



International Atomic Energy Agency

GENERAL CONFERENCE

GC(XXI)/OR.192

February 1978*

GENERAL Distr.

ENGLISH

TWENTY-FIRST REGULAR SESSION: 26—30 SEPTEMBER 1977

RECORD OF THE ONE HUNDRED AND NINETY-SECOND PLENARY MEETING

Held at the Neue Hofburg, Vienna, on Monday, 26 September 1977, at 11.5 a.m.

Temporary President: Mr. de CARVALHO (Brazil)
 President: Mr. ETEMAD (Iran)

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* A provisional version of this document was issued on 29 September 1977.

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THE RECORD

OPENING OF THE SESSION

1. The TEMPORARY PRESIDENT declared the twenty-first regular session of the General Conference open.

2. In accordance with Rule 48 of the Rules of Procedure he invited the delegates to observe one minute of silence dedicated to prayer or meditation.

● All present rose and stood in silence for one minute.

3. The TEMPORARY PRESIDENT welcomed those present and announced that the President of the Federal Republic of Austria had consented to honour with his presence the opening meeting of the twenty-first regular session of the General Conference, marking the twentieth anniversary of the founding of the Agency. The audience also included the President of the Austrian National Council, the Austrian Federal Minister for Foreign Affairs and various former Governors, delegates and Secretariat officials who had been associated with the Agency at its beginning. The Agency had had the good fortune to benefit from the joint efforts of exceptional personalities, which had enabled it to start its work on a sound foundation. The years of the Agency's twentieth anniversary had already been marked by important events such as the entry into service of the centrifuge enrichment plant at Capenhurst, which had resulted from co-operation among three west European countries, and the International Conference on Nuclear Power and its Fuel Cycle (the Salzburg Conference), which had established the Agency's dominant role in that area. He was convinced that the Agency would continue to play an ever-increasing part in the transfer of technology to developing countries, in conformity with the hopes of its founders.

ELECTION OF THE PRESIDENT

4. The TEMPORARY PRESIDENT invited nominations for the office of President of the Conference.

5. Mr. KAMIL (Indonesia) nominated the delegate of Iran, Mr. Etemad. Among his other qualifications the latter held a diploma in nuclear physics, and was Chairman of the Iranian Atomic Energy Commission and Assistant to the Prime Minister; he was thus particularly well qualified to exercise the functions of President of the Conference at its twenty-first regular session.

6. Mr. KHAN (Pakistan), Mr. HAUNSCHILD (Federal Republic of Germany), Mr. CISSE (Senegal) and Mr. BARABAS (Czechoslovakia) supported the nomination.

● 7. Mr. Etemad (Iran) was elected President of the General Conference for its twenty-first regular session by acclamation.

● Mr. Etemad (Iran) took the Chair.

8. The PRESIDENT thanked the delegates for the great honour they had accorded him by electing him to office. He regarded it as a tribute to his country, which was endeavouring to promote the peaceful utilization of atomic energy.

OPENING STATEMENTS

● The President of the Federal Republic of Austria took the Chair reserved for him.

● The Alban Berg Quartet played the first two movements of Schubert's string quartet in A minor.

9. Mr. KIRCHSCHLÄGER (President of the Federal Republic of Austria) said he desired to convey to the Agency the congratulations of the Republic of Austria and the Austrian people on the occasion of the Agency's twentieth anniversary. He was all the more happy to do so since he had taken part in the drafting of the Headquarters Agreement and had had the opportunity to follow the development of the Agency's activities. He was convinced that the Agency had properly performed the duties incumbent on it under its Statute and that it enjoyed exceptional international prestige. The fact that it had been entrusted with the application of safeguards in connection with the Treaty on the Non-Proliferation of Nuclear Weapons (NPT)[1] was witness to the confidence it had been able to inspire. Although he was aware of the difficulties the Agency had encountered during the last two decades, he would not refer to them since he believed that the host country of an international organization should show more reserve and discretion than the other Member States. Austria had offered a home to the Agency not so that it could exercise special influence within the organization but because it felt that its neutrality and its situation made it a suitable country for an international forum.

10. He thanked the Agency for being the first international organization to settle in Austria and for facilitating his country's duties as host. He also wished to express his gratitude to the Director General of the Agency, Mr. Sigvard Eklund, who, while representing the Agency's interests with firmness, was conscious of the possibilities and limitations of the host country. He hoped that when the Agency was installed in the Donaupark it would feel still more strongly that its roots were in Vienna. The new headquarters building was a reflection not of any desire for prestige but of the conviction that international organizations that had decided to settle in Vienna should be able to carry out their activities under the best possible conditions.

[1] Reproduced in document INFCIRC/140.

Finally, he expressed the hope that the Agency would remain faithful to its objectives, that it would be able to apply safeguards with maximum efficiency, and that it would succeed in achieving a better understanding of the utilization of atomic energy in the interests of the well-being, health and peace of the entire world. He trusted that the name of Vienna would continue to be happily associated with that of the Agency.

11. The PRESIDENT announced that several messages of congratulation had been received from Member States, and he wished first to read the message sent by His Imperial Majesty Shahanshah Aryamehr of Iran.

12. It was with deep pleasure that His Imperial Majesty was addressing a message to the International Atomic Energy Agency on the occasion of its twentieth anniversary. He wished to take the opportunity of offering his congratulations, and those of the Iranian Government and people, to the Members of the Agency, the Director General, the Secretariat and the entire United Nations family.

13. During the past twenty years the world had witnessed the birth and development of the Agency and the technical support which it had generously provided to the world community. That support had played an important part in the promotion of nuclear energy throughout the world and in the development of nuclear power in individual countries.

14. The mere fact of being a Member of the Agency was not the only reason for his country's participation in its activities. Iran firmly believed in the viability of nuclear energy and in its distinct place among the forms of energy available. The efforts made for the realization of a dynamic nuclear energy programme in Iran were based on that conviction.

15. As everyone was aware, nuclear technology constituted a double-edged sword. It was clearly one of the most creative technologies at the disposal of countries for use in alleviating the imbalance with which the world community was confronted. On the other hand, the misuse of nuclear technology represented a real source of danger to man in his quest for survival. His Imperial Majesty believed that those apparently contradictory attributes could be integrated in a constructive manner so as to facilitate the achievement of the quality of life to which all aspired.

16. The International Atomic Energy Agency was the paramount international institution in the domain of nuclear energy. It was invested with the twin and complementary goals of promotion and control. That was why the authors of the Agency's Statute had had the wisdom and courage to aim at integration rather than negation and fragmentation, and it was to be hoped that neither haste nor mistrust would lead to the abandonment of that approach. Iran believed that any attempt to replace those essential

functions of the Agency by unilateral, bilateral or multilateral arrangements would seriously endanger its strength and integrity. Iran was in favour of more active participation by the Agency in both the promotion and the control of nuclear energy and would do its utmost to help realize those goals.

17. His Imperial Majesty was aware that the use of nuclear energy posed formidable and continual challenges to all the world's institutions. However, it was necessary to exercise patience in order to arrive at common solutions within the universal context of the Agency.

18. His Imperial Majesty also wished to take the opportunity to express his appreciation to the Director General and the Secretariat of the Agency for all the assistance they had rendered to Iran in the realization of its nuclear energy programme.

19. Mr. FRI (United States of America) read the message from the President of the United States of America.

20. The President of the United States addressed his cordial greetings to the delegations to the twenty-first regular session of the General Conference of the International Atomic Energy Agency, a session which was of particular significance in that it marked the twentieth anniversary of the foundation of the Agency and was a reminder of the outstanding contributions the Agency had made during its relatively short life span.

21. The IAEA deserved congratulations for its fidelity to the purposes of its Statute, which were to foster the peaceful uses of nuclear energy and to do everything possible to ensure that those peaceful activities were not diverted to military ends. The Agency had amply demonstrated that the Members of the international community had far more to gain through scientific and technical co-operation than by pursuing their own independent nuclear objectives. The IAEA's research and development effort in the field of nuclear energy had been to the advantage of all its Members, both industrialized and developing.

22. The Agency's efforts to establish effective international safeguards were also most praiseworthy. It was in the interests of humanity as a whole to ensure that nuclear energy was not used for military purposes; the performance of the IAEA had helped to win the trust of the world community for the international safeguards system. The responsibility entrusted to it in connection with ensuring the implementation of the safeguards provisions of NPT represented a clear token of the trust and respect which the Agency had earned. However, the Agency's success should not engender undue optimism. An increasing number of countries were planning to expand their nuclear power programmes. That expansion inevitably meant an extension of the risks of misuse. The United States, along with other States Members of the Agency, was looking to the IAEA for leadership in ensuring that the further

expansion of peaceful nuclear applications would not lead to the proliferation of nuclear weapons. The United States, for its part, undertook to do everything within its power to assist the IAEA in that endeavour.

23. The aim should be to perfect the Agency's international safeguards programme so that the many benefits of the peaceful atom could be shared by all.

24. Mr. SITZLACK (German Democratic Republic) read a message from Mr. Erich Honecker, General Secretary of the Central Committee of the Socialist Unity Party of Germany and Chairman of the Council of State of the German Democratic Republic.

25. In his message, Mr. Honecker conveyed to the President, to the delegates to the twenty-first regular session of the General Conference of the IAEA and to the staff of the Agency Secretariat the warmest congratulations of the Council of State, Government and people of the German Democratic Republic on the occasion of the twentieth anniversary of the founding of the Agency. He also sent best wishes for fruitful discussions at the Conference session.

26. The Agency had always worked in the interests of peace, understanding among nations and the use of nuclear energy for the benefit of peoples.

27. In the age of nuclear energy any military confrontation was fraught with great risk for the countries of the world. It was therefore vital to consolidate and promote the policy of detente and to make it irreversible. The arms race, particularly in the nuclear field, had to be halted and the proliferation of nuclear weapons prevented.

28. The Agency's activities under NPT deserved appreciation and support by all States. The German Democratic Republic considered those activities a valuable contribution to world peace and security.

29. The peaceful uses of nuclear energy were playing a growing part in the rapid development of the economy, science and technology, thus contributing to the prosperity of peoples. In the field of international co-operation, the International Atomic Energy Agency had major achievements to its credit.

30. The German Democratic Republic was convinced that the Agency would continue to do everything it could to ensure that such co-operation served only the peaceful uses of nuclear energy and prevented the proliferation of nuclear weapons.

31. Mr. MIHULECEA (Romania) read a message from the President of the Socialist Republic of Romania.

32. Mr. Ceausescu said in his message that it was a pleasure for him to address the participants

in the General Conference of the IAEA, to whom he sent his warmest greetings.

33. International life was witness to a profound social and national revolutionary change and an increasing affirmation of the will of nations to put an end to the policy of inequality and oppression and the desire for free and independent development in a world of enhanced co-operation, in which all countries had full access to the achievements of modern civilization. At a time of modern scientific and technical revolution, when science was becoming an important production force engendering an increase in the material resources of society, the exploitation of scientific and technological gains for the purpose of economic and social development of all countries was urgently needed if it was hoped to overcome lags in development and create a better world.

34. It was particularly necessary to ensure access for all countries to the use of nuclear energy for peaceful purposes, more especially as a source of energy. At the same time, one could not remain oblivious of the fact that considerable scientific resources and advances in the field of nuclear energy were used for the production of means of mass destruction, a fact which presented a grave danger to the peace and existence of mankind. That was the reason why Romania was in favour of ending, most of all, the nuclear arms race and why it supported the idea of placing man's achievements at the service of progress and civilization. It was essential to end nuclear weapon production, to do away with the monopoly of certain States in the generation and use of nuclear energy, and to promote the access of countries to the peaceful uses of nuclear energy in order to speed up progress throughout the world, more especially in the developing countries, and to improve the level of prosperity and civilization for the whole of mankind.

35. Romania attached the greatest importance to modern science and technology, including nuclear physics and nuclear energy, as a means of ensuring a rapid advance towards economic and social prosperity. Similarly, within the framework of its general policy of developing ties with all countries of the world, irrespective of their social system, Romania was taking an active part in the international exchange of material and spiritual wealth. Accordingly, it was contributing to the creation of a climate of wide-scale co-operation in all spheres of activity, including scientific research.

36. Romania had decided to continue making a full contribution to the Agency's development and to a steady strengthening of its role as a promoter of co-operation among States - following the principle of full equality and respect for national independence and sovereignty - in the field of the peaceful uses of nuclear energy.

37. Mr. Ceausescu was convinced that the Conference would open up new vistas for the development of the uses of nuclear energy and

for international co-operation in that important field for the benefit of all countries, for progress and for peace throughout the world.

38. Mr. WINSPEARE GUICCIARDI (Director-General of the United Nations Office at Geneva) read a statement by Mr. Kurt Waldheim, Secretary-General of the United Nations, on the occasion of the session of the General Conference marking the twentieth anniversary of the Agency.

39. Mr. Waldheim said in his message that, on the occasion of the Agency's twentieth anniversary, it was a great pleasure for him to extend his greetings and good wishes to all participants in the General Conference.

40. From the outset atomic energy had been a major concern of the United Nations. It had been the subject of the first resolution adopted by the General Assembly and since then the United Nations had been endeavouring to deal constructively with the dual nature of atomic energy. The aim of the United Nations had been to see that the enormous power of the atom was put to peaceful uses and used to foster economic progress, while at the same time safeguarding against proliferation of nuclear weapons.

41. It was fitting, in connection with the anniversary being celebrated, to emphasize the impressive achievements of the Agency and the invaluable contribution it had thus made to the two fundamental objectives of the United Nations - peace and economic development.

42. In recent years reliance on nuclear energy had rapidly increased to meet the world's growing energy needs. Concomitantly, international co-operation in the peaceful uses of nuclear energy had grown both in its scope and in the number of States involved.

43. It was clear that once it had been harnessed and applied under adequate safeguards, nuclear technology could contribute significantly to economic development and human welfare throughout the world; it was in that regard that the Agency played a prominent role by promoting, in a variety of ways, the peaceful use of nuclear energy.

44. In his annual report to the thirty-second session of the General Assembly, the Secretary-General had stressed that the danger of the spread of nuclear weapons was growing from year to year as nuclear technology became more widely known, and had indicated that continuous study and assessment of nuclear weapon problems, including non-proliferation, were clearly required if the international community was to be able to move forward. The Agency was one of the most important international instruments available for limiting some of the risks to which mankind was exposed. He shared with the Director General of the Agency the belief that one of the most notable achievements of the Agency was the confidence placed in it by the world community, which had invested it with the safeguards functions under NPT.

45. He also firmly believed that the application of Agency safeguards, outside as well as within the framework of NPT, was of paramount importance in the success of efforts to prevent the diversion of nuclear technology. He welcomed the Agency's continued efforts to strengthen its safeguards system and found it gratifying that, as noted in the Agency's annual report for 1976[2], major progress had been attained in that field during the past year. All that was, of course, consistent with the Agency's responsibility to promote the dissemination of nuclear technology, particularly for the benefit of developing countries. In that connection he wished to refer to the value of the Agency's technical assistance and training activities in developing countries, together with the desirability of expanding and intensifying activities in that area.

46. He also wished to mention the Salzburg Conference, which the Agency had organized in May 1977. That meeting, which had been aimed at promoting international discussion and clarification of the highly complex and sometimes controversial aspects surrounding the peaceful applications of nuclear energy, had been timely and useful. He felt that it was an indication of the Agency's concern, which was shared by the United Nations, with regard to the nature and scope of the problems that would confront mankind as a result of increasing reliance on nuclear power to meet growing energy demands.

47. In conclusion, the Secretary-General expressed his confidence that the Agency would continue to play an invaluable role in promoting those goals in the future and wished the Conference all success in its deliberations.

48. The DIRECTOR GENERAL thanked President Kirchschräger for his kindness in attending the opening meeting of the General Conference marking the Agency's twentieth anniversary, thereby demonstrating for the second time that year - the first had been at the Salzburg Conference in May - the interest that he took in the Agency's activities. He (Mr. Eklund) wished to convey through him to the Austrian Government and people, and to the City of Vienna, his appreciation for the twenty years of generous hospitality that the Agency had enjoyed in the Austrian capital and in the country as a whole.

49. The founders of the Agency had shown wisdom and far-sightedness not only in drafting the provisions of the Agency Statute, but also in selecting Vienna as the Permanent Headquarters, a choice which had encouraged other United Nations bodies, such as the United Nations Industrial Development Organization, to settle there, and it was hoped that their example would be followed by many others.

50. He wished to extend a welcome to a number of guests of honour, each of whom had played an important part in the history of the Agency; they

[2] GC(XXI)/580.

included Mr. G.P. Arkadiev, Mr. H.G. de Carvalho, Mr. Sterling Cole, Mr. V.S. Emelyanov, Mr. Bertrand Goldschmidt, Mr. Bernhard Gross, Mr. Karl Gruber, Father Hesburgh, Mr. Heinrich Haymerle, Mr. I.I. Rabi and Mr. Henry D. Smyth. He also extended a special welcome to the members of the Scientific Advisory Committee (SAC). He regretted that Mr. P.R. Jolles and Mr. P. Winkler, who had also been invited to attend, were unable to do so.

51. He also requested Mr. Winspeare Guicciardi to convey the Agency's thanks to the Secretary-General for his kind message.

52. It was President Eisenhower who had put forward the idea of establishing an international atomic energy agency in his address to the General Assembly on 8 December 1953; until that time nuclear energy had primarily been known for its power to destroy.

53. In October 1956, a conference of 81 nations had put the final touches to the Agency's Statute, the text of which was then opened for signature. A short time before that, in August 1955, the First Geneva Conference on the Peaceful Uses of Atomic Energy had led to the disclosure of certain scientific and technical secrets (including the technology of reprocessing but not that of enrichment).

54. The Agency's Statute had come into force in July 1957, and the first General Conference had been held in Vienna in October of that year under the presidency of the then Foreign Minister of Austria, Mr. Karl Gruber. At that Conference it had been decided to locate the Permanent Headquarters of the Agency in Vienna. The first Director General, Mr. Sterling Cole, had signed the Headquarters Agreement in December 1957.

55. Recalling the provisions of Article II of the Statute relating to the Agency's objectives, he observed that the Agency was to "accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world", and that "it shall ensure, so far as it is able, that assistance provided by it or at its request or under its supervision or control is not used in such a way as to further any military purpose". The first objective gave the Agency the advantage of dealing with scientific and technical problems on which understandings could be reached more easily than on political matters, while the second objective brought the Agency into the political field and conferred on it a political importance which even the greatest optimist could not have foreseen in 1957.

56. Ten years after the first General Conference the Board had accepted the generous offer of the Austrian Government to provide a site and premises for the Agency's Permanent Headquarters, which, according to the latest information available, would be ready for occupation in the summer of 1979.

57. Quoting a few figures, he pointed out that the Agency's membership had grown from 54 on 1 October 1957 to 110 at present. A similar growth had also been reflected in the Agency's Board of Governors, whose strength had increased from 23 in 1957 to 34 now. On the other hand, the number of annual meetings held by the Board, which was 70 in 1958, had declined in recent years to not more than eight to ten. The Board had changed from a forum for political debates to an effective decision-making body. The Agency's staff had increased from 400 in 1958 to 1400 now, and the principle of geographical distribution was being applied on the widest possible scale: whereas 28 nationalities had been represented in 1958, there were 61 in the current year. The Regular Budget, which had amounted to about \$4 million in 1958, had been set at \$51 million for 1978.

58. With the resources at its disposal the Agency had carried out activities in various fields by establishing research centres, holding conferences, encouraging applications of isotopes and radiation, and promoting nuclear power generation.

59. In the field of research, it had established in 1961 the Seibersdorf Laboratory and the International Laboratory of Marine Radioactivity at Monaco, and in 1964 the International Centre for Theoretical Physics at Trieste, which it had been operating jointly with the United Nations Educational, Scientific and Cultural Organization (UNESCO) since 1970. It had contributed to the maintenance of the Middle Eastern Regional Radioisotope Centre for the Arab Countries from 1963 to 1968 and was co-operating with the Food and Agriculture Organization of the United Nations (FAO) through the Joint FAO/IAEA Division of Atomic Energy in Food and Agriculture.

60. The Agency had also held conferences which had promoted a considerable exchange of information between east and west as well as north and south. For example, it had participated in the Second Geneva Conference on the Peaceful Uses of Atomic Energy in 1958 and had been responsible for the scientific programmes for those held in 1964 and 1971. In 1977 it had organized the Salzburg Conference.

61. Another of the Agency's achievements had been the establishment in 1969 of the International Nuclear Information System (INIS), which provided world-wide coverage of literature dealing with the peaceful uses of nuclear energy. It was the first international, fully-decentralized, computer-based information system and had been adopted as a model by FAO and UNESCO.

62. In the early years of its existence the Agency had been engaged mainly in promoting the use of radioisotope techniques and radiation in medicine, agriculture, industry and hydrology. Many of those techniques had now become routine in the majority of the industrialized and the developing countries and, in the case of the latter,

still represented the major application of nuclear energy. The Agency devoted about a quarter of its budget to those activities, which were under the direction of the Department of Research and Isotopes.

63. While in 1957 the commercial generation of nuclear power had not begun, more than 200 nuclear power reactors would be in operation by the end of 1977. In about 20 years nuclear power had reached a stage where it accounted for about 10% of the total electricity generated in the industrialized countries.

64. When the developing countries had begun to introduce nuclear power, the Agency had launched programmes designed to help them to build up the appropriate infrastructure and to train the required manpower. The training programme prepared for that purpose had taken the form of a series of courses, the first of which had been held in 1975, as well as on-the-job training.

65. The Agency had also carried out three major special studies. The first, in 1963, had dealt with the use of nuclear power for desalting sea water. The second, which had begun in 1971, was a market survey of nuclear power in selected developing countries. The third study, which related to multinational fuel cycle centres, had brought out the significant advantages which a multinational approach would offer by deterring proliferation, facilitating radioactive waste management and reducing production costs through grouping together the users of different products.

66. Of the Agency's further activities, mention should be made in the first instance of technical assistance and safeguards. In view of the increasing importance of technical assistance, the Agency had set up a Department of Technical Assistance in 1964. The Member States, on their part, had raised the target of voluntary contributions from \$1.5 million in 1959 to \$6 million in 1977. While safeguards had been dealt with by a single Division in 1958, there was now a Department consisting of four Divisions, a section for standardization and administrative support, and a safeguards evaluation section. The activity in that field had been given a new dimension when in 1968 the General Assembly of the United Nations had approved NPT. The importance of that Treaty should not be belittled - it had been ratified by 102 States, which included almost all the industrialized non-nuclear-weapon States. Even in the non-nuclear-weapon States not yet party to NPT, nearly all significant nuclear facilities were currently under Agency safeguards. There were five exceptions, namely Egypt, India, Israel, South Africa and Spain, and that number might grow if the NPT regime was not made universal. Although the nuclear-weapon countries were still discussing their obligation regarding the cessation of the nuclear arms race, the Treaty represented a milestone in the efforts to prevent nuclear proliferation.

67. The results obtained by the Agency were no doubt less than what it would have liked to achieve.

However, every international organization was composed of a large number of Member States having widely different interests which could seldom be reconciled. He wished to thank SAC and other advisory bodies for their help in establishing the Agency's programmes, and to pay a tribute to the spirit of co-operation which had been much in evidence between the Secretariat, the Board and the Member States.

68. The tasks to which he attached the greatest importance in the immediate future were activities relating to nuclear power, technical assistance to the developing Members of the Agency and the Agency's safeguards functions.

69. It was evident that present oil and gas reserves were not unlimited and might be exhausted before the end of the century. Despite some views to the contrary, it was also evident that the only new energy source available for immediate use was nuclear energy. Every 1000 MW(e) of nuclear capacity introduced saved about 1.5 million tons of oil per year. The potential of renewable energy sources for producing electricity - the most convenient energy form - was only marginal. The use of solar energy for heating could be expanded considerably in many areas of the world but it would remain limited until the storage problem had been solved.

70. On the basis of numerous studies it could be concluded that it would be unwise to eliminate any option at the present time; yet that perfectly rational conclusion was being questioned in a number of industrial countries by persons who appeared to command more public attention than their popular support would justify. Even those who believed in the role of nuclear power had to acknowledge that public acceptance problems were a source of concern. He was conscious that he was entering into a highly complex field with social, economic, ethical and political ramifications. All the same, unless the present trend of making a legal playground of highly complex technical questions were reversed, the development of nuclear power in the industrial western world would be seriously hampered. The same bleak prospect would lie ahead of many developing countries, dependent as they were on the nuclear manufacturing industry.

71. Perhaps the whole situation reflected a loss of confidence by some people in advanced technology in general, of which nuclear energy was for them a symbol. He expressed the hope that the stark realities with which the world would be confronted in the next decade or two, when the demand for oil could no longer be met and when it became apparent that the so-called renewable sources of energy were a long way off, would restore the will to act before it was too late.

72. It was significant that doubts about nuclear energy were generally limited to an affluent section of the public in the richer countries. With one or two exceptions those doubts were not shared by Governments, regional organizations,

trade unions or the developing or socialist countries. Perhaps developing countries and workers' organizations had a deeper appreciation of the true implications of "zero growth". In any event, the Salzburg Conference had revealed that the majority of the participating Governments were firmly committed to making full use of the present generation of power reactors and were convinced that nuclear energy was a necessary and irreplaceable source of energy for mankind both in the short and the long term.

73. In view of the importance of the public acceptance issue and the Agency's extensive experience in that field, the IAEA would have to become more active in providing objective, factual information to its Member States. In that way it would help to supply the background against which persons who were seriously interested in the matter could form a balanced opinion about the pros and cons of nuclear energy compared with other energy sources.

74. With an eye to the long-term future of nuclear power, the Agency would continue to contribute to the development of fast-breeder reactors through an international working group. In response to the continuing interest in high-temperature reactors as a means of improving fuel utilization on the basis of the thorium cycle and supplying non-electrical energy in the form of high-temperature nuclear process heat, the Agency's activity in those areas would be further expanded.

75. Recalling that at the first Geneva Conference in 1955 it had been predicted that controlled nuclear fusion would be achieved within twenty years, he stressed how risky it was to try and forecast the development of new energy sources, whether nuclear or otherwise. It now seemed unlikely that fusion would be a practical possibility before the end of the century. Nevertheless, the potential of fusion was enormous and fusion research workers had let it be known that their work had reached a critical juncture.

76. The Agency's technical assistance programme relied on voluntary contributions, amplified by the United Nations Development Programme (UNDP) country programmes. It was clear that the scope of the assistance supplied by the Agency to the developing countries had to be expanded and that the implementation of the programme had to be improved. The scope of assistance should be, and was, broader than "technical assistance" in the usual meaning of the term. A group of high-level consultants which had met recently had provided the Agency with valuable advice on the administration of the technical assistance programme and, in particular, on ways of eliminating delays and making full use of gifts in kind and gifts in the form of non-convertible currencies.

77. It emerged clearly from the report of the consultants that both the size and scope of the technical assistance programme should be directly related to the needs of the Member

States. Consequently, the Agency should adapt its programme constantly to the changing situation in developing countries. Compared with the thousand million dollars it cost nowadays to build a standard 1000-MW power reactor, the cost of providing a few experts or fellowships was almost negligible. In such cases the Agency should concentrate on ensuring that the developing country concerned had access to the best and most suitable technology for its programme, that all safety requirements were met, that the country was able to obtain nuclear fuel and fuel-cycle services at a reasonable price, and that its views and interests were taken into account in future international policy decisions affecting the nuclear energy field. In that connection he recalled the suggestion made at the previous General Conference that an international pool of nuclear fuel be established.

78. The Agency bore witness by its existence to the fact that the world was aware of the need to develop nuclear energy and concerned about the spread of nuclear weapons. In the past few years in particular, concern about proliferation had influenced the thinking of an increasing number of States, as the Salzburg Conference had shown.

79. It had become apparent in recent years that safeguards remained the central element of any combination of measures taken against nuclear proliferation and that their existence was a primary condition for international commerce and co-operation in the nuclear field. It was heartening to note that 99 non-nuclear-weapon States had now acceded to NPT. In that connection he again appealed to the remaining States to accede to NPT also or, failing that, to enter into an agreement for the application of complete fuel-cycle safeguards.

80. International interest in the potential effectiveness of safeguards continued to increase. The first Special Safeguards Implementation Report (SSIR) had been received with interest by the Board. Such reports would in future be prepared on an annual basis and thus provide a background for the continuous review of progress in that area. The recent organizational changes in the Department of Safeguards would assist considerably in making such a review.

81. The first report showed the need for an effective and strong system of accounting and control of fissile material. He appealed for the active co-operation of Member States in establishing effective national systems and reaffirmed the Agency's readiness to assist them in any possible way.

82. Intensive development work was essential if safeguards were to be made more credible and more cost effective. Considerable progress had been accomplished recently in the development of surveillance instruments which would help to achieve both those ends; more needed to be done to improve safeguards in continuously-fuelled power reactors and certain types of fuel fabri-

cation plants. It went without saying that the support of Member States was essential if those development programmes were to be successful.

83. At the same time it had to be admitted that the non-proliferation measures practised to date had their limitations. In addition to the need for better control and physical protection of all nuclear material, it had to be recognized that the handling of large quantities of plutonium, as for example in a reprocessing plant, required a particular type of materials management. Even the strictest international safeguards verification did not prevent the accumulation of weapons-grade nuclear material within the peaceful fuel cycle, and hence there was a tendency to try to prevent proliferation by limiting the expansion of the peaceful nuclear cycle. It also seemed that such measures might impede development or encourage the establishment of independent national fuel cycles instead of furthering international co-operation in that field.

84. He recalled that reprocessing had been declassified by the time of the first Geneva Conference in 1955. In the light of experience and, in particular, of the Agency's study of regional nuclear fuel cycle centres, it was generally accepted that the number of such plants should be limited to a minimum. To prohibit them, however, would probably lead to a result opposite to that intended. Isotope separation processes had always been classified by the nuclear-weapon States, which appeared to have stimulated research on new separation methods in several countries, a fact which had become clear at the Salzburg Conference. That was a prime example of how a policy of denial could stimulate research and development in a sensitive area.

85. It should not be forgotten that in the long run there was no way of stopping the spread of nuclear technology among nations and, taking into account the proliferation problems which resulted, the aim should not be to block nuclear development but to find the best way of using it and the best means of applying effective safeguards. The Agency, which desired to promote both nuclear power and safeguards, was interested in the plans now being drawn up for the International Nuclear Fuel Cycle Evaluation Programme to be undertaken by a group of States.

86. The Salzburg Conference had indicated the potential usefulness of certain measures aimed at reducing the risk of proliferation and which would be complementary to the safeguards regime. At the Conference of the Parties to NPT in 1975 it had been proposed that the export requirements recommended by the Conference should be complemented by import requirements. Other proposals that had been put forward in recent years included the setting up of multinational fuel cycle centres and the storage of fissile material under the Agency's control. Some of those measures would require new forms of international co-operation and such co-operation would be essential if trade in the nuclear field and the transfer of nuclear technology were to develop to their full potential. The Agency was prepared to serve as a forum for discussion and as a mechanism for the implementation of those new concepts aimed at non-proliferation.

87. Recalling that the role of the Agency, like that of every organization in the United Nations family, was to contribute to peace, he was pleased to record that the promotion of nuclear energy by the Agency had always taken place in an excellent atmosphere of co-operation, and that, in its turn, had enabled the international community to charge the Agency with important tasks under NPT. In the space of twenty years the industrial use of nuclear power had grown from infancy to maturity and would play an increasingly important role in an energy-hungry world. If Member States continued to support the Agency, it would certainly be able to accomplish its most important task in the political area, namely to discharge its obligations under NPT and thereby help to ensure that the Treaty came up to expectations in curbing the nuclear arms race. In conclusion, he expressed the hope that the co-operative spirit which had prevailed in the Agency and which had often been referred to as the "spirit of Vienna" would also pervade the conferences held to study general disarmament.

- The Alban Berg Quartet played the last two movements of Schubert's string quartet in A minor.
- The Federal President left the hall.
- The meeting rose at 1.25 p.m.

