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President: Mr. CHUNG (Republic of Korea)

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The composition of delegations attending the session is given in document GC(XXXIII)/INF/274/Rev.2.

GENERAL DEBATE AND ANNUAL REPORT FOR 1988 (resumed)

1. Lord Marshall of GORING (World Association of Nuclear Operators) recalled that in October 1987, senior representatives from most of the world's nuclear utilities had met to discuss the need for increased co-operation among nuclear utilities world-wide. The decision had been taken to strengthen the existing links and co-operation among nuclear operators by setting up a world-wide association, whose mission would be "to maximize the safety and reliability of the operation of nuclear power stations by exchanging information and encouraging comparison, communication and emulation amongst its members".
2. From 15 to 17 May 1989, senior representatives of every nuclear operating company in the world had met in Moscow to participate in the inaugural meeting of the World Association of Nuclear Operators (WANO). Every operating company, without exception, had elected to join WANO and had signed its charter. A great deal of hard work and commitment by many utilities, together with the encouragement of the Agency and many national governments, had been crucial to the successful establishment of WANO and the Soviet Ministry of Atomic Power, as host of the inaugural meeting, had played a particularly important role.
3. International co-operation in the nuclear industry was not something new. The early emphasis had been on the exchange of technology and research information which had helped to achieve progressive improvements in reactor designs. The free exchange of information on safety matters had also always played an important role in the nuclear industry. The Agency had stimulated discussion between governments on all kinds of nuclear activities and had the central role to play in connection with non-proliferation. More specifically, the International Nuclear Safety Advisory Group (INSAG) had made good progress in developing the concept of safety culture, in reviewing and strengthening the Operational Safety Review Team (OSART) programme and in improving the usefulness of the Agency's Incident Reporting System.
4. However, all those activities were not enough. The benefits of nuclear power were dependent upon the highest possible level of nuclear safety; and nuclear safety ultimately depended upon the nuclear utilities that operated the plant. Regulators, designers, manufacturers and individuals all had an

important safety role to play, but the ultimate and fundamental responsibility for safety lay with the nuclear utility. Therefore, all nuclear utilities had a collective responsibility to work together and to help one another improve the safety and reliability of the plants that they operated.

5. WANO operated through four regional centres based in Atlanta, Moscow, Paris and Tokyo together with a small co-ordinating centre in London. Each of those centres was working together to achieve an ambitious programme of technical exchange visits between East and West within two years. An electronic communication system was working and was available for use by all but a few members. WANO's sole concern was the safe management and operation of nuclear power plants throughout the world; it would not duplicate the work of the Agency, but intended to work closely with the Agency to achieve shared objectives.

6. In conclusion, WANO was well aware that, in future, it would be judged by its achievements rather than by promises and it welcomed that challenge. OSART visits were an important measure of WANO's work and WANO was convinced that the OSART teams would have increasing difficulty in finding any defects in the management and operations of nuclear power plants in future. WANO would welcome the opportunity to report to a future General Conference on its achievements.

7. Mr. ZILLER (Federal Republic of Germany) drew attention to the increase in world energy demand which was to be expected in view of the rapidly growing energy needs of a number of countries, particularly developing countries. Since fossil fuel reserves were finite and it was premature to hope that large quantities of renewable energies would be available in the near future, it was important to develop further and make responsible use of all energy sources.

8. A withdrawal from nuclear energy would not only jeopardize the respective country's economy and stability but would also contribute to the irreversible damage of the biosphere, since nuclear energy would, for the most part, have to be substituted by the burning of fossil fuel. The increasing importance of nuclear energy as a means of limiting the carbon dioxide level in the atmosphere and, therefore, the greenhouse effect, had already been

stressed. It was essential to limit the use of fossil fuel as far as possible so as to prevent irreversible damage to the environment and a change in climate with all its potentially catastrophic effects on world food production and the inundation of low-lying regions.

9. For its part, his country intended to spend DM 270 million in 1989 on renewable energy research and development, including energy conservation, and was already demonstrating the utilization of solar energy. Solar and other renewable energies would eventually contribute to meeting the energy needs of developing, as well as of industrialized, countries. However, there was still a long way to go.

10. As regards nuclear fusion, his country appreciated the work done under the International Thermonuclear Experimental Reactor (ITER) programme. It was particularly satisfied that the Max Planck Institute for Plasma Physics provided excellent working facilities for the ITER team and hoped that their work would lead to a joint fusion reactor project.

11. Effective non-proliferation of nuclear weapons depended on the co-operation of all States. It was regrettable that no complete consensus had been reached within the Agency's Committee on Assurances of Supply (CAS) on the principles governing international nuclear co-operation and trade. If supplies were indeed required exclusively for peaceful purposes, there was no reason to denounce non-proliferation requirements as unduly onerous. If importing States were not willing to provide sufficient assurances that the nuclear material and technology supplied would be used only in peaceful activities, international nuclear co-operation and trade would come to a standstill.

12. His Government, for its part, would have to refrain from bilateral co-operation and to cut existing co-operation if doubts remained whether transferred nuclear material or technology was used for peaceful purposes only. That could also damage the Agency's technical assistance programme to which the Federal Republic of Germany contributed very substantially. His country remained firmly committed to the peaceful use of nuclear energy and the non-proliferation of nuclear weapons and in that context renewed its appeal to all States to accede to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). His Government had fully implemented the respective

multilateral undertakings and had also introduced new legislation which would further strengthen its export controls.

13. His country supported the safeguards activities which the Agency carried out in many countries all over the world and was pleased to note that, for 1988, the Agency had again reached the conclusion that nuclear material under Agency safeguards had remained in peaceful nuclear activities or had been otherwise accounted for. The new formula for the financing of safeguards constituted a valuable step in the right direction and took account of the responsibility shared by all Member States for effective safeguards. He was confident that the Agency would find ways of further improving and rationalizing its safeguards concepts, thereby avoiding an increase in cost which might jeopardize a balanced Agency programme and the need for zero real growth of the budget.

14. The risk of another nuclear accident still dominated public discussion on nuclear issues in many countries. Within the framework of the Agency, much had been done to reduce damage in the event of such an accident, in particular through the two Conventions on Early Notification of a Nuclear Accident and on Emergency Assistance in the Case of a Nuclear Accident or Radiological Emergency. He was happy to announce that the instruments of ratification of both Conventions by the Federal Republic of Germany had been deposited with the Agency. The Joint Protocol harmonizing the Vienna and Paris Conventions on Civil Liability, adopted during the previous year's General Conference, and the establishment of the Working Group on Liability for Nuclear Damage were further welcome developments. The General Conference, at its special session in September 1986, had emphasized that the highest level of nuclear safety would continue to be essential and, although each country engaged in nuclear energy activities was itself responsible for ensuring nuclear safety, international co-operation, at both the bilateral and multilateral level, was of paramount importance.

15. His country had been very satisfied with the Symposium on Regulatory Practices and Safety Standards for Nuclear Power Plants which had been held in Munich in November 1988 and sponsored by the Agency, the Nuclear Energy Agency of the Organisation for Economic Co-operation and Development (OECD/NEA) and the Federal Republic of Germany. In connection with the follow-up actions

proposed at that symposium, his Government believed that all Member States should respond to the revised codes of the Nuclear Safety Standards (NUSS), the fundamental safety criteria established by INSAG, and the voluntary OSART missions. A further step forward in efforts to achieve an even higher level of nuclear safety would be made if all Member States confirmed that their national licensing regulations conformed to the revised NUSS codes. His Government, for its part, had made such a declaration to the Agency.

16. At national level, his Government continued to support research work in the area of nuclear safety. The probabilistic risk study on nuclear reactors prepared by the Gesellschaft für Reaktorsicherheit (GRS) on behalf of the Federal Ministry for Research and Technology represented one major result of his country's safety research programme. All other countries were invited to share in the experience acquired by his country through that study.

17. In conclusion, his country appreciated the constructive role played by the Agency in encouraging and facilitating peaceful international nuclear co-operation. As a mark of that appreciation his Government was donating a bronze sculpture of Otto Hahn to the Agency, in commemoration of the fiftieth anniversary of the discovery of nuclear fission by Otto Hahn together with Lise Meitner and Fritz Strassmann.

18. Mr. TALIANI (Italy) wished first of all to make some general comments on the evolution of Italian energy policies, especially in the nuclear field.

19. Along with the readjustment of Italy's energy production and supply forecasts, a new approach had been developed and translated into a general framework of economic choices in line with the National Energy Plan adopted by the Italian Government in August 1988 and currently undergoing parliamentary scrutiny.

20. The basic objectives of the Plan were the following: energy saving, environmental protection, the development of national resources, the geographical diversification of supply sources and the improved competitiveness of the productive systems. A thorough examination of the instruments in force was needed in order to render those objectives mutually compatible and attainable.

21. In the nuclear field, the five-year moratorium foreseen in the Plan on programmes for the construction of new fission plants offered a good opportunity to explore and develop new solutions based on the use of reactors with a high degree of intrinsic and passive safety.

22. While the new Plan did not envisage that Italy would relinquish the development of fission energy technologies, it did, however, recognize the need to reorient research, within an appropriate context of international co-operation, with a view to designing and constructing innovative reactors.

23. An ad hoc committee comprising the National Committee for Research and Development on Nuclear Energy and Alternative Energy Sources (ENEA), the Italian electricity utility (ENEL) and the industrial companies active in that sector had recently been set up with the specific objective of formulating a strategy to be defined in the course of the year. In that connection, he wished to express his delegation's appreciation for the Agency's organization in parallel with the Conference of the scientific meeting "The New Generation of Nuclear Power", to which Italy would provide a specific contribution.

24. At the same time, Italy would continue to promote the use of other applications of nuclear energy in sectors such as agriculture, medicine, industry, etc.

25. In the field of radiation protection, Italy had participated with interest in the expansion of international activities in all the relevant fora after 1986, commencing with the Agency. Italy considered that, in international terms, radiation protection was an indisputable priority. It therefore continued strongly to encourage activities in that sector, both with regard to non-energy applications and the control of levels of radioactivity in the environment.

26. In following the guidelines of the new Energy Plan with particular respect to nuclear fusion, Italy had increased both the financial commitment and the human resources allocated to that sector. As of 1989 ENEA, the agency responsible for co-ordinating fusion research nationally, had substantially increased its contribution; in 1990 activities related to fusion would account for roughly 20% of its overall commitments. Italy was also taking an

active part in the European nuclear fusion programme through the Joint European Torus (JET) and Next European Torus (NET) joint projects and national activities within the framework of the ENEA-EURATOM association.

27. Regarding research on magnetic confinement, he announced that the Frascati Tokamak Upgrade (FTU) plant had already been inaugurated at the Frascati Centre, and that the RFX machine was nearing completion at the Ionized Gases Institute in Padua. Furthermore, the Ignitor project for a prototype high magnetic field controlled nuclear fusion reactor had already entered the detailed design phase.

28. With regard to research into methods based on inertial confinement, studies on laser techniques and techniques envisaging the use of heavy ions were at an advanced stage.

29. Turning to the more general international context, he noted that similarities with the Italian position could be discerned.

30. Despite the difficulty of summarizing the undoubtedly wide diversity of government strategies and public perceptions, it was perhaps possible nevertheless to state that the current debate on the future of nuclear energy had reached a more rational in-depth analysis of safety issues and that significant progress had been made in the search for appropriate technological situations. International co-operation in that regard had expanded accordingly, especially through instruments provided by the Agency.

31. At the same time, general interest in environmental protection and the reduction of the harmful impact of technological development on the ecosystem had increased dramatically, which had naturally had repercussions in the energy sector and had prompted - within the Agency also - a comparative assessment of the environmental and climatic impact of the various energy systems, including those based on nuclear fusion.

32. Italy had long hoped for the parallel development of technical and regulatory solutions relating to the safety of nuclear plants.

33. Although responsibility for complying with safety regulations in the design, construction and operation of nuclear plants fell upon the individual States, developments in recent years had given rise to an increasing demand for the harmonization of such regulations and the adoption of more binding rules.

34. Italy was in favour of intensifying international co-operation aimed at improving safety norms and ultimately establishing a more effective international regime. The aim should be to achieve the widest possible convergence of views on a set of detailed rules and procedures capable of solving the various problems raised by nuclear safety considerations. At the previous General Conference Italy had made a proposal that international initiatives should be undertaken to encourage the generalized and binding adoption of the Agency's codes and safety guidelines such as NUSS.

35. Undoubtedly, the improved harmonization of safety standards and the design, construction and operation criteria applied by users would contribute substantially to restoring greater confidence in nuclear energy. The emphasis placed by the Agency on the OSART, ASSET (assessment of safety significant events team) and RAPAT (radiation protection advisory team) missions should therefore be maintained and, if possible, reinforced. In that connection, he noted with satisfaction that for the first time China, Czechoslovakia, Poland and the United Kingdom had invited OSART missions that year.

36. The experience to be gained by studying and assessing abnormal events or incidents in nuclear plants was of great importance for the continuous improvement of safety standards. His delegation therefore maintained its belief that a widening and strengthening of the Incident Reporting System was an urgent priority and could no longer be postponed.

37. In addition, the co-operation recently established between the Agency and WANO would prove extremely useful in making an in-depth analysis of practical problems of common interest.

38. A further issue likely to be analysed in depth was the still imperfect regime of nuclear liability. The Joint Protocol adopted in Vienna on 21 September 1988 establishing a link between the two parallel OECD/NEA and IAEA regimes represented a first significant step, but efforts must be continued, particularly within the existing working group on nuclear liability, to fill the remaining gaps in the international regime. Italy attached the utmost importance to the identification of specific rules on international liability for nuclear damage, as well as to the search for linkage mechanisms between those rules and the civil liability systems in force.

39. Besides the Agency's activities in the field on nuclear safety and radiation protection, Italy also highly appreciated its sponsorship of fusion research. The ITER (International Thermonuclear Experimental Reactor) project, developed under Agency auspices by the USA, USSR, Japan and the European Community was of great value and Italy was prepared to give such endeavours its fullest support.

40. Italy's steady support for the safeguards system was another vital part of its policy regarding the Agency. The Italian Government was convinced that the IAEA safeguards were a highly effective mechanism for guaranteeing the peaceful use of nuclear energy. He therefore noted with satisfaction that the 1988 Safeguards Implementation Report stated that no diversion of nuclear equipment or material subject to safeguards had taken place that year. He also noted that there had been further expansion of the safeguards regime through the welcome conclusion of other agreements. Spain's accession in April 1988 to the verification agreement between the IAEA, EURATOM and members of the EEC deserved special mention.

41. The safeguards regime would undoubtedly continue to expand, which made it ever more necessary to contain and rationalize costs and to start an in-depth analysis of the technical methods and approaches adopted by the Secretariat, dealing effectively with the issue of safeguards financing.

42. In that respect, he took note of the proposal agreed in June by the Board of Governors reiterating his delegation's reservations about its duration. It was indeed necessary to find as soon as possible a long-term solution reflecting the Member States' responsibility. However, the proposal to share safeguards costs among the "unshielded" members was still cause of concern. He believed that an equitable arrangement should be based on the following principles: safeguards were in the common interest of the entire international community; contributions should be proportionate to the real financial abilities of Member States; and contributions should reflect the specific responsibilities of some members of the Board of Governors.

43. Italy considered the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) to be an irreplaceable instrument in preventing the spread of nuclear weapons and promoting effective co-operation in the peaceful uses of nuclear energy. It had accordingly always stressed the need for the largest

possible number of countries to accede to the Treaty and welcomed the most recent signatory, Qatar.

44. Consequently, Italy looked forward with great expectation and profound commitment to the Fourth NPT Review Conference scheduled for summer 1990. That Conference would provide a valuable opportunity for reflection and dialogue, and also for jointly reviewing appropriate ways and means of further extending and strengthening the regime.

45. The increasing commitment noted in recent years to international co-operation, the progress already recorded and that expected in reducing nuclear arsenals provided further grounds for optimism that the NPT Review Conference would be successful.

46. With regard to participation in the Agency's Board of Governors, it was undeniable that the growing scope of the Agency's activities had a strong impact on individual national energy policies and that wide representation of the Member States on the Board was therefore essential.

47. The issue of the revision of Article VI could be postponed no longer. As was well known, Italy, together with Belgium, Portugal, Spain and Sweden, had submitted a draft amendment allowing full participation of an increased number of countries in the adoption of important decisions by the Board, while simultaneously preserving the criterion of the balanced representation of all regions. The recent presentation by the Cuban delegation of an important set of documents reflecting elements of the Italian proposal showed once again, that the need for wider representation was widely felt.

48. For many countries broader and more qualified participation in the Board's proceedings could constitute a further incentive to take positive action in the fields of non-proliferation, the peaceful uses of nuclear energy and safety.

49. Italy welcomed the report submitted to the General Conference by the working group so ably chaired by Ambassador Wiryono, which in its operative part recommended renewed efforts on the basis of the Italian proposal.

50. At the same time, it was necessary to guarantee adequate participation in the proceedings and decisions of that body for all those Member States which were temporarily not represented on the Board itself.

51. In the informal working group on the revision of Article VI of the Statute his delegation had recently submitted a draft amendment of Rule 50 of the Board's procedures which, far from distorting its content, provided a clearer and more correct interpretation of its spirit, embracing among other things procedures now entrusted to the various Chairmen and dependent on their sense of responsibility.

52. The above remarks and proposals were founded on his country's firm belief that the Agency's activities constituted an organized and dynamic context in which new opportunities for co-operation could be sought in parallel with increasing interlinkage and interdependence between the different political and economic systems.

53. Within that framework, Italy made a sizeable contribution to the Agency's financing and was, moreover, strongly committed to technical assistance to developing countries, one of the basic tasks of the IAEA, not only through its contributions to the Technical Assistance and Co-operation Fund (TACF), but also and above all through a substantial financial commitment to special projects in sectors such as agriculture, medicine and industry as well as training. Italy took part in training through an organized programme of scholarships, and in particular through its increasing contributions, now averaging more than US \$13 million per year, to the Trieste International Centre for Theoretical Physics.

54. The important role assumed by the Trieste Centre in the past few years - thanks to the commitment of its Director, Professor Salam, and his team and to the constant financial and scientific support provided by Italy - both as a meeting place for scientists from North and South, East and West, and as a channel for the transfer of science and technology deserved the widest recognition, a fact which the Director General had acknowledged in his statement.

55. The Centre was one of the Agency's most significant achievements and one insufficiently stressed by the Agency itself. He was surprised to note the limited coverage of the Centre's activities in the Agency's official programmes, publications and documents, including the annual report, and wondered why, for example, the Centre's activities and the financial resources

allocated to it were not regularly included in the yearly report on technical assistance provided by the Agency, thus offering a more complete picture of the efforts undertaken in that sector.

56. Finally, he hoped that the forthcoming celebration of the 25th Anniversary of its foundation with the participation of key figures and scientists from all over the world would prove an opportunity for a more satisfactory assessment of the importance of the Centre itself and its contribution to developing countries.

57. Mr. CHOI (Republic of Korea) said that, despite the current steady decline in the growth rate of nuclear power generation, nuclear power would nevertheless remain a major energy source, since there were few alternatives and since it helped to avoid the harmful effects caused by fossil fuel utilization. The Agency should endeavour to further promote the peaceful uses of nuclear energy by every means available. In particular, the technology necessary to produce nuclear energy more safely and reliably must be further developed and supplied to those countries which were seeking to expand their nuclear programmes.

58. A real problem in many countries was that of public acceptance of nuclear power. Anti-nuclear movements chose either to ignore or to undermine the fact that nuclear power generation was the major and single most useful application of nuclear energy, and it was regrettable that the nuclear community had failed to respond in a systematic manner to anti-nuclear activists, who had now internationalized their campaign. Despite the difficulties involved, the public must be made aware of nuclear power generation as a means of dealing both with the world energy demand and environmental problems - an exercise in which the Agency, as the central body within the nuclear power community, had a leading role to play.

59. However, such support was fully dependent upon a general feeling of reliable safety. Since the Chernobyl accident, nuclear safety had been a major concern of governments and public alike. It must continue to receive top priority, and he commended the Agency on its long and active role in promoting nuclear safety and radiation protection programmes among its Member States.

60. In that connection, he expressed deep appreciation for the four-week safety review mission recently carried out by the Agency in his country, during which the design of units three and four of the Younggwang plant, construction work on which was to commence at the end of 1989, had been thoroughly reviewed. Also, three OSART missions had to date been successfully carried out in the Republic of Korea, the most recent of which had thoroughly reviewed the operational safety of the Wolsung nuclear power plant. Such safety-related activities by the Agency played a great part in enhancing the safety of nuclear plants around the world.

61. As the tenth largest nuclear energy producing country in the world, the Republic of Korea was anxious to participate more actively in the Agency's programmes, in which connection a new formula for representation on the Board of Governors should be introduced in order to give those countries which, like his own, had active nuclear power programmes and which strove to meet the Agency's objectives the opportunity to participate on the Board on a continuing basis, since proper representation in that forum could only enhance the quality of the Agency's work.

62. Since the Third NPT Review Conference, no new nuclear-weapon State had thus far been confirmed. Meanwhile, the number of parties to NPT - a crucial regime for preventing the proliferation of nuclear weapons - had increased from 130 in 1985 to 138 in the current year. With regard to the Agency's 1988 Safeguards Implementation Report, moreover, he had been relieved to learn that there had been neither diversion of sensitive nuclear materials nor misuse of nuclear items and facilities. Since concern over proliferation represented one of the greatest barriers to the peaceful uses of nuclear energy, the need for international regimes such as NPT and the Agency's full-scope safeguards could not be over-emphasized. When all countries were fully committed to non-proliferation and had placed all their nuclear facilities under Agency safeguards, there would no longer be any barriers against the transfer of advanced nuclear technology for use in peaceful nuclear projects. With that end in view, he urged those countries which had not yet done so to conclude full-scope safeguards agreements with the Agency as soon as possible, and called upon the Secretariat to pursue its best efforts to that end.

63. Commending the Agency on its technical co-operation activities, he noted with satisfaction both the increase in the budget for those activities and in their rate of implementation, although he emphasized that qualitative improvement should also be a constant goal.

64. As to his country's nuclear programme, the Republic of Korea had remained actively committed to the development and use of nuclear energy. Its nine operating nuclear power plants - a total of over 7.6 GW(e) of installed capacity - had supplied 46.9% of the country's total electricity requirements in 1988. The revised Presidential Decree of the Atomic Energy Law had been promulgated the previous June in order to keep abreast of the progress in nuclear technology development in the country. Under the Decree, his Government was planning a full-scale nuclear waste disposal and spent fuel management project, as well as an ambitious research and development programme, with funds for radioactive waste management purposes being drawn from the sales of nuclear-generated electricity.

65. His country had also made significant progress with its nuclear fuel localization programme. Following the localization of CANDU fuel, it had succeeded in localizing nuclear fuels for PWRs. Also, the construction of a 30 MW multipurpose reactor, led by the country's domestic design team, had been initiated in March 1989 and was scheduled to be completed in 1992.

66. The Republic of Korea was keen to share its 30 years of experience in the nuclear field with other developing countries, to which end it had, since 1987, been participating in the Agency's technical assistance and co-operation programme as a donor country. In the current year it would be supporting a footnote-a/ project in Egypt entitled "Computer-aided nuclear safety analysis" and would be hosting the second RCA regional training course on nuclear power project planning and implementation in October. It also intended to play a more active part in the Agency's technical assistance and co-operation programme, serving as a bridge between advanced and developing countries in the transfer of nuclear technology.

67. Earlier that day, his delegation had taken great pleasure in presenting the Director General with a document certifying his Government's donation of 30 personal computers made in the Republic of Korea for use within the Agency's technical assistance and co-operation programme. He was proud of

that opportunity to repay the Department of Technical Co-operation for the immeasurable assistance it had rendered to his country in the past.

68. In conclusion, he once again emphasized that all countries should make sincere efforts to maintain nuclear power as a safe and reliable energy source. The effective and efficient response of the Agency and its Member States was necessary in order to render nuclear power more viable and valuable for the peace and prosperity of all peoples of the world.

69. Mr. ALP (Turkey) said that world public opinion was increasingly concerned with environmental pollution and had generated a new climate of environmental awareness, which promised well for the future. The major role played by energy in the development process on the one hand, and the growing concern for the environment, together with the depletable nature of conventional energy sources on the other called for a reassessment of nuclear policies and, in particular, matters related to public confidence.

70. The environmental aspects of energy supply and consumption, such phenomena as the growing atmospheric concentration of CO₂ and other so-called "greenhouse" gases had an important bearing on the future role of nuclear energy. The dramatic events of the recent past had strengthened universal concern for nuclear safety, but public attention to the pollution created by conventional sources of energy had not declined. Many Governments, including Turkey's, as well as international organizations were still seeking ways of curbing the use of fossil fuels in order to mitigate the emissions of carbon dioxide and other hazardous elements and particles. While, however, the sensitivity to environmental pollution, and the vital concern to keep the earth clean for present and future generations might highlight nuclear energy as an attractive alternative for the world's increasing energy requirements, nuclear power as an energy source would only achieve general acceptance if its safe use and operation were assured, and if all States showed their readiness to accept their responsibilities. Nuclear safety should not, therefore, remain a function of the Agency but should rather be considered as one of its objectives.

71. International co-operation should consequently aim at creating a regime for the safe production and use of nuclear energy, as well as for the safe handling of radioactive wastes. That regime should also encompass comparable

standards and procedures for the management of reactors and the sharing of information and technology for nuclear safety. In that context, both the Convention on Early Notification of a Nuclear Accident and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency should be complemented by bilateral and subregional agreements.

72. The Agency's authority and reputation depended to a large extent on the quality and efficiency of the measures implemented to assure nuclear safety. It was gratifying to note that the Agency's safety programme had expanded throughout the years from the nuclear fuel cycle to the use of nuclear methods in medicine, agriculture and industry, and the many activities in nuclear safety and radiation protection in 1989, including the establishment of an Emergency Response System, were commendable. Turkey had already put into operation 11 stations in its radiation monitoring network and early warning system and had strengthened its co-operation with the Agency in that area.

73. The Director General, in his opening statement, had said that the application of nuclear techniques facilitated and supported environmental assessments. Turkey was aware of the Agency's efforts to encourage the use of nuclear techniques in detecting and understanding the behaviour of certain pollutants in the environment and particularly of those within the food chain. It followed with interest the activities undertaken in that important field, and believed that close co-operation with other specialized agencies was a prerequisite for efficiency. The credibility of nuclear energy would be further enhanced if the nuclear techniques and applications could be employed more extensively for the benefit of environmental protection projects.

74. The question of nuclear waste disposal should certainly continue to receive utmost attention. Nuclear waste technology had reached an advanced stage of sophistication but, as was pointed out by the World Commission of Environment and Development, there was still a lot to be done in the area of waste disposal, and there could be no real public confidence in the nuclear industry's ability without mechanisms for the safe, effective and timely disposal of radioactive wastes. While the final disposal of high-level waste remained a vital question for the future, countries were having difficulties in finding sites even for interim waste disposal. In that connection, Turkey fully supported the work of the group of experts on radioactive waste

transactions which was established pursuant to the General Conference resolution GC(XXXII)/RES/490 on dumping of nuclear waste. It was to be hoped that a satisfactory code of practice would be worked out and adopted in the near future.

75. The Director General had informed the plenary of two highly interesting proposals made by the Soviet Union, namely the establishment of a centre for international research at Chernobyl and an international project in waste disposal research at a site in the USSR. Turkey would be following the developments with great interest.

76. Turkey had consistently supported all initiatives aimed at promoting greater security and confidence in the use of nuclear energy, in which the question of liability for nuclear damages was an important aspect.

77. While the signing of the joint protocol linking the Paris and Vienna Conventions was a step forward, Turkey was greatly concerned that many of the States with important nuclear activities had not yet become parties to those Conventions, thereby seriously restricting the scope of their implementation. It appreciated the efforts of the working group on all aspects of liability for nuclear damage, and hoped that it would be successful in complementing the existing liability regime and that all interested parties would participate.

78. Turkey was pleased to note that in 1988, as in previous years, the IAEA had not detected any event indicating the diversion of a significant amount of safeguarded material for the manufacture of any nuclear weapon or for the manufacture of any other nuclear explosive device. The IAEA safeguards should remain the only system for combatting proliferation. As an NPT country which had accepted full-scope Agency safeguards, Turkey believed in the universal application of safeguards. However, it in no way condoned the misuse of the NPT as a barrier in the promotion of peaceful applications of nuclear energy in the developing countries. It was disheartening to observe that the Committee on the Assurances of Supply had been meeting for over a decade without making any substantial progress. The lack of an overall system of co-operation in which the supply of nuclear material and equipment could be assured on a more predictable and long-term basis would have adverse effects on non-proliferation.

79. The efficient and effective implementation of the technical assistance and co-operation programme should be one of the main pillars of the Agency's activities. Nuclear applications promoted through technical co-operation projects and co-ordinated research programmes had been helpful in meeting the needs of developing countries.

80. In that context, the Agency's projects in Turkey on irradiation of disposable medical products and foodstuffs, radioisotope applications in industry and hydrology, installation of new units for production of radiopharmaceuticals or improvement of existing ones deserved mention.

81. The recently initiated programme aimed at the use of nuclear techniques in assessing the pollutants from coal-fired plants was of great interest, and Turkey followed with attention the programme for the analysis of non-radioactive pollutants of the sea which was under way in the Monaco Laboratory.

82. It was encouraging to learn from the Director General's statement that the developing countries had offered a considerable number of training services in 1988. Turkey was among those countries offering training and expert services through the Agency's programmes.

83. In 1989, in addition to the co-ordination meeting of the radiotracer studies of fungicide residues in food plant projects which had already taken place in Ankara, Turkey would be hosting a seminar in Izmir for developing countries in the Middle East, Asia and the Pacific on the applications of isotope and geochemical techniques in geothermal exploration. The Research Co-ordination Meeting on human daily dietary intakes of nutritionally important trace elements as measured by nuclear and other techniques would again be held in Ankara in 1989. In addition, Turkey's voluntary contribution to the Technical Assistance and Co-operation Fund for the year 1990 had been pledged at its assessed level.

84. With regard to its policy in the use of nuclear energy, Turkey had for a long time made efforts to introduce a nuclear power programme. The energy projections indicated that, even with the maximum use of its hydro potential, Turkey would need extra energy resources in the year 2000 and beyond. Nuclear

energy thus remained a valid option for Turkey in meeting its future energy needs and its economic planning for the 1990s would lay emphasis on that aspect.

85. A very important point had been made in the statements by the Secretary-General of the United Nations and by the Director General of the Agency. Both had referred to unprecedented changes in the international political climate, to a renewal of confidence in multilateralism and to collective approaches to solving world problems. That was particularly true in the field of disarmament, arms control and confidence-building. The reasons and motivations which had made that drastic change of attitude possible were complex and multiple. However, one aspect was clear: a new approach to international co-operation had emerged, and it was to be hoped that that new spirit would be fully reflected in individual approaches to the matters under the responsibility of the Agency.

86. Mr. PANDEV (Bulgaria) said that over the previous year positive moves had been made to strengthen dialogue and co-operation between countries; there was a wider understanding of the interdependence of all countries, and that trend would continue as problems vitally affecting the economic and social development of many countries in the world were solved.

87. Reduction and elimination of nuclear weapons and the prevention of further proliferation were the highest priorities for mankind. The efforts to create nuclear-weapon-free zones, in the Near East and Africa for instance, were of particular importance. Bulgaria was taking initiatives to create a nuclear- and chemical-weapon-free zone on the Balkan Peninsula.

88. The annual report showed that the Agency's role as an accepted authority on international co-operation in the peaceful uses of nuclear energy had gained in weight over the previous year. Decisions in the nuclear power area were currently being re-evaluated and there was increased interest on the part of the public in nuclear problems. Nuclear power had to continue to develop, but at the same time international safety regimes for its generation and use, and for the safe management of radioactive wastes had to be created and reinforced.

89. The Agency's nuclear safety and radiation protection programme was extremely important. The "Basic Safety Principles for Nuclear Power Plants" which had been drawn up by the International Working Group and published by the Agency in March of 1988 had made a significant contribution to the safe use of nuclear energy. The wide use being made of the program package for probabilistic safety assessment of nuclear power plants should also be noted; Bulgarian experts had taken part in the development of that program package. An Agency technical committee on the application of probabilistic safety assessment programs had convened in Sofia at the beginning of the year.

90. The signing of the Joint Protocol connecting the Vienna Convention on Civil Liability for Nuclear Damage and the Paris Convention on Third Party Liability in the Field of Nuclear Energy, and the institution of the working group which was considering a whole range of problems related to liability for nuclear damage had been positive steps towards the creation of a international regime for the safe use of nuclear energy. Physical protection of nuclear material and its application in nuclear facilities was an important matter where nuclear safety and radiation protection were concerned, as was wider adherence to the Convention on the Physical Protection of Nuclear Material, the Convention on Early Notification of a Nuclear Accident, and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency. The Agency should also play a role in the prohibition of armed attacks on nuclear facilities intended for peaceful purposes. The Governments of Bulgaria and Greece had concluded an agreement on notification in the event of a nuclear accident and exchange of information on nuclear facilities. A regional agreement on notification and assistance in the event of a nuclear accident and a radiological emergency was to be signed by CMEA member countries in Sofia in October of the current year.

91. The more active position of the Agency with regard to protection of the environment, and the greater attention being given to the connection between the safe use of nuclear energy and restoration and protection of the environment were the most promising ways of restoring public confidence in nuclear power. The IAEA Yearbook which had been published for the first time in the current year would play an important role in providing the general public throughout the world with objective and competent information on the

achievements and problems of the peaceful use of nuclear energy. The Agency was to be congratulated on that well thought-out and excellently implemented initiative.

92. The Agency's technical assistance and co-operation programme had grown again significantly over the previous year. The implementation of a bi-annual planning cycle, the expansion of pre-project assistance, and the evaluations and analyses of projects under way had had a beneficial effect on preparation and implementation of the programme. Bulgaria actively supported the technical assistance and co-operation programme on a regular basis and paid its voluntary contributions in full. Agency fellows were trained in Bulgaria as far as conditions allowed, and Bulgaria supplied equipment and the expert services. In 1990, Bulgaria would be making a voluntary contribution to the value of \$68 250 in national currency to the Technical Assistance and Co-operation Fund. He stressed again the need to do away with the 8% contribution for technical assistance programme costs which had long ago lost its original purpose, and he urged all countries to take part in the programme and to pay their voluntary contributions. The situation where only 40% of the Member States of the Agency were supporting the technical assistance programme was far from satisfactory. He thanked the Agency and the Division of Technical Assistance and Co-operation for the assistance that they had given to Bulgaria in 1988, and for their excellent and creative co-operation. Bulgaria was ready to extend its participation and reinforce its connection with the Agency in that area in the future.

93. The Agency's safeguards programme made a unique contribution to the prevention of the proliferation of nuclear weapons, and to strengthening confidence in the use of nuclear energy for peaceful purposes. The successful implementation of safeguards was in the interests of all countries. He noted with pleasure that the Agency had not discovered any diversion of nuclear materials under safeguards during 1988, or any use of a nuclear facility for the production of a nuclear weapon. Bulgaria had placed all of its nuclear activities under Agency safeguards, and safeguards objectives had been fully met there. During the previous year, Unit 5 of the Kozloduj nuclear power plant, the first WWER-1000 unit outside the USSR, had been placed under safeguards for the first time. In that unit Bulgarian experts had

collaborated actively on the development of reliable and precise monitoring methods for nuclear material even within the reactor containment. Bulgarian specialists had developed and presented to the Agency a computerized nuclear materials accounting system. Bulgaria would continue to support the Agency's safeguards system within the limits of its capabilities. During the coming year a review conference on the Treaty on the Non-Proliferation of Nuclear Weapons was to take place and should significantly help reinforce the non-proliferation regime, strengthening international trust and improving international safety. He felt sure the Agency would play its due part in the preparation and running of the conference.

94. He approved the draft budget for 1990 presented by the Board of Governors and the scale of contributions. Bulgaria would fulfil its budgetary obligations. He pointed out that arrears of Member States Regular Budget contributions were in excess of US \$12 million and that no administrative measures could replace the timely payment of Member States' contributions to the Regular Budget. He approved the Agency's accounts for 1988 and thanked the auditor, and he reiterated his position with regard to the staffing of the Secretariat and the proposed changes to Article VI.A.2 of the Statute and Article VI as a whole.

95. Nuclear power had continued to develop inside Bulgaria over the previous year. Thirty-six per cent of all the energy generated within the country had come from nuclear power plants. The construction of Unit 6 of the Kozloduj nuclear power plant had been completed; construction of the second nuclear power plant in Beleno was still under way and a complex of measures was being implemented to improve nuclear and radiation safety, including the incorporation of a system to monitor the state of the metal in the steam generators which was being done with the help of the Agency; work was also under way to determine the optimum method for managing radioactive waste. As part of a regional project, problems connected with design-basis accidents and serious accidents, and means of preventing them were being studied. During 1990 the Kozloduj nuclear power plant would receive an OSART mission. Use of ionizing radiation to sterilize medical products, to produce materials, and in agriculture and the food industry was expanding. It was planned to extend

monitoring of the irradiation of food products, and to set up a national ionizing radiation metrology laboratory. The international document signed in Geneva on the irradiation of food products was an important step, and it opened up new scope for the use of radiation in agriculture and the food industry. On the basis of that document, and the Agency's interregional project, work was in progress on the drawing up and signing of a regional agreement on trade in irradiated products.

96. He concluded by thanking the Agency's Secretariat for their work during the previous year, and he congratulated the Director General on his re-election and wished him well.

ELECTION OF OFFICERS AND APPOINTMENT OF THE GENERAL COMMITTEE (resumed)

97. The PRESIDENT informed the General Conference that consultations within the Latin American group had resulted in agreement on its nominee for the post of additional elected member of the General Committee: he accordingly proposed that the delegate of Mexico be elected as an additional member of the General Committee. Furthermore, the Middle East and South Asia group had agreed on its nominee for the post of Chairman of the Committee of the Whole: he therefore proposed that Mr. Nethsinghe of Sri Lanka be elected as Chairman of the Committee of the Whole.

98. It was so decided.

99. The PRESIDENT said that the General Committee was now fully constituted. However, in order to ensure the smooth progress of the Conference's business, he suggested that, pending a recommendation by the General Committee, the Conference suspend Rule 42 of its Rules of Procedure ad interim, so as to allow the Committee of the Whole to start its work before the General Committee met and to embark on consideration of items 10-15 and 17-20 of the provisional agenda, those being items which had been included in the agenda as a result of previous decisions of the Conference or which the General Conference was obliged by the Statute to consider.

100. It was so decided.

GENERAL DEBATE AND ANNUAL REPORT FOR 1988 (continued)

101. Mr. AMROLLAHI (Islamic Republic of Iran) said that science and technology should be used for the general benefit of mankind and should not be treated as the property of particular countries, nor used solely for material gain; unscrupulous deployment of science and technology could only lead to the degradation of mankind. His country advocated that philosophy and was a strong supporter of the peaceful applications of nuclear energy.

102. Mankind was approaching the end of the 20th century with excesses at all levels and on all fronts. Great achievements in science and technology were matched by social and environmental problems of unprecedented magnitude. It seemed that scientific and technological progress was being pursued solely for its own sake; while advances in the industrial or developed countries had helped raise the standard of living and quality of life to a considerable extent, parallel to that there had been some degradation in the social and environmental spheres, the consequences of which were shared with the developing countries. That was cause for concern and even alarm.

103. That was so for a number of reasons. The developing countries' support of the scientific and technological infrastructure in the more advanced countries was depleting their natural resources at an alarming rate. They received little benefit from their raw materials, either financially or technologically, since the low prices received for them, combined with the high prices charged by the developed countries for their supplies and services, were progressively impoverishing the developing countries in real terms. An example of that was the vast accumulation of debts owed by the developing countries to the financial institutions of the developed countries. In effect, major multinational conglomerates forced such debts upon the developing countries in order to control their political and economic growth. Low GNP, combined with large population growth rates, meant that standards of living in most developing countries were stagnant or declining.

104. The developing countries were also being asked to take on the burden of toxic industrial waste and other pollutants produced by the developed countries. Although sea-dumping of nuclear and other toxic wastes, nuclear test explosions and high altitude tests had been somewhat curtailed, they

nevertheless bore witness to the fact that the developing countries were environmentally and socially degenerating as a consequence of the support they gave to the scientific and technological progress of the developed countries.

105. An increasing number of important industries, such as the petrochemicals and nuclear industries, on which the future of the developing countries might depend and which might help to ensure their economic independence, were being labelled "off-limits" by the developed exporting countries and becoming increasingly "inaccessible". It was regrettable that many oil-producing countries were net importers of the petroleum products which they should logically be exporting.

106. The increasingly high tuition fees charged by some European and North American universities in recent years had effectively deprived students from the developing countries of the benefits of advanced studies. It was difficult to imagine that the developed countries were economically dependent on the incomes of their institutions of higher learning. Political discrimination often deprived scientists, engineers and technicians from the developing countries of the opportunity to participate in advanced training courses organized in developed countries. When faced with little prospect of progress at home, it was inevitable that the top scientists and engineers of the developing countries were attracted to the developed countries' industrial and academic establishments, thus further eroding scientific and technological infrastructures in their own countries. The large and increasing number of Third-World scientists and engineers employed in developed countries was proof of that.

107. Factors such as those had widened the gap between North and South to such an extent that, unless effective measures were adopted immediately, the 21st century would see an unbridgeable gap between the two groups of countries. Such extremes, such vast differences in standards of living, such inequalities, would not be compatible with global peace and prosperity; indeed, they constituted the best formula for constant tension, for political strife, for regional and ultimately global conflicts.

108. The industrial countries should attempt to redefine their policies in the direction of more equitable sharing of scientific and technological progress, aiming for more reasonable terms of exchange between raw materials

and industrial supplies and/or services. Less political, religious and ethnic discrimination would also benefit mankind as a whole, and was the only way to defuse the present time-bomb. Only thus could the 21st century bring lasting peace and prosperity.

109. Technological barriers were set up by most developed countries for the purpose of preserving proprietary rights and maintaining a monopoly on certain technologies. The developed countries used political means to discriminate between various developing countries as to the type and the levels of the technologies which they might or might not receive, thus regulating the diffusion of technology and its benefits. That applied in particular to the nuclear industry, whose growth was strictly regulated by political considerations, in spite of NPT, the Agency's full-scope safeguards programme and other treaties and safeguards regimes.

110. Political constraints had thus led to a regrettable erosion of the Agency's effectiveness in meeting its objectives: it was constantly obliged to perform a balancing act between upholding its Statute and objectives on the one hand and complying with unwritten political guidelines on the other. Nevertheless, the Director General was to be commended for his efforts in pursuing the Agency's objectives under such constraints.

111. Thus, nuclear technology had remained stagnant in the developing countries for a number of years, whereas most developed countries were experiencing considerable growth. That was, again, a clear case of the developing countries not having the advantages of nuclear technology while being required to shoulder their full share of its potential transboundary risks.

112. The concern of most developing countries about the issue of inequitable access to advanced technology, particularly nuclear technology for peaceful purposes, had been evident during the Ninth Summit Conference of the Non-Aligned Nations. One of the resolutions adopted by that Conference stressed the importance of all nations having equitable access to technology in general and nuclear technology in particular. Further, it had emphasized that non-proliferation issues should not be used as a means of preventing the utilization of nuclear energy for peaceful purposes.

113. Political constraints aside, the passage of time and over-regulation had made the nuclear industry extremely capital-intensive, so much so that even if certain developing countries were not faced with political barriers, the sheer magnitude of the investment required, particularly for nuclear power plants, would make any such venture prohibitively expensive. No OPEC country had an operating nuclear power plant, or, indeed, a viable nuclear industry, and OPEC's revenues no longer constituted encouragement to venture into such enormously capital-intensive projects as nuclear power plants.

114. The stagnation of most developing countries' nuclear power programmes, in the form of half-completed power plants and dormant nuclear projects, could clearly be attributed to financing problems. Unfortunately, slogans such as "cheap energy" or "an economically competitive energy alternative" no longer applied to nuclear power; the global situation of fossil fuels and the declining price of oil had further compounded that difficulty.

115. Nuclear power embodied a contradiction: it was a desirable alternative because generally well-suited to combating degradation of the environment, particularly the greenhouse effect, yet at the same time the cost of nuclear power was high and currently beyond the financial means of many countries. The Agency, aware of that situation, was to be commended for having organized a special scientific programme entitled "The New Generation of Nuclear Power" which was to take place parallel to the current session of the General Conference.

116. Although the Agency, in its circular on that programme, had described nuclear power as "economically proven", that was, regrettably, no longer a universally valid assertion; in fact it had become a statement which should be made with some caution. The fact was that nuclear power programmes were expensive; they could now barely compete with fossil-fuelled plants, and if the price of oil continued to fall they would soon become uneconomical. Nuclear power programmes had become luxuries which few countries could afford. Since nuclear energy was the only reliable energy option for the future, and its effectiveness would depend to a large extent on whether it could compete safely and economically with other energy alternatives, it was vitally important that a fresh approach to nuclear power plant technology be

adopted, to reduce investment costs without compromising safety and operability levels. The Agency's scientific programme could constitute a first step in that direction.

117. The previous year, his country had accepted United Nations resolution 598 in its entirety. It had further announced that that had not been a tactical manoeuvre and had demonstrated its serious intent by pursuing the full implementation of resolution 598 through appropriate diplomatic channels, thus giving the lie to the propaganda efforts of the international Zionist news media which attempted to present the Iranian régime as dogmatic and warmongering.

118. However, Iraq, which had started the eight-year war and which had always pretended to seek peace, was effectively undermining peace negotiations by presenting unreasonable demands.

119. His country found itself in a situation which not only impeded the progress of negotiations but also hampered its attempts to proceed with reconstruction programmes and economic recovery. Many countries, including several western industrialized nations, had expressed readiness to co-operate with Iran in that endeavour. Regrettably, in some cases the claims and real intentions did not coincide, a good example being the Bushehr nuclear power plant. It had always been his country's intention to complete that plant; the Director General, who had recently visited the plant, had also expressed the view that it was important to complete that project. In the past, there had been promises of co-operation from the West German supplier of the plant. However, now that the conditions for resuming construction activities were favourable, the West German Government was being evasive about fulfilling its obligations under the relevant bilateral agreements.

120. The Director General had contacted the West German Government, seeking clarification of their position on the completion of that vast project. Regrettably, the West German Government had not responded to the Director General's inquiries. Because of the West German Government's evasive position, more than US \$3 billion which his country had so far invested in that project had remained idle for a considerable period of time.

121. In June, in the course of his visit to the Islamic Republic of Iran, the Director General had visited the site of the Bushehr nuclear power plant. Although the Director General had been familiar with the plant and knew about the damage caused by military attacks, he had been surprised at the extent of the damage inflicted - despite Iran's reports on the subject. Iran's nuclear power programme had sustained a severe setback as a result of the military attacks on the Bushehr nuclear power plant, not to mention the tragic loss of innocent lives of technical personnel as well as that of a West German expert. Was it not time to take a stand to prevent such atrocities? Was it not time to adopt effective resolutions against military attacks on nuclear installations, whether in operation or under construction? Indifference might encourage further aggression in the future, with even more severe consequences. His country expected the General Conference to face up to its responsibilities in that respect.

122. There would be no restrictions on Agency safeguards inspectors travelling to Iran. The recent visit of an Agency Radiation Protection Advisory Team (RAPAT) demonstrated Iran's close collaboration with the IAEA in the field of radiation protection. Moreover, according to the Safeguards Implementation Report (SIR) for 1988, submitted to the Board of Governors in June 1989, the IAEA's Secretariat had not detected

"... any event which would indicate the diversion of a significant amount of safeguarded nuclear material - or the misuse of facilities, equipment or non-nuclear material subject to safeguards - for the manufacture of any nuclear weapon, or for any other military purpose, or for the manufacture of any other nuclear explosive device, or for purposes unknown."

123. Committed as it was to full-scope Agency safeguards, Iran strongly urged Member States to take appropriate measures which would ensure full control, prevent any further proliferation of nuclear weapons, and, in the long run, eliminate all nuclear arsenals.

124. On the issue of chemical weapons, as his delegation had declared before, Iran had neither manufactured nor deployed chemical weapons, nor would it do so in the future. As a reaction to public opinion, the United States Government was now proposing a reduction in chemical weapons. But why had such weapons been manufactured in the first place?

125. Among the main activities of the Atomic Energy Organization of Iran were applications of ionizing radiation, particularly as applied to nuclear medicine, the production of radioisotopes and radiopharmaceuticals, radiation processing of disposable medical supplies and various industrial products, public protection against the harmful effects of ionizing radiation and monitoring of those who handled radioactive materials.

126. His country's nuclear research centres pursued various activities and programmes related to fundamental research, the physical sciences, chemistry, engineering and nuclear applications in agriculture. Furthermore, various services were offered to the public and private sectors.

127. The relatively new Theoretical Physics and Mathematics Department was also actively pursuing its objectives and in that connection had established close links with the International Centre for Theoretical Physics (ICTP) in Trieste.

128. In conclusion, he expressed Iran's support for the resolution submitted for the purpose of altering the name of the Palestine Liberation Organization (PLO) to Palestine. That, it was felt, was the right of the courageous Palestinians, to whom his country wished complete success in expelling the occupying Israelis from their homeland.

129. Mr. AL-NOWAISER (Saudi Arabia) observed that the General Conference, the Agency's highest policy-making body, met to discuss and take decisions on matters of interest to the Agency and to its Member States. Those decisions could serve their purpose provided they were based on an earnest desire to fulfil the Agency's statutory objectives.

130. Since the Agency's objectives were to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world, the Member States should not confine themselves to taking decisions but should ensure that all activities, including power plant operation and waste disposal, conformed to the nuclear safety requirements and that nuclear energy was not used for non-peaceful purposes.

131. He wished to comment on a number of matters of current public concern and the Agency's activities, which the Director General had reviewed in his statement.

132. The latter had referred to the environmental pollution caused by the burning of fossil fuel and demands of industrial development. For example, emissions of environmentally harmful gases like carbon dioxide into the atmosphere and deforestation contributed to the greenhouse effect. It was encouraging news that between 1973 and 1985 the amount of carbon dioxide emissions in France had declined from 450 million to 325 million tons, thanks to the increased use of nuclear power. In that connection, he noted that the 1989 Paris summit of industrialized countries had recognized the important role of nuclear power in limiting the factors responsible for the greenhouse effect.

133. Predictions indicated a steady annual growth of 2-3% in energy demand and consumption over the following 15 years, and it was advisable to meet that growth by increasing the share of nuclear power, which would help decrease the amount of carbon dioxide emissions into the atmosphere and, consequently, the greenhouse effect.

134. The Paris summit had also stressed the importance of international co-operation in the field of nuclear safety, including the safety of nuclear power plant operation and waste management. In that context, he welcomed the statement of the Director General who had emphasized that, in spite of the already high level of nuclear safety, it should be improved continuously.

135. As to the Director General's suggestion that Member States should pool their efforts and work jointly under the Agency's auspices, as in the case of the International Thermonuclear Experimental Reactor (ITER) project, to develop new reactor models and systems with reinforced safety features, his delegation considered the idea worthy of consideration and support. Such reactors should, in his opinion, be so designed as to serve more than one purpose, including production of potable water from sea water, on which subject an item had been included in the Conference's agenda at the request of the Libyan Arab Jamahiriya. One of the factors hindering the introduction of power reactors in developing countries was the problem of financing, and he hoped that the Agency would continue to take an interest in that matter under the proposed project together with the participating industrialized States and the World Bank.

136. Another matter which was connected with nuclear safety and which created a climate of trust and security for Member States to continue to develop peaceful uses of nuclear energy was the positive assurance of such safety. One instrument, envisaged in the Statute, of verifying Member States' commitment to the peaceful uses of nuclear energy was the safeguards system. He had noted with regret in the Director General's report in document GC(XXXIII)/886 that Israel persisted in rejecting the resolutions of the United Nations General Assembly and those of the Agency, which had called upon it to place its nuclear activities under safeguards, and in refusing to sign the Non-Proliferation Treaty, although most States in the region of the Middle East had done so and had concluded or were negotiating safeguards agreements with the Agency. Instead, Israel was suggesting that with certain conditions the States in the region should conclude a treaty on the lines of the Tlatelolco and Rarotonga Treaties making the Middle East a "nuclear-weapon-free zone"; it was thus evading the safeguards system. Israel did not sincerely intend to eliminate nuclear weapons in the region because it was the only State in the region which possessed such weapons. Moreover, it was well aware that the conditions prevailing there were different from those in the countries party to the Tlatelolco and Raratonga Treaties.

137. The Arab countries in the region were desirous of establishing stability and peace in the region, and were firmly in favour of creating a nuclear-weapon-free zone in the Middle East. In that connection, the Director General would be requested, through a draft resolution to be submitted to the Conference, to make available his good offices in negotiations on the establishment of such a zone with the States in the region and to report on the subject to the Board and to the Conference the following year.

138. He commended the Agency's intensive efforts in the area of promotional activities of interest to its developing Member States and its regulatory activities which benefited all Member States. He hoped that it would continue to send the Operational Safety Review Teams (OSARTs) to advise Member States and the Radiation Protection Advisory Teams (RAPATs), which helped Member States in strengthening their technical infrastructure in radiation protection.

139. He also expressed his appreciation of the efforts by the Director General and the Secretariat, together with those of the expert group, in

drafting the Safety Principles and Technical Criteria for the Underground Disposal of High-level Wastes, and hoped that the expert group concerned with drafting a code of practice for international transactions involving nuclear wastes would be able to propose such a code for approval by the Conference in 1990.

140. Referring to safeguards, he pointed out that the method of financing those activities imposed an additional burden on some developing Member States which were not included in the list of shielded countries. His country was not on that list, and contributed a relatively large share of the costs although it had no nuclear activity. It would be more appropriate for countries with nuclear activities and utilizing nuclear energy to bear a greater share of the growing costs of verification of nuclear activities.

141. The Conference had before it the Agency's budget for 1990 amounting to US \$160 million, representing a slight increase over the preceding year's figure but remaining within the bounds of zero growth imposed by the world economic situation. However, the principle of zero growth actually limited the required expansion in the Agency's promotional programmes and the volume of the budget. The developing Member States were not in favour of the continued increase in the safeguards expenditure and urged that the latter should not be covered at the expense of the important promotional programmes in developing countries.

142. He was especially appreciative of the Director General's efforts to respond to Member States' demands by achieving economies through efficiency gains and by improving and reorganizing the Agency's activities.

143. From the list submitted to the Conference he noted that the number of nationals from developing countries employed in the Agency had been increasing. The Director General deserved to be commended on that account, and he hoped that the latter would continue to improve the proportion of nationals from those countries, especially at the senior levels.

144. Lastly, he shared the Director General's concern at the late payment by Member States of their assessed contributions to the Agency's budget, which not only caused difficulties in the implementation of many programmes and in meeting commitments in time, but also led to the cancellation of some

programmes. He was pleased to state that the Kingdom of Saudi Arabia had paid its contribution in full, and appealed to Member States which had not done so, especially those whose share was large, to endeavour to meet their obligations in time.

145. In conclusion, referring to the Board's recommendation to the Conference to approve the appointment of Dr. Blix for another term of four years, he extended his congratulations and support to the latter, and expressed his confidence that the Agency would make further progress in fulfilling its objectives under the wise guidance of Dr. Blix.

146. Mr. RAHMAN (Malaysia) said the challenges faced by the Agency in executing its functions and duties needed little comment, particularly in view of the growing appreciation of the needs and benefits of supra-national organizations. However, such organizations should not take it upon themselves to attempt to transcend national sovereignties, rather they must work through recognition of those sovereignties, particularly since the early enthusiasm for the unqualified transfer of technology from the industrialized to the developing countries and the optimism and faith in its beneficial effects had given way to increasing scepticism and criticism. The appropriateness of the technology and the various costs associated with the transfer were increasingly being questioned, as was the political and administrative machinery to be used. The Agency in particular should do no more than what was entrusted to it by one or more nations for the achievement of the purposes which that nation or those nations approved. The Agency had been operating in that way as could be seen by the benefits now being reaped by Member States.

147. The complexity of modern life and the rapid growth of technology unavoidably allowed impersonal functional forces free play and reduced the individual's range of choice. However, scientists were citizens first and foremost, and understood, through the many discussions and movements in which they were involved, the need for a unitary outlook and for a proper balance between science and duty. They would not care to be witness to a process of dehumanization, an incipient collectivism or collectivization inherent in and inseparable from the very constitution of modern society. Confrontation in the political sphere, given the problems posed by nuclear energy, was another aspect of their dilemma. The fundamental problems were not political but

transpolitical, as was clear from some aspects of decision-making in modern society. Scientists could not therefore ignore the political aspects of nuclear science, which was only logical given that the Atom for Peace Programme had been based on the merger of commercial, political and strategic assessments. Malaysia considered that technical co-operation was a very important multilateral channel for the transfer of nuclear technology.

148. Nuclear science and technology had also been successfully promoted through regional co-operation, such as co-ordinated research programmes, training courses, workshops and seminars implemented within the framework of the Regional Co-operative Agreement (RCA). The Malaysian Government strongly supported such activities, and Malaysia was hosting three regional training courses.

149. In the application of nuclear techniques in agriculture, medicine and industry, radiation sources of one form or another were being used. However, the safe use and disposal of those radiation sources gave rise to some concern. While the Agency's efforts to assist Member States in developing an adequate infrastructure for radiation protection and waste management were commendable, there was still more that could be done. The numerous safety series, regulations, guidelines and technical documents were only helpful when they were well understood by their users. In that respect, the Agency must place greater emphasis on providing practical guidelines as well as more training programmes in the safe handling and disposal of radiation sources. Assistance in developing the plan and infrastructure to handle radiological emergencies was also urgently needed by many developing countries.

150. The area of nuclear energy should not be studied only by engineers and scientists as a technical subject, rather it should be studied from the point of view of its implications for and its effects on society. It was not therefore totally divorced from other human activities. However, many still believed that nuclear science was a highly specialized area and should be treated as such. It had undoubtedly played an important part in public affairs but the appropriateness of its politics was open to question.

151. For example, in the Director General's report the previous day it had been stated that notwithstanding the relative merits of nuclear power as compared with power from fossil fuels, scepticism or even outright opposition

continued to be expressed by certain quarters against nuclear power. Such opposition arose either from lack of information as to the relative merits of nuclear power, or from genuine concern about safety and proliferation of nuclear material. Both sources of opposition must be addressed by the Agency. On the one hand, an effective public information strategy was needed to promote an understanding of nuclear energy and, on the other, greater efforts were needed on the part of the international community to develop or improve the necessary mechanism to ensure the highest degree of safety and protection against a nuclear accident, and in the event of such an accident, to ensure appropriate compensation for the victims as a matter of course. In that regard, as well as the Agency's developing and ensuring universal compliance with improved safety measures, Member States, too, should get together and agree with the least possible delay a comprehensive international liability regime that would include both civil and state liability. His country had noted that a start had been made towards developing such a regime, but the urgent need for an early agreement could not be over-emphasized. All Member States were therefore urged to support such an agreement which was essential to universal confidence in nuclear energy and its acceptance.

152. As to the application of nuclear energy in the non-power areas, the Malaysian delegation held the view that the technical assistance and co-operation programme was of direct benefit to developing countries. Malaysia had itself benefited from that programme. However, a liberal and purposeful sharing and transfer of technology to accelerate the development of developing countries would generate whole-hearted support for the goals of peaceful uses of nuclear energy. The use of radiation and isotopes in industry was widely established in the industrialized nations, and the technologies could be acquired through international collaboration. Malaysia was greatly encouraged to see that the programme had gone from strength to strength as evidenced by the increasing number of projects and resources being made available.

153. As a party to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), Malaysia attached great importance to the Agency's safeguards system and appreciated the concern expressed in many quarters that the use of nuclear energy for peaceful purposes implied a certain abdication of sovereign

rights. The majority of countries considered that the most appropriate way to make a commitment to non-proliferation was through adherence to an internationally binding agreement such as NPT or the Tlatelolco Treaty while others held the view that the unilateral declaration of state policy was an equally valid commitment to non-proliferation.

154. However, the IAEA's safeguards system provided a service to sovereign States wishing to create confidence which might not otherwise be achieved. The new procedure for the designation of safeguards inspectors was an attempt to improve the efficiency of that system and Malaysia accepted the modified version.

155. Lastly, it was in the interests of mankind as a whole for everyone present to be aware of their global interdependence and the need to accommodate national and international interests. Divisions of interests or of vested interests had become sharper in nuclear matters between the nuclear and non-nuclear States on such issues as environmental protection, access to energy producing resources, economic development, etc. The vast complexity of the situation offered no simple solution, and it was only through intergovernmental organizations such as the IAEA that co-operation between Governments could be achieved.

156. Mr. CASTILLO CONTOUX (Guatemala) said that nuclear energy played a valuable part in his country's development. Nuclear techniques were being introduced wherever appropriate and measures were being taken to ensure that both the public and the environment remained adequately protected against the harmful effects of ionizing radiations.

157. The new premises of the Guatemalan General Directorate for Nuclear Energy (DGEN) had now been completed. The building housed a secondary standards dosimetry and radiation protection laboratory, laboratories for nuclear applications in health, agriculture and industry, a nuclear information centre, a library and lecture rooms, as well as administrative and general service areas. It would increase Guatemala's capacity for generating and applying scientific and technological knowledge, thereby contributing to the country's comprehensive development. His Government was, moreover, willing to put that infrastructure at the disposal of the countries of the

region and of the Agency, trusting that such co-operation would in part serve to repay the assistance they had provided in the past.

158. His country firmly supported and was increasingly involved in the ARCAL programme, having already been selected as the venue for a number of important ARCAL activities. The programme, together with the valuable assistance provided by the Agency, had been of great benefit to Guatemala, particularly in the area of staff training. Guatemalan technicians were now in demand as instructors for courses held in the region, and the country's installations were called upon to receive Agency fellows. He thanked the donor countries, whose support had to a great extent been responsible for the success of ARCAL, and also the Secretariat for its co-ordination work.

159. With regard to nuclear applications in Guatemala, the past year had witnessed a very positive increase and diversification in the use of nuclear techniques in health, agriculture and industry. The health sector was now capable of producing thyroid axis kits and of offering diagnostic services using radioimmunoassay techniques; it had commenced production of antithyroid antibodies, and had also increased its services in the area of image diagnosis, now having the ability to produce 14 different radiopharmaceuticals for labelling with technetium-99.

160. In the agricultural sector nuclear techniques were now widely accepted as a useful research tool, and the number of experimental plots had increased considerably. Some very promising results had been obtained with crop improvement, such as bean and rice varieties with enhanced nutritive, physical and earliness characteristics. The necessary research had taken several years, and laboratory and field trials would be carried out prior to propagation and distribution.

161. He was pleased to note that in the nuclear analytical area work had been completed on the installation of a total X-ray reflection system for multi-elemental analysis in biological materials and minerals, traces and ultra-traces. Also, work had begun on determining natural radiation levels in Guatemala, starting with an analysis of soils and plants.

162. Radiation protection was accorded the highest priority by his country, and regulations governing radiation protection and the licensing of

radioactive installations had been drawn up. Courses had been given on the operation of gamma radiography units and the management of radiological emergencies, and Guatemala was also participating in a pilot plan on radiation protection.

163. With regard to the Agency's safeguards, he reiterated his Government's confidence in that system, which was a vital element in ensuring that nuclear energy was used for peaceful purposes.

164. The Agency's technical co-operation programme was a valuable mechanism which had made a significant contribution to his country's programme of nuclear applications. It was important, however, that an appropriate balance be achieved in the distribution of the Agency's resources, so as to satisfy a greater number of technical assistance requests. He expressed thanks to the Agency for the technical co-operation it had provided to Guatemala; to the Government of the United States for providing extrabudgetary funds for the implementation of footnote-a/ projects; and to the Government of the United Kingdom for its generous donation to permit implementation of the project entitled "Dosimetry laboratory".

REPLY BY THE DELEGATE OF IRAQ TO THE STATEMENT BY THE DELEGATE OF THE ISLAMIC REPUBLIC OF IRAN

165. Mr. ALKITAL (Iraq), exercising his right of reply, said that United Nations Security Council resolution 598, to which the delegate of the Islamic Republic of Iran had referred, had in fact been adopted by the Security Council in July 1987, but the Islamic Republic of Iran had not accepted it until July 1988. During the intervening year Iran had been occupying parts of Iraqi territory and had only accepted the resolution after the defeat of its forces. The difficulty with which it had accepted that resolution was demonstrated by its statement that it would be easier for its leader to swallow poison than to accept that resolution.

166. The Islamic Republic of Iran had accepted the Iraqi proposal to enter into direct negotiations with Iraq but had not yet actually entered into such negotiations. In fact, the delegate of the Islamic Republic of Iran had even refused to sit next to the delegate of Iraq in the General Conference.

167. The Islamic Republic of Iran continued to search shipping in the Gulf and to keep the Shatt-al-Arab waterway closed. It was also holding prisoners of war as hostages for political negotiations in contravention of the Third Geneva Convention of 1949 and in violation of Security Council resolution 598. For its part, Iraq had repeatedly called for the immediate release of prisoners of war and had made a great contribution to the peace process.

168. As to the remarks made regarding the visit by the Director General, he would leave it to the Director General to reply to those. For its part, Iraq considered that the Islamic Republic of Iran was seeking to use the Director General's visit for propaganda purposes and had no genuine desire for co-operation with the Agency.

STATEMENT BY THE DELEGATE OF THE ISLAMIC REPUBLIC OF IRAN

169. Mr. AMROLLAHI (Islamic Republic of Iran) said that his delegation wished to reserve the right to exercise its right of reply, at a later stage, to the comments which had just been made by the delegate of Iraq.

The meeting rose at 1.15 p.m.

