of the people.

51. Pending completion of the research reactor facility, Ghana's research programme in radioisotope applications in medicine, hydrology, food and agriculture, pest control and uranium prospecting had continued and even been intensified.

52. Emphasis was being placed on research likely to contribute significantly to the practical solution of the country's problems, especially in the sphere of agriculture. In that connection he wished to refer to some of the major research projects for which plans had already been finalized with a view to their implementation between 1978 and 1980, and for some of which the Agency would, it was hoped, provide funds under its regular technical assistance programme.

53. One such was the Radiation Technology Project, which envisaged the use of radiation technology in the sterilization of medical equipment and materials as well as pharmaceutical products. Agency-assisted feasibility studies completed in June 1977 indicated that there was a large potential in the country for the sterilization of intravenous infusion products, medical and sanitary dressings, and certain drugs, including antibiotics now manufactured in Ghana. The project was considered to be viable and the Ghana Atomic Energy Commission planned to implement it by 1980.

54. The Commission also planned to collaborate with the Ministry of Health and the Environmental Protection Council of Ghana in establishing a Secondary Standards Dosimetry Laboratory as part of the Commission's health physics and radiation protection programme. The Laboratory, when established, would form part of the network of similar laboratories serving not only Ghana, but other countries in West Africa, with an up-to-date dosimetry service.

55. Also planned was the establishment by the end of 1978 of an Institute of Nuclear Science and Technology at the Ghana Nuclear Research Centre. It would provide training in nuclear science and technology, including radioisotope applications, for newly recruited staff of the Commission, Scientists graduating from the universities in Ghana would be able to take post-graduate degrees at the projected institute and it would also accept graduates from other developing countries.

56. In the field of staff training and development, Ghana was continuing to receive support from the Agency through its fellowship programme, and also from bilateral sources, for which it wished to record its appreciation.

57. In conclusion, Ghana had faith in the future of the Agency as an organization capable of bringing the full benefits of nuclear technology to all mankind. His country would continue to cooperate actively with the Agency in that noble task.

58. Mr. SODNOM (Mongolia) congratulated the President and the Director General on their elections, and the Agency as a whole on its twentieth anniversary.

59. Strengthening of the regime of non-proliferation of nuclear weapons was an important aspect of the general striving towards international détente. However, there remained two nuclear Powers and several nuclear threshold States that had not signed NPT. The situation had been exacerbated by the acquisition of nuclear weapons by the racist régime of South Africa with the help of several Western States; as a result the stability and safety of Southern Africa, and of all mankind, were in danger. The utmost efforts should be made by the international community to prevent South Africa from building nuclear weapons. The regime of non-proliferation could be strengthened by attracting new signatories of NPT, by the conclusion of safeguards agreements with the IAEA, by improved effectiveness of Agency safeguards, and by stricter supervision of exports of nuclear materials, equipment and technology.

60. Mongolia had been among the first to support the Soviet Union's proposal of an international agreement prohibiting the development and production of new types and systems of nuclear weapons for mass destruction. Recent developments proved that such an agreement was needed to put a stop to the arms race.

61. The Agency's safeguards activities were certain to expand, and the Agency must therefore develop effective methods of controlling movements of nuclear materials. The Mongolian delegation welcomed the Agency's progress during the past years, and supported its technical assistance activities, which were very valuable to developing countries. An X-ray fluorescence analysis project was being conducted in Mongolia, the first results of which had been described at international conferences, and there was also a radiation biology project concerned with the use of radiation in agriculture.

62. The Mongolian delegation supported the Agency's activities in connection with regional nuclear fuel cycle centres and with the physical protection of nuclear material. Mongolia welcomed the raising of the target for voluntary contributions to US \$7 million, and would make its own modest contributions to the General Fund.

63. Mr. MANZ (Austria) said that the Agency had been created as an international authority to control and develop the peaceful use of atomic energy. During the twenty years of its activity it had been guided by Article II of its Statute under which it was enjoined to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world, while ensuring that assistance provided by it or through it was not used to further any military purpose. When those objectives had been drafted the commercial use of nuclear power had just appeared on the horizon. With nuclear power becoming a technical and commercial reality, the situation had changed and so had the responsibilities of the Agency.

64. Although the Agency was concerned primarily with the peaceful uses of atomic energy, Austria could not but express its dismay at the current arms race - it not only constituted the most serious threat to peace and order in the world but also entailed a tremendous drain on resources required urgently for other purposes. It was indeed outrageous that the world afforded itself the luxury of spending approximately 20 times more on armaments than on combating poverty.

65. His country considered that NPT, which it had strongly supported from the very outset, and the Agency's safeguards system could provide the framework for disarmament and arms control measures which were politically necessary in order to diminish the motivation for developing independent nuclear weapon potentials.

66. In that connection, it was encouraging to note that two more States had acceded to NPT and that the number of safeguards agreements concluded with the Agency had risen since the preceding General Conference.

67. Austria supported the Agency's continued efforts to develop and expand the safeguards system, and commended its activities during the preceding year in providing assistance to Member States in establishing and strengthening their national safeguards through training seminars and direct consultations.

68. As for Austria, the safeguards procedures to be applied to the first nuclear power plant under construction had been improved, and the subsidiary arrangements for the material balance area were being negotiated with the Agency's Secretariat so that the Austrian national system for nuclear material accounting and control would be completed in the near future.

69. The Safeguards Analytical Laboratory (SAL) which Austria had built for the Agency had been

commissioned in 1976, and the negotiations for licensing its operation at full capacity were proceeding satisfactorily.

70. The construction of the first Austrian nuclear power station had nearly been completed. However, public acceptance of nuclear power had become an important political issue in Austria as in many other countries.

71. Continued resistance to the construction of nuclear power plants had resulted in a decrease in the orders for nuclear power stations in the world. Realizing that such resistance derived mainly from lack of objective information on the dangers and usefulness of nuclear energy, the Austrian Government had started a comprehensive campaign to provide the public with as much detailed information as possible on the advantages and disadvantages of nuclear energy. Well-known critics of nuclear energy had been invited to draw up a questionnaire, which had then been discussed in public forums where the supporters and the opponents were equally represented. On the basis of the results of those discussions, the Government had prepared a report to be submitted to Parliament. A decision on starting operation of the first Austrian nuclear power plant would be taken only after those extensive and thorough deliberations had been concluded.

72. The opponents of nuclear energy had been concentrating increasingly on the final storage of radioactive waste, which had become a key problem also for the authorities. A solution to that problem could be facilitated by international co-operation.

73. Austria appreciated the Agency's comprehensive study on regional nuclear fuel cycle centres, which had been presented at the Salzburg Conference in May, and was especially interested in the aspects dealing with long-term storage of spent fuel. His country supported all activities in that field for they could strengthen the Agency's role under its Statute.

74. The Agency had rendered a valuable service to Member States by formulating a set of criteria for the physical protection of nuclear materials and facilities. Austria would welcome and assist in further development of the recommendations on the subject contained in document INFCIRC/225/Rev.1 and hoped that the efforts to draft an international convention on the physical protection of nuclear material would be successful.

75. Austria was gratified that the Agency had held an important gathering like the Conference on Nuclear Power and its Fuel Cycle at Salzburg and hoped that it had made a positive contribution to the Conference.

76. As in the previous years, the Austrian Government wished to reiterate its full support for and interest in the Agency's activities; it had pledged, subject to parliamentary approval, a voluntary contribution of \$47 600 to the General

Fund for 1978 and would make available funds for Type II fellowships, amounting to 170 000 Austrian schillings.

77. In conclusion, he wished to assure the General Conference that all the buildings of the Agency's Permanent Headquarters would be completed and ready for occupation in the summer of 1979. Although the office buildings were expected to be available at an earlier date, the organizations concerned had expressed a preference for moving to the new premises only after the completion of the whole complex. His Government was confident that the Agency's activities in the future would be favourably influenced by the new environment, which should provide the most suitable working conditions for the staff of the organization.

78. Mr. KOLICHAN (Byelorussian Soviet Socialist Republic) said that the Agency's twentieth anniversary was being celebrated at a time of considerable success in the struggle for peace and international security. Thanks to the unwavering policy of the socialist countries and of all peace-loving forces it had been possible to reduce the threat of war and intensify the peaceful co-existence of States with different social systems.

79. In July, the Secretary General of the Central Committee of the Soviet Communist Party and Chairman of the Presidium of the Supreme Soviet of the USSR, Mr. Brezhnev, had said that it would be possible for mankind entering the twenty-first century to enjoy conditions of peace more stable than ever in the past. In his message to the General Conference, however, he had stated the following:

"We must not be blind to the fact that the forces in the world which would like to possess nuclear weapons as a means of threatening the people have not yet been eliminated. For this reason the problem of placing a reliable barrier in the way of nuclear weapons proliferation and of preventing the danger of nuclear war is now acute as never before.

"The International Atomic Energy Agency has a major part to play in the solution of this extremely important problem and we express the hope that it will make every effort to ensure that the atom serves only the interests of peace."

80. During the twenty years of its existence, the Agency had worked to "accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world", and his delegation was particularly satisfied with the results achieved in safeguards, nuclear power generation, nuclear safety and nuclear information handling.

81. The number of countries proficient in nuclear technology and in possession of significant amounts of nuclear material, including plutonium, was growing - and with it the risk of

nuclear weapons proliferation. The importance of NPT and of the Agency's safeguards was therefore obvious, and his delegation was in favour of an intensification of the Agency's activities in the safeguards field. The scope of the Agency's safeguards would have to be considerably broadened in order to include all facilities involved in the fuel cycle and hence guarantee the possibility of effective controls on all nuclear activities in all non-nuclear-weapon States regardless of whether those States had acceded to NPT. Accordingly, his delegation supported the proposal to increase the staff and the budget of the Department of Safeguards.

82. The Byelorussian SSR considered that all countries exporting nuclear materials, equipment and technology should, in their export policies, apply standards which would render nuclear weapons proliferation completely impossible. Strict standards would also have to be applied in accounting for and controlling nuclear materials used in programmes for nuclear explosions for peaceful purposes (PNE).

83. His delegation was concerned about reports that South Africa was developing nuclear weapons and preparing to test them. The South African racists, who had not signed NPT, were feverishly trying to increase their nuclear potential. The making of nuclear weapons by South Africa would have very serious and far-reaching consequences for international peace and security, and the dangerous intentions of the Pretoria régime should therefore be condemned in the strongest terms. In that connection, he noted that the campaign being conducted by certain western circles in favour of the neutron bomb was giving rise to legitimate concern and condemnation.

84. His delegation commended the Agency's work relating to the creation of multinational nuclear fuel cycle centres and to physical protection. The international meetings organized by the Agency, like the Salzburg Conference, were also important, for they provided opportunities for valuable exchanges of information.

85. As regards the peaceful utilization of atomic energy in his country, significant progress had been made, especially in nuclear physics and related areas; research was being conducted in a variety of fields, including nuclear structure, nuclear spectroscopy, the structure of radiation defects and the kinetics of their accumulation, magnetic neutron radiography and neutron activation analysis and its practical applications. In addition, work was being done on nuclear data evaluation and in the field of radiation chemistry. Radioisotopes were being used widely and for a great variety of purposes in science, technology, medicine and agriculture. A reactor of the IRT type and a number of accelerators and gamma installations were being used in research work, the results of which might well be of use to the Agency, with which his country was prepared to consider possibilities for co-operation.



86. In the Byelorussian SSR, intensive research and design work was continuing on a nuclear power station with a reactor using dissociating nitrogen tetroxide as coolant and heat-transfer fluid. Experiments and theoretical studies had yielded positive results and a 300-MW demonstration plant had been designed. A substantial expansion of nuclear power generation during the next few decades would probably be possible only with the participation of fast reactors. Hence, the nuclear power station being developed would have a gas-cooled fast reactor with a high heat-density core in no way inferior to the core of reactors with a liquid-metal coolant. The Republics of the Soviet Union and also Poland, Hungary, Bulgaria and Czechoslovakia - as Members of the Council for Mutual Economic Assistance (CMEA) - were playing a direct part in the project.

87. The natural energy resources of the Byelorussian SSR were insufficient to meet - in the long run - the growing demand for thermal energy for industrial and communal purposes, and the possibility was therefore being considered of building a nuclear plant to provide heat for the town of Minsk. In that connection, his delegation considered the question of multipurpose reactors to be a fairly important one which should find an appropriate place among the Agency's activities.

88. His country appreciated the work being done by the Agency in the field of technical assistance and had great understanding for the desire of developing countries to use the energy of the atom in accelerating their economic development.

89. Announcing that the Byelorussian SSR proposed to contribute 20 000 roubles in national currency in 1978, he said that the equipment, instruments and materials purchased with the money should be given primarily to those developing countries which had acceded to NPT.

90. In conclusion, he expressed confidence that the Agency would continue to help in solving the major problems of the peaceful utilization of atomic energy for the good of the world and the welfare of all peoples.

91. Mr. SACADURA CABRAL (Portugal) congratulated the President and the Director General on their election.

92. The consumption of electricity in Portugal was still far below that of other European countries, and it could thus be expected to increase in the future. However Portugal was not rich in natural energy resources, and the Government envisaged installing nuclear reactors to produce the electricity needed to promote the economic development of the country. Since the technology and the know-how for building such power plants would have to be provided from abroad, his Government welcomed the Director General's report on some of the most urgent problems connected with the introduction of nuclear power in less developed nations (GC(XXI)/INF/169, paras 8-32).

93. In Portugal, the reorganization of nuclear activities had been studied carefully, and a white paper was being prepared for submission to the Legislative Assembly together with the Government's proposals regarding the introduction of nuclear power. The Administration was currently reorganizing its structure so that it could better deal with the needs of the years to come. If those proposals became law, the identity and functions of the Portuguese Nuclear Energy Board would be transferred to the Department of Energy, to be created in the Ministry of Industry and Technology. That Department would also be concerned with fossil fuels, electricity production and alternative energy sources. The Nuclear Research Centre at Sacavém, near Lisbon, would be integrated in a National Laboratory, under the same Ministry, and would concentrate on research and development in industry and energy. Furthermore, a public enterprise, ENU, had been established to exploit uranium resources; it would take over the production of uranium concentrates from the Mining Department of the Nuclear Energy Board. Finally, measures had been taken to establish an adequate regulatory organization in Portugal.

94. Portugal was in favour of the strengthening of peace and co-operation, and consequently fully endorsed the objectives set forth in Article II of the Agency's Statute. Agency safeguards were already applied to the research reactor at Sacavém, and would be applied to the Portuguese nuclear power programme. However, the mechanisms associated with the proper application of safeguards should never stand in the way of legitimate wishes for continued economic development.

95. Since the last General Conference Portugal's ties with the Agency had been strengthened. Much technical assistance had begun to arrive in 1977, and the Agency's assistance in tackling problems connected with the introduction of nuclear power, by providing advisory services and special missions, was taking good shape.

96. The twentieth anniversary of the IAEA was a very important occasion; the role which the Agency would be called upon to play in the years until the end of the century would be even more important to the countries of the world. Questions such as the application of safeguards and the physical protection of the environment, as well as the increased provision of technical assistance to less developed countries, were vital to the establishment of a mutually beneficial system of international relations.

97. However, the Agency would not be able to fulfil its tasks without carefully reviewing its funding mechanisms, and the system of financing and implementing the technical assistance programme. The introduction of a long-term planning basis for that programme would attenuate the problems encountered in its implementation. In that connection the Portuguese authorities approved of the report and accounts of the Agency for 1976 and of the budget for 1978.

98. Mr. MEYER (Uruguay) said that in the course of the Agency's first 20 years Uruguay had been engaged in almost all the main fields of activity which the Agency was promoting and that period also marked the beginning of a new era for his country.

99. The Uruguayan National Atomic Energy Commission had recently been reorganized and a new Nuclear Medicine Centre had been set up, the scientific level of which was such that the World Health Organization had nominated it as a Reference Centre. He was honoured to offer the facilities of that Centre to the Agency and its Member States for scientific meetings and the training of specialists.

100. The application of nuclear techniques in agriculture in Uruguay was particularly important, as Uruguay could become an important exporter of foodstuffs. It had all the basic conditions for that but, as competition between countries in the world was becoming ever more intense, Uruguay would have to endeavour to increase, improve and reduce the price of its production; the scientific control of the soil, water, fertilizers, crops, cattle etc. would considerably increase the yield of those resources.

101. For that reason Uruguay had elaborated and was implementing an ambitious programme for the application of radioisotopes in agriculture, in which it placed great hopes. The present year would also see the establishment of a health physics service, the function of which would be to monitor personnel exposed to radiation. The services of the Nuclear Research Centre had been re-evaluated in the light of current requirements and now comprised the following: (1) a Central Radioisotope Service, (2) a Radiopharmaceutical Production Unit, (3) an Industrial Applications Laboratory, (4) an Activation Analysis Laboratory, (5) support for the programme on radioactive mineral resources, and (6) support for the food irradiation programmes. Without prejudice to the above, the principal task of the Centre in the future would be to train specialists in the different fields required for the implementation of Uruguay's nuclear power programme.

102. Uruguay did not at the present time possess any non-renewable energy resources and oil imports now absorbed approximately 30% of proceeds from the country's exports. To try and rectify that situation, his Government had adopted a policy aimed at fully exploiting the hydroelectric potential of the country. Work would start soon on the 300-MW Palmar Dam project and work would be completed shortly on the 1890-MW Salto Grande project being undertaken jointly with Argentina. Together those projects would provide Uruguay with an additional 1245 MW of capacity by 1982. At the same time, measures would be taken to rationalize the use of energy and make use of non-conventional sources, although it was realized that the latter could be no more than a palliative.

103. The demand for electricity was increasing at a cumulative rate of more than 7.5% a year in

Uruguay which meant that the only option in the nineties would be nuclear power. In the light of that, plans had been made to accelerate work on the prospection of new uranium resources, to train specialist technical personnel and to construct a number of research reactors; indeed the first of those, with a capacity of 10 kW, was due to go critical by the end of the year.

104. Being a Latin American country and, as such, one of the creators of the first denuclearized zone on the planet, Uruguay had always supported the Agency's safeguards system. However, it felt that the enormous effort being devoted to safeguards should be balanced by an increase in the programmes of technical assistance for the least developed countries.

105. Likewise he urged that the amount of technical assistance granted to developing countries should be calculated taking into account the relation, favourable to the Agency, between the amount contributed under the heading of safeguards by such countries and the minimal outlay required to apply safeguards to the embryonic nuclear programmes in developing countries.

106. More funds should be allocated to technical assistance, since that was the most important of the Agency's programmes for the developing countries. In view of its importance that programme should not be based essentially on voluntary contributions. He proposed that bi- or triennial programmes be introduced (at least on an experimental basis), as in some cases those would be more appropriate than the annual programmes. It was necessary for the Agency to maintain a proper balance between its technical assistance and safeguards activities. It was logical that the development of nuclear power should result in an expansion of safeguards but it was not right for one programme to be expanded at the expense of another.

107. Uruguay also supported the proposal that a study be carried out on the question of the equitable geographical distribution of Member States in the Board of Governors.

108. In conclusion Uruguay pledged its full assessed contribution to the General Fund for 1978 by way of demonstrating its continued confidence in the work of the Agency.

109. Mr. AROCHA CASTRESANA (Venezuela) said that the Venezuelan Government shared the views expressed by representatives of other countries concerning the important role of the Agency in the development of nuclear energy in both the industrialized countries and the developing countries. The activities of the Agency in connection with safeguards were evidence of the high trust placed in it by the international community.

110. It appeared, however, that the provision of technical assistance, which was one of the main objectives of the Agency, was being subordinated to other activities. That matter should be given

careful consideration and corrective action taken if necessary.

111. Although Venezuela had been a Member of the Agency from the very start, it had, for reasons which he would explain, up to the present not demonstrated its interest in nuclear energy. Venezuela was an oil-producing country of the Third World which exported a raw material without major processing. That export was the mainspring for most of the country's economic activity and generated 90% of its income. That was why, in the international context, Venezuela's economic policy was co-ordinated with the efforts of the developing countries. Given its strategic importance, oil could be a factor in the promotion of a new economic order which would result in a fairer distribution of the world's wealth and prosperity.

112. Venezuela's economic and energy policies were based on conservationist principles and were intended to prevent depletion of its oil resources by the end of the century. For that reason oil production had been reduced from over 3 million bbl per day to 2 million bbl per day. In that way a satisfactory ratio of 20 to 1 between reserves and production could be maintained. The conservationist policy was favourable to the development of industrialization and of a diversified domestic economy. Efforts were also being made to find other fuels so that oil and gas could be used more for activities like petro-chemistry or transport.

113. All those considerations had led Venezuela to consider alternative sources of energy and to engage in integral planning of all the country's energy resources. Priority had been given in that connection to the use of water power for the generation of electricity. Venezuela had a potential electric power supply of 20 000 MW available to industry and the economy. Of that amount 12 000 MW would be in use in 1985. Steps were also being taken to promote coal-fired generation of electricity to supply a new regional programme of iron and steel production.

114. However, even full utilization of coal and water resources would not suffice to meet the long-term electrification plans of the country and therefore it would become necessary around 1990 to turn to hydrocarbons or other sources of energy. For those reasons it had been considered necessary for the National Council for the Development of the Nuclear Industry (CONAN) to make an evaluation of the country's nuclear capabilities.

115. Obviously, the development of nuclear industry and technology for peaceful purposes, including the generation of electricity, would have to be undertaken gradually and without undue haste. First priority had been given to prospecting for uranium in order that the country's reserves could be estimated and in the realization that existing world reserves were insufficient to meet the requirements of additional installed capacity. In that way Venezuela was showing its determination not to have to become an energy importer.

116. The exploration carried out thus far had revealed the presence of promising anomalies, which were now being studied more intensively. Venezuela was interested in international co-operation which would help provide better training for its young geologists, geophysicists and geochemists, but it was concerned that such co-operation should not in any way compromise its uranium reserves.

117. In view of the great interdependence between technology and the development of the nuclear power industry, special attention was being paid to the training of professional personnel in matters of nuclear planning in order that decisions which had to be taken in nuclear matters should be made by qualified persons. The co-operation of the Agency was, of course, of fundamental importance in that connection and Venezuela hoped that it would be able to count on Agency assistance as in the past.

118. Venezuela attributed great importance to the task of ensuring that nuclear energy was used for peaceful purposes only. That position, which was the traditional Latin American one, had been reiterated by the President of the Republic in statements to the General Assembly of the United Nations and on the occasion of visits to various continents. Long before NPT, Venezuela and other Latin American countries had sponsored the Tlatelolco Treaty and it was an active supporter of the Organization for the Prohibition of Nuclear Weapons in Latin America (OPANAL), the organization of that regional treaty. It was concerned that OPANAL should be concerned solely with problems of nuclear weapons prohibition and not have to deal with other nuclear matters. As far as peaceful uses were concerned, it had given maximum support to the Inter-American Nuclear Energy Commission, which was part of the Organization of American States.

119. Although Venezuela, by reason of its own power resources, could afford to take a more conservative approach to reaching a decision on nuclear power, it realized that the situation was different in other countries where the nuclear alternative was an immediate necessity in order to fill the gap left by the depletion of fossil fuels.

120. Mr. SUKIJAMRUNG (Thailand) said that in the past twenty years the Agency had come a long way in promoting the peaceful uses of nuclear energy, as had been envisaged by President Eisenhower when he had declared his "Atoms for Peace" programme in 1953. Like other developing countries, Thailand appreciated the promotional role of the Agency, in particular the technical assistance it provided in the fields of medicine, agriculture and industry. That assistance should continue during the next decade as it still constituted the basic help that many developing countries urgently needed.

121. The past few years had seen the Agency emphasizing the promotion of nuclear energy, in particular, in manpower planning. Training courses, jointly organized by the Agency and

certain developed Western States, had taken place. In Thailand full advantage had been taken of that programme, since it was known that the technical ability of staff was crucial to the launching of a national nuclear power programme. However, a problem that occurred from time to time in both developing and developed countries was the unfavourable opinion of the public with regard to the building of nuclear power plants. Since the Agency was both a promotional and regulatory organization, it should and could do much to alleviate fears and misconceptions about nuclear energy. His delegation wished to see a more active role played by the relevant department of the Agency in that field. Books or pamphlets written in plain language refuting the more common criticisms of nuclear energy could be published in various languages. Other publications or other action aimed at preventing misunderstandings on the part of the public could also be planned as required.

122. With the expansion of nuclear energy the role of safeguards increased in importance and involved the Agency in considerable expenditure, obliging all Agency Members to take political considerations into account. That expansion gave rise to the most important issue of the time, that of how to develop nuclear power programmes without being excessively burdened by questions of proliferation. As a party to NPT, Thailand believed in nuclear non-proliferation, and still felt that non-proliferation could go hand in hand with the receipt of urgently needed nuclear technology. A regional fuel cycle centre, once free of technical and political difficulties, was perhaps the answer to that question which had not yet found a solution. He agreed with the Director General's comment in his opening statement to the Conference that a policy of denying the existence of nuclear technology could only be self-defeating in the end. That issue would remain for the next few years or perhaps the next decade unless those transferring and receiving nuclear technology could achieve mutual trust and understanding. The nuclear-weapon States could also improve the political climate by moving nearer towards nuclear disarmament, as was required of them by NPT.

123. As a member of the Regional Co-operative Agreement for Research, Development, and Training Related to Nuclear Science and Technology (the RCA Agreement)[5], Thailand was naturally pleased to see that agreement extended for another five years. He hoped that there would be more financial and technical support for many worthwhile regional projects. He particularly welcomed Australia's membership in the agreement and hoped that Japan, which was another developed country in the Asian region, would also join.

124. At the General Conference held in Rio de Janeiro in 1976 the head of his delegation had

urged that, as the Agency entered its twentieth year, understanding and foresight should prevail in certain quarters and that mutual tolerance and accommodation should be permanent features of future sessions. In that spirit, his delegation hoped that serious consideration would be given to the proposal of the South Asian, Middle Eastern, and African regions to amend Article VI.A.2 of the Statute. Thailand supported the proposal in principle, as it felt that it was only fair to correct the under-representation of those areas.

125. In conclusion, he reiterated his Government's firm support for the work of the Agency, especially its technical assistance programme. To that end Thailand had already pledged its assessed share of the Regular Budget and the voluntary fund for 1978. He congratulated Dr. Sigvard Eklund for his unanimous re-election as Director General of the Agency for another term. With his leadership and long experience another successful four years were assured.

126. Mr. KAPSAMBELIS (Greece) expressed his Government's appreciation to the Secretariat for the contribution it made to the activities of the Agency, especially in the fields of technical assistance, nuclear power, nuclear safety and safeguards. At the beginning of the third decade of the Agency's existence, it was most appropriate that the activities foreseen in the texts of Articles III, X and XI of the Statute should be further expanded and his Government noted with pleasure that the Agency had already begun to show interest in developing those activities.

127. In his opening statement to the General Conference, the Director General had referred to the need for irrevocable access, at a reasonable price, to nuclear fuel and fuel cycle services for nuclear power plants and to the suggestion that an international pool of nuclear fuel be established. He had also referred to the Agency's interest in the international fuel cycle evaluation which, his delegation understood, was to be organized shortly at a meeting in which the Agency would participate. His delegation also understood that one of the important items to be discussed at that meeting would deal with assurances for long-term supply of nuclear fuel for nuclear power plants.

128. His Government was pleased that the Agency would be participating in that meeting for the important reason that the Agency could convey the views and provide information about the interests of Member States not taking part in the studies that would be undertaken. In that connection, and following a proposal the Greek delegation made to the Director General at the twentieth session of the General Conference, his Government suggested that the Director General should urge the participants at that meeting to include the question of assurances for long-term supply of nuclear fuel for research reactors amongst the studies.

129. A number of Member States, including Greece, had encountered delays and complications in the supply of fuel for their research reactors.

[5] The text of the agreement is reproduced in document INFCIRC/167.

Such delays and uncertainties jeopardized the continued operation of the reactors and experiments being carried out with them. His Government suggested that the Director General should present to the proposed meeting estimates of the future needs of Member States for fuel for their research reactors for the next 5 or 10 years. He might also request that arrangements be considered for the assured supply of such fuel through the Agency under reasonable terms and conditions consistent with non-proliferation objectives. Such arrangements should be studied separately from

arrangements related to the assured supply of power reactor fuel.

130. His Government believed that the establishment of assured supply of nuclear fuel through the Agency would further contribute to the development of the peaceful uses of nuclear energy and that the Agency would thus have more efficient control of nuclear material, which was of great importance to world peace.

● The meeting rose at 5.40 p.m.

