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RECORD OF THE THREE HUNDRED AND TWENTY-FIFTH PLENARY MEETING

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on Tuesday, 18 September 1990, at 10.30 a.m.

President: Mr. VAJDA (Hungary)

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[*] GC(XXXIV)/914.

The composition of delegations attending the session is given in document GC(XXXIV)/INF/287/Rev.2.

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

1. The PRESIDENT, noting that agreement on a candidate had been reached in the Middle East and South Asia group, proposed that the General Conference elect the delegate of Saudi Arabia as an additional member of the General Committee.

2. The delegate of Saudi Arabia was elected as a member of the General Committee.

GENERAL DEBATE AND ANNUAL REPORT FOR 1989 (GC(XXXIV)/915)(resumed)

3. Ms. AGNELLI (Italy), speaking first on behalf of the 12 Member States of the European Community, said that the European Council had made a declaration on nuclear non-proliferation in Dublin in June 1990 in which it recognized the vital role played by the Agency in the development of the peaceful uses of nuclear energy and the paramount importance of safeguards in ensuring the effectiveness of the non-proliferation regime, as well as the important contribution made in that connection by the EURATOM (European Atomic Energy Community) safeguards system. In that declaration, the Council had called for the application of safeguards on as universal a basis as possible, expressed concern about the continuing risk that further countries might acquire nuclear weapons and called on all States to join efforts to eliminate the danger of nuclear proliferation.

4. The 12 Member States of the European Community Party and not Party to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) were committed to working actively to permit access to the benefits of nuclear energy to those countries seeking it, through equitable and stable regulations on international trade and in compliance with international non-proliferation obligations, since they were convinced that such access could only be considered within the framework of such regulations and obligations. For their part, they had accepted the exercise of international controls on their nuclear installations and had adopted limitations on their exports. They therefore hoped that progress could be achieved on the basis of equitable and stable regulations for international trade in nuclear materials and equipment and international commitments to non-proliferation by recipient countries.

5. The Member States of the European Community fully supported the non-proliferation objectives of the NPT and the Agency's Statute in making the benefits of the peaceful uses of nuclear energy available to all States and they would continue their active support of the Agency's activities. They attached particular importance to the safeguards system which, as the Director General had rightly emphasized, was an impartial verification service that was in the interest of the parties subject to it.

6. They welcomed the proposal for a medium-term plan, which would make it possible to identify priorities, although in order to implement the medium-term plan with the limited resources available, current activities would also have to be examined. It was to be hoped that that activity could enhance the discussions on the role which the Agency could play in the worldwide debate on ways of securing energy supplies, while avoiding irreversible environmental damage, at a time when there was strong public opinion about ecological issues and the delicate link between the environment and energy production.

7. The discussion on nuclear energy was inseparable from a global consideration of the relationship between present and future energy policy and environmental protection. That was particularly true in a world where energy consumption was expected to increase considerably and where many countries did not have such a diversity of energy options as in Europe. It was important that that growth should not result in increased pollution, in particular an increase in gases contributing to the greenhouse effect, or in any other environmental damage. In that respect, the Member States of the European Community had noted the importance attached by the Director General to environmental issues in his statement to the Fourth NPT Review Conference.

8. Environmental preservation included the need to ensure the highest possible degree of safety at all types of nuclear installations, beginning with nuclear power plants. While the Agency's Member States bore the primary responsibility for the safety of nuclear installations located within their territorities, the Members of the European Community appreciated the support which the Agency could give its Member States in fulfilling that responsibility. The impact of the Chernobyl accident had demonstrated the importance of international co-operation in the area of nuclear safety.

9. The Member States of the European Community hoped that the conclusions of the Agency missions to evaluate the radiological consequences of the Chernobyl accident would soon be published. They were participating actively in the current studies on the safety of nuclear power plants in East European countries and were following with particular attention the important changes in Central and Eastern Europe, which were opening up the way to new co-operation in the nuclear field, particularly in the area of nuclear safety. They recognized their duty of solidarity to the countries in that region which had appealed to them to share their experience and provide assistance. That solidarity manifested itself in the prominent part played by the Community and its Member States in the programme of assistance for the economic reconstruction of certain Central and Eastern European countries. One important sector of that programme was the provision of technical and financial resources to improve the safety of nuclear power plants in the countries concerned. However, the European Community Member States reaffirmed that those countries bore the responsibility for implementing the results of the studies and recommendations concerning their nuclear power plants.

10. The Community had noted with satisfaction that the missions of the Operational Safety Review Teams (OSARTs), Radiation Protection Advisory Teams (RAPATs) and Waste Management Advisory Programme (WAMAP) had increased during the past few years and that recently more frequent use was being made of the missions by the Assessment of Safety Significant Events Teams (ASSETs). That trend reflected a recognition that the efforts made in the area of safety and radiation protection were contributing effectively to the objectives set out in Article II of the Statute. The report prepared by the Director General in response to resolution GC(XXXIII)/RES/508, submitted the previous year by the Members of the European Community, on measures to strengthen international co-operation in matters relating to nuclear safety and radiological protection outlined strategies for greater and more effective global co-operation in nuclear safety. The Community recognized the importance of further developing research on the improvement of nuclear safety, environmental protection and the design of all reactor types, including new ones.

11. The Community's proposal to organize a conference on nuclear safety in 1991 with as wide a participation as possible aimed to promote all aspects of nuclear safety. The Community believed that that conference could make an

important contribution to strengthening international co-operation in the area of nuclear safety. It would also provide an opportunity for reviewing the status of nuclear safety worldwide and would enable Member States to identify priority areas and to draw up future action plans. The report of that conference should form part of the Agency's contribution to the United Nations Conference on Environment and Development to be held in 1992.

12. The Member States of the European Community had noted with satisfaction that the Board of Governors had recently approved a code of practice on international transfers of radioactive waste, which was a good example of international co-operation.

13. The European Community had followed with interest the revision of the mandate of the Standing Committee on International Liability for Nuclear Damage, which had already achieved very encouraging results. It hoped that the work on the revision of the Vienna Convention on Civil Liability for Nuclear Damage would soon start and that it would lead to a successful conclusion. The Community would join in common efforts to achieve early agreement on the various issues submitted to the Committee for consideration.

14. The European Community assigned a high priority to the whole spectrum of Agency activities in the field of scientific and technical co-operation. It noted with satisfaction that during the past ten years the funds allocated to technical assistance and co-operation programmes had increased from US $20 million to over $50 million, reflecting a growing interest on the part of Member States in those activities and the renewed efforts by the Agency.

15. The Member States of the European Community welcomed the recent conclusion of the African Regional Co-operative Agreement for Research, Development and Training related to Nuclear Science and Technology (AFRA). The positive experience already gained with similar regional initiatives - such as the Regional Co-operative Agreement for Asia and the Pacific (RCA) and the Regional Co-operative Arrangements for Latin America (ARCAL) - showed the advantages of such co-operation.

16. The Agency played a key role in supporting the development of nuclear technology and in ensuring fair access to nuclear resources. The Fourth NPT Review Conference, which had just completed its work, had not been able to

agree on a final document, but it had permitted a thorough review of the implementation of the NPT. The Agency should analyse the material produced by the Main Committees II and III with the greatest attention. In that connection, the Community looked forward to the strengthening of the Agency's role as a major guarantor of an effective non-proliferation regime and would play its part to ensure that the Agency continued to make a vital contribution to dialogue and co-operation in all regions of the world.

17. Speaking on behalf of Italy, she had a few additional remarks to make.

18. The basic objectives of Italy's energy policy continued to be energy saving, assurance of supply and environmental protection. Since Italy was largely dependent on energy imports, that policy aimed to achieve an effective and competitive system which fully complied with safety requirements and the need to protect the environment.

19. The 1987 referendum had resulted in a five-year moratorium on the construction of nuclear power plants. The debate on the country's energy future was currently being given new emphasis. Account had to be taken of the growing energy requirements and increased public concern about the environmental impact of energy production. In any case, the use of nuclear energy would only be possible when a new inherently safe technology could be adopted. Future plants would have to ensure that no radiation was released even in the event of a malfunction of the facility, so that it would not be necessary to evacuate the neighbouring population.

20. The Italian Government was committed to decommissioning the Caorso and Trino Vercellese nuclear power plants in the expectation that research and development activities would provide new solutions to safety problems. At the same time, Italy was encouraging research on the design and development of new reactors with enhanced passive and inherent safety features, together with research in the areas of radioactive waste management and fusion.

21. Italy wished to underline the need to establish a comprehensive system of international guarantees in the field of nuclear safety. At present, the safety regime basically relied on national initiatives, supplemented by a number of actions taken at international level. Regulatory practices adopted and safety levels achieved varied significantly in different countries and

regions. Strengthening the international safety regime would help make national systems more uniform and raise the general level of safety.

22. With regard to the definition of safety criteria and requirements, a set of codes and guidelines already existed for the present generation of nuclear power reactors, namely the Nuclear Safety Standards (NUSS) documents, which had been drafted by the Agency with the assistance of all Member States and which were constantly updated. The revision of those documents should focus primarily on the definition of stricter safety requirements for a new generation of reactors with enhanced inherent and passive safety features. The NUSS documents should be a binding reference for national regulatory systems. Each country would of course be free to supplement the system if it saw fit, in accordance with its national responsibilities and with due regard for its international commitments, but in no case should national safety criteria be less stringent than those agreed upon at international level.

23. At present, the responsibility for verifying compliance with safety requirements lay essentially with national authorities. The huge volume of control activities worldwide would alone make it impossible to assign that task to an international institution, not to mention the problems of national sovereignty which would be involved. That verification should therefore continue to be carried out essentially at national level. However, procedures should be set up at international level to verify the adequacy of activities carried out in each country. An international institution such as the Agency could be given the responsibility of verifying the quality of the safety regime in individual countries. To that end it would be necessary to encourage the rationalization, simplification and harmonization of national procedures, to establish mechanisms for the continuous quality assessment of national safety regimes based primarily on the implementation of adequate quality assurance programmes and to empower the Agency to conduct safety assessments similar to those it currently carried out under the OSART and RAPAT programmes, not only at the request of countries, but also at its own discretion. Those measures should be internationally accepted under the auspices of the Agency, which would be given the relevant regulatory and control tasks.

24. Italy supported the Agency's project to establish an international programme of co-operation on the safety of WWER reactors. That project was currently being reviewed to determine ways of providing technical assistance. A final decision would soon be made, taking into account the results of the advisory group meeting held in Vienna the previous week.

25. Italy also encouraged direct initiatives with the Central and Eastern European States which, together with Austria, participated in the Pentagonal initiative. Under that programme, the Italian energy authority ENEA was preparing a project to provide assistance and to train managers for the nuclear industry, since Italy shared the desire to develop activities related to the safety of nuclear power plants in other countries. Furthermore, the members of the Pentagonal were negotiating an agreement on early exchange of information in the event of a nuclear accident, based on an automatic system of communication. Italy hoped that that system would be accepted and applied on as wide a scale as possible and would complement the existing international agreements.

26. The aforementioned considerations clearly showed the interdependence of all countries in the field of nuclear safety. However, the chances of fuller accceptance of nuclear power would be limited if the public continued to be concerned about other countries' nuclear reactors. In that context, the Agency had a unique role to play, but it needed to improve the important instruments developed so far and Member States should co-operate fully to make those instruments effective.

27. The contribution which nuclear power could make to environmental protection was an opportunity which should not be missed. Italy fully supported the Agency's expanded activities on the comparative assessment of risks and safety for nuclear power and other energy sources planned for the following two-year cycle, which would require the full participation of other international organizations.

28. The problems raised by the use of nuclear energy varied from one country to another and it was therefore difficult for the Agency to draw up programmes taking into account very different expectations. While being fully aware of those difficulties, Italy was very much in favour of the decision recently taken by the Director General, and supported by the Board, to prepare

during the following few months a medium-term plan for the Agency's activities. That would provide an excellent opportunity for carrying out a thorough concerted study of the role which the Agency would be called on to play in the future and the way in which it could carry out that role.

29. The issue of the revision of Article VI of the Statute could not be eluded indefinitely. Italy was convinced that the growing scope of the Agency urgently required broader, more equitable representation in the Board of Governors. It was, as was evident from the proposals which it had repeatedly submitted, well aware of the need to ensure balanced representation in the Board and to preserve and enhance the effectiveness of the Agency's governing body and its decision-making processes. It trusted that that problem would be tackled with determination and dynamism during the following few months.

30. Mr. CHUNG (Republic of Korea) said that even though the ideological confrontation between East and West was coming to an end and the world was on the verge of a grand reconciliation, certain regional, political and military conflicts could still threaten world peace. Furthermore, problems such as widespread famine, dangerous diseases and serious threats to the environment darkened the future of humanity. The international community should adopt a harmonious approach to deal with those problems before they became uncontrollable. The judicious development and application of science and technology could provide key solutions to those problems. He was very happy that he had participated in the informal meeting of ministers of Member States attending the session of the General Conference which had been organized with the support of the Agency in order to study the possibility of establishing an international forum to discuss existing and future scientific and technological problems.

31. As had been stated at the Fourth NPT Review Conference, the strengthening of the nuclear non-proliferation regime was essential to the development of the peaceful uses of nuclear energy. Acceptance of the NPT regime should be further expanded and there should be more effective implementation of safeguards. His country was highly encouraged by the fact that China and France, among others, had participated in the Fourth NPT Review Conference as observers. It urged countries which had not yet joined the NPT and States Party to the Treaty which had not yet concluded a safeguards

agreement with the Agency to do so. During the Fourth NPT Review Conference, his country had expressed its serious concern about the fact that the Democratic People's Republic of Korea, which had significant nuclear activities, had not yet concluded full-scope safeguards with the Agency almost five years after it had joined the NPT. It therefore called upon that country once again to conclude such an agreement with the Agency without further delay.

32. Under the international non-proliferation regime, efforts should be made to develop the peaceful uses of nuclear energy not only to cope with the oil crisis, but also to re-establish a clean environment. To achieve that goal, industrialized countries should assist developing countries in using nuclear power and make the necessary technology available more easily.

33. Existing nuclear power technology had been subject to intense scrutiny in terms of safety and public acceptance. It was time to look into the development of a safer and more economical new nuclear power technology, using advanced techniques, within the framework of extensive international co-operation. The Republic of Korea was planning to conduct research and development work on a new type of advanced passively safe power reactor which would be easily accepted by the public. It was also studying the possibility of establishing passively safe small or medium-sized plants mounted on barges near the seashore. That solution would shorten plant construction time significantly, improve quality control and assurance and lower electricity generation costs and might help to solve the difficulties of site acquisition on land. His country proposed that all Member States interested should join it in studying that idea and possibly in carrying out such studies. It planned to co-ordinate its work closely with the Agency's programme of user requirements for the evaluation of advanced reactor systems.

34. Reviewing the main developments of his country's nuclear power programme since the previous session of the General Conference, he said that an additional unit had started commercial operation at the end of 1989. There were at present a total of nine nuclear power plants in the Republic of Korea, accounting for more than half of its electricity production. Its nuclear power programme had been further expanded. The construction permit for two additional PWR units had been issued at the end of 1989. Those two units would enter into commercial operation in 1995 and 1996, respectively. In

addition, negotiations were being conducted on three more units (two PWRs and one CANDU reactor), which were scheduled to be operational before the end of the century. The design and contruction of those plants would be carried out on a standardized basis to shorten construction time and to reduce generating costs.

35. Recent forecasts suggested that the Republic of Korea would need an additional 50 nuclear power plants by the end of the year 2030. That would mean that an average of three new plants would have to be constructed every two years. As far as the choice of reactors was concerned, it planned to continue to use advanced PWR and improved CANDU technologies during the next two decades and hoped that passively safe reactors would be commercially available from about 2005. That long-term nuclear programme would be officially adopted by the Korean Atomic Energy Commission by the end of 1990. In that connection, he thanked the Director General who, in his speech at the opening of the Fourth NPT Review Conference in Geneva, had kindly said that the Republic of Korea was an excellent model for other countries in the peaceful uses of nuclear power.

36. During 1990, the Government of the Republic of Korea had set up an independent regulatory organization, the Korea Institute of Nuclear Safety, and had promulgated a law to provide people living near operating nuclear power plants or those under construction with various advantages, including regional development programmes.

37. The Republic of Korea had been producing fuel for CANDU reactors locally since July 1987 and for PWR reactors since 1989. It was also making long-term efforts to develop advanced fuels for PWRs and CANDU reactors within the framework of international co-operation.

38. Together with the development of front-end fuel cycle technology, the Republic of Korea placed strong emphasis on the management of radioactive wastes, which had been rapidly accumulating during the operation of nuclear power plants and as a result of radioisotope applications. It had established a long-term plan of radioactive waste management which called for the construction of final disposal facilities for low- and medium-level wastes by 1995 and an away-from-reactor storage facility for spent fuel by 1997. He

hoped that the Agency would be able to provide internationally acceptable codes and standards on radioactive waste management in a timely manner.

39. His country had a sincere desire to share its experiences and capabilities with other Member States and, in particular, with developing countries. For that purpose, it was going to host the third RCA regional training course on nuclear power project planning and implementation in October 1990.

40. His country had been steadily increasing its contribution to the Agency's activities, particularly since 1987, when it had become a donor country. It had donated 30 personal computers to the Agency's Secretariat the previous year and had supported the Agency's footnote-a/ project in Egypt on computer-aided nuclear safety analysis. It was also providing financial support for the Agency's high-level conference on nuclear safety to be held in 1991 and it planned to increase its contribution to the Agency's technical assistance and co-operation programme.

41. It was often suggested that countries which had active nuclear power programmes and which were strongly committed to the achievement of the Agency's objectives should be better represented in the Agency. His country would sincerely like to have more opportunities to share the experience and knowledge it had gained through developing its nuclear power generating capability. It was very interested in the discussion on the revision of Article VI of the Statute as a whole and asked that its request to be allowed to become a permanent member of the Board of Governors be given favourable consideration. His Government was also willing to increase its technical and financial support for Agency programmes.

42. The Republic of Korea had joined the Convention on Early Notification of a Nuclear Accident and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency and was prepared to co-operate with other Member States in those important areas of nuclear safety. Also, a nuclear co-operation agreement had been concluded in May 1990 between the Republic of Korea and Japan to strengthen co-operation in the area of nuclear safety and related research and development activities.

43. In conclusion, he was satisfied with the way in which the Agency had carried out its work to promote the peaceful uses of nuclear energy and to implement the non-proliferation regime, and he recalled his country's firm commitment to the peaceful uses of nuclear energy in accordance with the letter and spirit of the NPT and to growing co-operation with the peaceful nuclear community. His country, whose experience in the Agency had been enriching and stimulating, had demonstrated that a poor developing country could become a dynamic and responsible member of that organization. It was grateful to the Agency for the assistance which it had given in past years and pledged to work to make the Agency more active and important in future years.

44. Mr. AMROLLAHI (Islamic Republic of Iran) said that his delegation, for the ninth time, was denouncing the violation of the rights of other nations before the General Conference. Its repeated condemnation of the spirit of aggression in any place or form had scarcely been taken seriously at first, but the passage of time and the perseverance of his courageous people had finally shown that his country's conviction had been justified.

45. Recent developments had once again emphasized the extreme strategic importance of oil, which, owing to its scarcity and value, would in the future be used not as a source of energy, but for specific applications for which no substitute was available. Nuclear power was the only viable energy option for the future, but it remained beyond the reach of many countries, particularly in the developing world, and the situation was continuing to deteriorate, as his delegation had been pointing out for many years.

46. The special scientific meeting held during the thirty-third session of the General Conference had had the objective of investigating new approaches to the design of nuclear power plants in the light of the new requirements for electrical utilities and regulatory bodies, environmental issues, and the changes in public opinion resulting from the serious nuclear accidents which had taken place in recent years. Those objectives had not been fully achieved, firstly because only the point of view of the industrialized countries - in other words the main beneficiaries of nuclear technology - had been taken into consideration, and secondly, because the main concern of most speakers had apparently been to determine how public opinion could be persuaded to support nuclear power following the recent accidents, whereas that issue was primarily the concern of nuclear power plant vendors.

47. However, it was clearly an international problem. If the world was being asked to accept the inherent risks of nuclear power, then it should also be provided with its potential benefits on an equitable basis. Unfortunately, that was not the case. Firstly, because of discrimination between various countries on political grounds, and secondly, because nuclear power programmes had become so capital-intensive that only the wealthiest nations could afford to finance them. Those issues deserved closer attention.

48. Technological barriers were erected by the majority of developed countries in order to preserve proprietary rights and maintain a monopoly on certain technologies. That was particularly the case in the nuclear industry where growth was strictly regulated by political considerations, despite the NPT, the Agency's full-scope safeguards programme and other treaties and safeguards regimes. Thus, contrary to the statutory objectives of the Agency, nuclear technology had been stagnating in the developing countries for a number of years, whereas the majority of developed countries were showing considerable growth in that field. It was interesting to note that the developing countries accounted for only about 5% of the total nuclear-generated electricity in the world. That showed clearly that those countries were not enjoying the advantages of nuclear technology, even though they were expected to share fully in any potential transboundary consequences.

49. In addition to political constraints, the passage of time and over-regulation had made the nuclear industry extremely complex and capital-intensive. Although some developing countries were not faced with political barriers, the sheer magnitude of the required investments, particularly for nuclear power plants, had made any venture into that field practically impossible. The stagnation of the nuclear power programmes of the majority of developing countries, in the form of half-completed power plants and dormant nuclear projects, could clearly be attributed to financing issues.

50. Nuclear power thus presented a contradiction: although it was a desirable energy resource because it was generally well suited to replacing oil for electricity production as well as combating environmental degradation, and particularly the greenhouse effect, the capital cost of nuclear power was high and currently beyond the reach of many countries. It was therefore vital to adopt a fresh approach to nuclear power plant technology in order to reduce

investment costs without compromising safety and operability levels. His country firmly believed that nuclear power was the only viable energy option for the future. However, its effectiveness would depend to a large extent on its ability to compete safely and economically with other energy sources, and on whether all countries could benefit from it without political discrimination.

51. His country had described in detail its concerns about those issues during the topical seminar on the financing of nuclear power projects in developing countries, which had been held in Jakarta at the beginning of the month, and it was imperative to reiterate them in the hope that the developing countries would reach a consensus on the subject. That applied to both oil-importing and oil-exporting countries, as the latter would be more seriously affected than the others if, when their oil reserves were exhausted, they were unable to use other energy sources. The oil-exporting countries, and particularly some members of the Organization of the Petroleum Exporting Countries (OPEC), should therefore be warned against the future dangers of overproduction within an economic framework based solely on oil revenues.

52. His country was fully committed to the NPT, to which it was a signatory, and it supported the Treaty's extension beyond 1995. It had taken an active part in the Fourth NPT Review Conference, where it had delivered a critical statement emphasizing that although almost all non-nuclear-weapon States had fulfilled their obligations under the terms of the Treaty, the nuclear-weapon States had generally not done so.

53. On an issue which was directly relevant to the Agency, namely the application of Article IV of the Treaty, he recalled that under that Article the Parties undertook to facilitate the exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy, especially for the benefit of non-nuclear-weapon States Party to the Treaty. A review of the situation over the past 20 years showed that the developing States Party to the Treaty had not only not benefited from the peaceful uses of nuclear energy, but had also had to face growing and often insurmountable constraints in that area. Restrictive measures adopted by the industrialized countries, particularly the nuclear-weapon States, to curb the transfer of nuclear technology for peaceful purposes were a clear violation of Article IV of the Treaty.

54. The Islamic Republic of Iran had been particularly affected by those measures, as they had prevented it from completing the construction of its two nuclear power plants, in which it had already invested almost $4 billion. Its research activities had also been hampered by export restrictions. Severe discriminatory measures had been applied, although it had been one of the first States to accede to the NPT and that all of its nuclear facilities were subject to full-scope Agency safeguards.

55. The Agency's promotional activities should be granted at least the same importance as its safeguards activities. The disparity in those areas was shown by the repeated reductions in the promotional and technical assistance budgets on the one hand, and the increases in the safeguards budget on the other. To ensure the continued existence of the NPT and scrupulous compliance with it, attention should be given to shortcomings in the way it was implemented. Its success would depend, to a large extent, on the will of the nuclear-weapon States to rectify those shortcomings.

56. Thus, while the gap between North and South in the fields of science and technology was growing, the credibility of certain international organizations and certain bilateral and multilateral agreements and treaties was being seriously compromised. That trend also jeopardized the future role of the NPT as a potential instrument for maintaining world peace and security.

57. If peaceful nuclear technology was to be applied worldwide without discrimination, and nuclear power was to be a viable energy option, a number of measures would have to be taken by all the parties concerned.

58. First of all, the Agency had a vital role to play and it should be made clear to the politicians responsible for the nuclear power industry that no developing country had yet succeeded in diverting nuclear material from a power plant for military purposes, as had been concluded in all of the Agency's safeguards implementation reports.

59. Next, the supplier countries should renew their efforts to standardize their nuclear power plants. The nuclear industry as a whole could no longer sustain the development of about ten different types of reactor. The best performing systems currently in operation should be selected for

standardization. Of course, studies relating to new concepts such as intrinsically safe reactors should be continued. However, experience showed that some of the present systems, when operated by well-trained personnel, were sufficiently safe and could be standardized.

60. Licensing procedures should be subject to extensive review and streamlining, particularly in some supplier countries, without compromising the safety and reliability of the systems. Many redundant requirements should be removed, and again standardization should be the aim.

61. Finally, the retroactive laws and regulations which had been periodically enacted by the industrialized countries had considerably eroded the confidence of developing countries in bilateral agreements and contracts concluded with the suppliers. International measures should be adopted in order to protect developing countries in that respect and the Agency should take the initiative of establishing the necessary mechanisms.

62. The international community would find that such measures would contribute much towards reducing the technological gap between North and South and preserving the NPT.

63. The Agency's safeguards system was an important instrument of verification, but the debate on safeguards financing had become unnecessarily complicated. The application of safeguards was one of the Agency's two main objectives, as laid down in Article II of the Statute. It was therefore logical that a substantial portion of Member States' annual contributions should be required to cover the expenses involved. It should be recognized, however, that those expenses had increased considerably owing to the growth in the peaceful uses of nuclear energy in line with the other objective mentioned in Article II of the Statute. That increase must be met by Member States, but the main issue was to decide how that should be done.

64. It would seem fair and logical for the additional expenses to be borne by those Member States which had benefited most from the use of nuclear energy. It was quite unacceptable to expect a Member State whose nuclear facilities had not changed since the establishment of the Agency, or which still had no such facilities, to cover the costs of safeguards implementation in other Member States which had increased their nuclear capacity and the number of their facilities at an enormous rate.

65. The key issue was to establish a link between the nuclear capability and facilities of each Member State and the benefit it derived from the peaceful uses of nuclear energy in general, on the one hand, and the particular Member State's share of the additional safeguards expenses, on the other.

66. Accordingly, he proposed that the following factors be taken into account to ensure the fair allocation of safeguards expenses among Member States: nuclear-weapon capability; number of nuclear power plants (some Member States had proposed taking into account the percentage of electricity produced by nuclear plants, but that could be misleading as such a percentage did not accurately reflect the share of safeguards expenses); number of nuclear research facilities under safeguards; and number of nuclear installations (enrichment, reprocessing, and fuel fabrication plants, etc.) under safeguards. No other factor, such as the economic situation, should be considered. If the economy of a country was in a poor state, it was unlikely that it would have a well-developed nuclear infrastructure.

67. Any attempt to spread the burden of safeguards expenses among developing countries which were neither active in the nuclear field nor in a position to benefit from the advantages of nuclear power would be unacceptable. That opinion was surely shared by many other developing countries, although some developed countries had stated the contrary.

68. His country, which had been the first State of the Middle East to initiate, in 1974, the proposal for turning the Middle East into a nuclear-weapon-free zone, continued to support that proposal, while regretting that Israeli activities and nuclear capability remained an obstacle. Moreover, paragraph 2 of resolution GC(XXXIII)/RES/506, in which the General Conference had requested the Director General "... to consult with the States concerned in the Middle East area with a view to applying Agency safeguards to all nuclear installations in the area ...", had not led to any results because Israel persisted in refusing to accept full-scope Agency safeguards. Nevertheless, the Islamic Republic of Iran was prepared to support any initiative which would bring about the application of Agency safeguards to all nuclear facilities in the Middle East and the eventual establishment of a nuclear-weapon-free zone in that region.

69. The Iranian Atomic Energy Organization was continuing to pursue peaceful activities at its nuclear research centre, despite the difficulties it faced with regard to nuclear technology and material transfer. Nuclear technology was used for the production of radioisotopes and radiopharmaceuticals. Local industry was also making greater use of the gamma irradiation centre's facilities. Seminars and conferences had also been organized to encourage fundamental research in physics and nuclear science as well as their applications. For example, an international conference on high levels of natural radiation was due to be held from 3 to 7 November 1990 in Ramsar. That conference had been organized by the Iranian Atomic Energy Organization in co-operation with the Agency, the World Health Organization (WHO) and the United Nations Environment Programme (UNEP). The international scientific community had already reacted very favourably to that initiative, whose results, it was to be hoped, would bring benefits to all parties concerned.

70. Mr. ROUVILLOIS (France) said that the past year had been rich in events whose full implications would probably only become clear in a few decades. Recent developments in the international situation had somewhat overshadowed the satisfaction of witnessing the processes of renewal in Central and Eastern Europe, but the gradual coming together of East and West had given greater impetus to discussion and co-operation at the international level, particularly in the area of safety.

71. The international nuclear community recognized that nuclear safety was of global importance, as the consequences of an accident would extend beyond national boundaries, and questions of safety were a major issue in the acceptability of nuclear power to the public. Furthermore, calls for a high level of safety regardless of the country or technology in question must be backed up by solidarity with countries whose safety level was judged insufficient. Any action by the nuclear community demanded an international consensus, and the Agency had played a role in promoting international co-operation though the development of a universally acceptable set of safety objectives and criteria.

72. The NUSS codes and guides and the basic principles drawn up by the International Nuclear Safety Advisory Group (INSAG) were references that were

universally accepted by Agency Member States and should be implemented by them. They were constantly revised in order to take into account technical progress and experience gained, and they thus provided an undisputed basis for any future progress in safety at the international level. However, it should be remembered that only the requesting countries could decide what action to take following the results of analyses carried out at their request in their territory. Those results were neither a warning nor an injunction, but a set of reports and recommendations.

73. It was no longer sufficient to seek excellence in safety at the national level. Research and progress in that area must be global in nature, and information on the progress made should be shared. The Agency remained the principal forum for expressing needs, analysing difficulties, collecting data, and drawing up the necessary recommendations with the participation of all concerned. It had amply proved its effectiveness, for instance by producing a code of practice on the transboundary movement of radioactive waste. France, which had played an active role in achieving the consensus on the adoption of resolution GC(XXXII)/RES/490 in 1988, welcomed that prompt success in such a sensitive and important area. There was no doubt that the Agency would become even more important in the future.

74. His country continued to believe that the development of the peaceful uses of nuclear energy was inseparable from appropriate action against the risks of nuclear proliferation. What had been true at the very beginning of the development of nuclear energy was even more so at the present time, when all Members should show greater vigilance with regard to nuclear proliferation. The improvement in relations between East and West should not be accompanied by the development of new nuclear, ballistic or chemical weapons programmes in other regions of the world.

75. France had been following a rigorous policy against nuclear proliferation for many years, was continuing that policy in ever closer co-operation with its main allies, and had contributed to strengthening European unity in that area. As the representative of Italy had stated on behalf of the Member States of the European Community, the Dublin summit had reaffirmed their common stand on that issue as well as their determination to take more concerted action. The same intention had been expressed by the

Heads of State and Government of the seven most industrialized countries at the Houston summit. Finally, at the Fourth NPT Review Conference, where France had been represented by an observer to demonstrate its readiness for dialogue with all its partners, the same concern had been expressed by the vast majority of States, including developing countries. The strengthening of international agreement on that subject gave grounds for satisfaction, as it appeared more necessary than ever to have as wide a consensus as possible in favour of a stable non-proliferation regime and to reconcile the development of civil nuclear activities and the need for binding international commitments.

76. Nuclear energy was obviously one of the essential responses to a world situation characterized by rapid demographic growth, increasing energy demand and growing concern for environmental protection. It was also generally acknowledged that in many countries, increased use of nuclear power would require external support to enhance technological capabilities, provide funding and mobilize manpower. One of the Agency's main tasks was to contribute to that endeavour through its technical assistance activities, including personnel training programmes. France was increasing its efforts in that area, through closer involvement in Agency projects and by increasing its total financial contribution.

77. Lastly, the implementation of strict non-proliferation controls was widely recognized as a prerequisite for the development of nuclear power. In that area, the Agency made an irreplaceable contribution through its safeguards system. The Agency should also be the main forum for working out the difficult consensus referred to previously. It was a difficult task, but there was no other way. Joint monitoring of the peaceful use of nuclear energy was a means of defending it, and of defending development in general. Nothing could be more damaging or unrealistic than to claim that the non-proliferation of nuclear weapons was solely the concern of the developed countries, or that it was an issue for confrontation between North and South. It was clearly an issue of interest to everyone, and particularly to the vast majority of developing countries which were scrupulously honouring their commitments and had nothing to fear from the strict application of international safeguards.

78. Faced with a growing workload and a constant budget, the Agency was forced to make choices; rigorous analysis of priorities and regular evaluation of results were therefore essential to ensure both the effective use of the Agency's resources and the co-ordination of its activities to complement those of Member States.

79. There was at present a growing conviction that nuclear power might enter a new period of expansion, and probably would do so before the end of the decade. Preparations should be made by developing products appropriate for potential future markets and by seeking solutions to the problem of public acceptance of nuclear power. In that spirit, France was continuing to develop its own nuclear power programme. Substantial research and development work was being conducted on reactors to take over from the present generation towards 2010-2015. In the same spirit, the replacement of current reactors made it necessary to give thought to the fate of shutdown reactors, and consequently to add to the present level of experience with decommissioning.

80. Where the fuel cycle was concerned, France was actively pursuing development work on laser technology for uranium enrichment, on the use of MOX fuels, and of course on reprocessing. The facilities at the La Hague UP3 plant would be completed and put into operation during 1990.

81. France was also giving close attention to waste storage options. Construction of a second storage site for low-level wastes had begun. In the interests of securing public support for its nuclear power programme, the French Government had recently decided for the time being to discontinue its siting study for a deep repository in order to allow time for a debate on the technical choices involved and for the improvement of public relations.

82. As absolute priority would continue to be given to safety in the future, a significant amount of work was directed to that end, often in an international framework, and particularly at the European level.

83. Co-operation in Europe of course primarily meant strengthening the unity of the European Economic Community, with the establishment of a single market in 1992, and with the free circulation of energy and in particular electricity within the Community. But since the rapprochement with Central and Eastern Europe, a new and hopeful dialogue had begun and new initiatives

were being taken, for example with Czechoslovakia, Hungary, the German Democratic Republic and Poland. In addition, the foundations for easier co-operation with the Soviet Union had been laid in the fields of science, technology and industry.

84. The internationalization of all aspects of nuclear energy was becoming more essential every day, particularly since 1986 when it had become clear how an event in one part of the world could affect all other parts, however remote. That irreversible trend should also have a positive effect, as it was not only the problems which transcended boundaries, but also the search for solutions.

85. Mr. MONDINO (Argentina) said that the decade which was beginning should enable nuclear power to take its rightful place as the only technically reliable, safe and clean energy option. The distrust caused by the accidents at Three Mile Island and Chernobyl was receding, but until ecological groups recognized the non-pollutant nature of nuclear power, efforts would have to be made to develop new power reactor models which were even safer and more economical than those of the present generation. Confident that the future of nuclear power was a promising one, Argentina intended to continue to develop its capacity to use nuclear energy for peaceful purposes and to pursue the permanent objectives of its nuclear programme until they had been achieved.

86. Argentina, where nuclear power had provided an average of 16.3% of total electricity production in 1990, had the satisfaction of having completed by itself the repair of the Atucha I nuclear power plant, which had been shut down in August 1988 for 16 months owing to faults in some of the fuel channels, after 14 years of effective operation, some of which had been characterized by load factors which were among the highest in the world. That repair, conducted under difficult conditions, had forced the technicians and companies in the nuclear industry to develop special techniques and tools. During the last few months, the plant, which had been in operation again since the beginning of 1990, had operated at 100% of its capacity under excellent safety conditions. The technical solution adopted had been endorsed by a group of experts sent, at the request of the Argentine authorities, by the Agency to evaluate the work undertaken. Argentina was of course ready to make that experience available to the Agency and countries which wished to profit from it.

87. Argentina was in a position to announce that it had completed the conversion of its main research and radioisotope production reactor to the use of low-enriched uranium by means of a technology developed in Argentina. In addition, on the fortieth anniversary of the National Atomic Energy Commission, a set of hot cells, also designed and constructed locally, had been inaugurated to analyse the behaviour of irradiated materials.

88. Argentina was working actively on a programme for the eradication of the Mediterranean fruit fly and hoped that, through those efforts, it would be able to guarantee the quality of the fruit which it exported. In the area of cobalt therapy, it was developing special equipment which it also made available to friendly countries. In addition, it had completed the feasibility study for a high-level radioactive waste disposal facility and it was making that study available to the Agency's Secretariat.

89. Within the constraints imposed by its economic difficulties, Argentina was continuing its international co-operation activities, both at the multilateral and bilateral level. Within the framework of the Agency, it had continued to participate in the technical co-operation programme and in ARCAL, as was demonstrated by the interregional courses it had hosted, the regional workshops it had organized, and the fact that in 1989 it had been fourth in the ranking of Member States in terms of the number of experts and lecturers provided to the Agency and tenth in the ranking for provision of training in the form of study visits and fellowships. Argentina reiterated its full support for the ARCAL programme, the second stage of which had got off to a good start. The programme was a real stimulus to development and regional integration in that area which was so important for the welfare of the people of Latin America.

90. As in previous years, he was in a position to pledge, on behalf of his Government, a voluntary contribution to the Technical Assistance and Co-operation Fund for 1991.

91. At the bilateral level, Argentina had co-operated with a large number of friendly nations with which it had concluded 21 co-operation agreements relating to the peaceful uses of nuclear energy, the most recent one being with the Republic of Indonesia. Others were currently being negotiated and would soon be added to that list.

92. There was reason to draw attention once again to the growing significant co-operation between Argentina and Brazil, the continuity of which was guaranteed by the political will reaffirmed on many occasions by both Governments. The accelerated integration process, adopted with resolute determination by Argentina and Brazil, and the perfect understanding between the two countries in the nuclear field provided all international forums which had expressed concerns on the subject in the past with the best assurance that they could discard once and for all the notion of an alleged risk of a nuclear arms race in Latin America.

93. Argentina was particularly pleased to note the beginning of a new stage in its co-operation with Chile, with which it had had close links in the nuclear field for many years. The beginning of that stage had recently been confirmed during the first meeting of the current presidents of both countries.

94. Argentina continued to be convinced of the need to make the benefits of the peaceful uses of nuclear energy available to all, without imposing restrictions based on equivocal arguments relating to the non-proliferation of nuclear weapons, but with the requirement and acceptance of adequate assurances that the technologies, installations and nuclear materials transferred would be used exclusively for peaceful purposes.

95. Turning to the Agency's activities, he recalled that at the nineteenth session of the General Conference, held in New Delhi in 1979, his Government, considering that the type of technical assistance offered by the Agency did not meet its specific needs, had announced its decision not to apply for such assistance as of 1 January 1980, while making a firm commitment to maintain, and even increase, its contribution to the technical assistance programme in support of other developing countries. During the whole of the 1980s, Argentina had faithfully adhered to those commitments. Having carried out a thorough analysis of the evolution of the technical assistance provided by the Agency, his Government now believed that the reason which had prompted it to take its decision in 1979 was no longer applicable. Accordingly, Argentina would begin to take advantage of Agency technical assistance again as of 1 January 1991. That major change in a policy followed for more than a decade reflected a clear recognition of the fact that, through the Secretariat's continuous efforts, the volume and quality of current technical assistance and co-operation activities had reached satisfactory levels.

96. With regard to safeguards, it was gratifying to note that there had been no case of failure to fulfil the commitments undertaken by Member States and that the Secretariat was therefore in a position to state that no material subject to safeguards had been diverted for non-peaceful purposes.

97. As to the problem of the financing of safeguards, which had still not been settled after more than 15 years, his delegation reaffirmed its conviction that the problem would not be solved simply by finding ingenious formulas, but by determining how the cost of safeguards could be kept to acceptable levels in future without damage to their credibility. It was obvious that, with the impending upturn in the use of nuclear power, the application of existing safeguards methods to an ever-growing volume of material and number of nuclear facilities would soon lead to an impossible situation where Member States would no longer be able to finance the system. That was why, at the last meetings of the Board of Governors, his delegation had stressed the vital need to rationalize those methods and to focus efforts on the application of safeguards to direct use material, and to the limited number of facilities where such material was produced, treated or stored.

98. His delegation was satisfied with the measures taken by the Secretariat in the area of nuclear safety. Argentina had acceded to all the existing international conventions in that area and had participated actively in drafting the new code of practice on the international transboundary movement of radioactive waste which had been submitted to the General Conference for its consideration and the proposals for amending the Vienna Convention on Civil Liability for Nuclear Damage, which it hoped would lead to wider accession to that instrument.

99. The Agency should also be commended for the results achieved in the areas of food and agriculture, life sciences and physical sciences. In the last-named area, the International Centre for Theoretical Physics in Trieste once again deserved particular praise for its excellent work. Lastly, the Director General and the Secretariat should be thanked for their hard work and for what they had accomplished in spite of the growing difficulties they faced. His Government appreciated all those efforts and undertook to lend wider and more active support to all the Agency's activities.

100. Mr. ALVAREZ GORSIRA (Venezuela) expressed appreciation of the quality and volume of the work carried out by the Agency, particularly in the area of technical assistance and co-operation. His Government regarded activities in that area as the Agency's raison d'être, since they were of benefit to the developing countries and an effective and modern means of improving the living conditions of great populations. As the former Secretary-General of the United Nations, Mr. U Thant, had rightly pointed out, development was the long and slow path that led to peace. International scientific and technological co-operation was advantageous to all, not only the poor and less developed countries. It made it possible to maintain peace by helping to narrow the technological gap between industrialized and developing countries. However, the efforts made in that direction were not enough: instead of diminishing, the technological advantages of the industrialized countries were increasing at an excessive rate, thereby facilitating their economic growth, while countries in the South were experiencing a deterioration which was adversely affecting the standard of living of their populations and increasing the contrasts between the peoples of the world, thus engendering envy, aggressiveness and violence. In that context, the Agency's activities in the area of technical assistance and co-operation, together with other statutory activities, made an important contribution to the maintenance of international peace and security. Accordingly, Venezuela felt very strongly that technical co-operation should receive more support, be granted more substantial, assured and predictable resources, and be regarded as the Agency's main activity.

101. Since Venezuela had oil, hydroelectric and other resources, it did not intend to use nuclear power in the immediate future. It had therefore requested assistance from the Agency for projects concerning applications of nuclear techniques in agriculture, medicine, food and other areas. It needed that support and it hoped that that fact would be taken into account in the allocation of technical assistance resources. For 1991-92, Venezuela had submitted technical assistance project requests in the areas of health, agriculture and education, and their implementation would make a substantial contribution to the country's development plans.

102. In May, Venezuela had hosted the seventh ARCAL co-ordination and planning meeting, during which the schedule of activities presented by the Agency for 1991-92 had been examined and the second stage of the programme (1990-94) had been co-ordinated and planned. The experience gained during the implementation of the first stage would surely serve to strengthen the ARCAL programme, which was a valuable instrument for technical promotion and regional integration supported by the Venezuelan Government and by private Venezuelan institutions working in the area of nuclear energy.

103. His delegation thanked the Agency for the way in which it had conducted that co-operation and urged it to make the necessary efforts to ensure that the programme received the required resources. It also thanked donor countries and organizations and recalled the importance of their assistance for the programme's success.

104. The public interest in the environment had been increasing since the United Nations Conference on the Environment in 1972, causing the misguided notion of development based solely on accelerated economic growth to be abandoned. In that light, Venezuela was proud of having launched in 1976, with the promulgation of the organic law on the environment and the establishment of the Ministry of Environment and Renewable Natural Resources, an environmental policy whose main objective was to reconcile national development with the need to protect the environment.

105. Venezuela also shared the concerns raised internationally by the greenhouse effect and supported the environmental protection activities carried out by international organizations. It was following with interest the comparative studies on the impact of different energy sources on the environment and on health. In order to implement the necessary corrective environmental protection measures, however, it was necessary to adopt a global approach to the problem of pollution. Those comparative studies should be based on scientific criteria and not on economic considerations likely to favour one energy source to the detriment of others. Decisions taken in the area of energy must not be guided by simplistic criteria or theoretical schemes which did not correspond to the changing reality. Given that research instruments and capabilities for scientific and technological innovation were continually developing in all areas, including that of fossil energy sources,

it was possible to state that countries could continue to develop with bearable costs and risks. On the other hand, it must also be borne in mind that underdevelopment was just as dangerous for the environment as overdevelopment. Development needs and environmental requirements were interlinked, and developing countries whose economies were highly dependent on the exploitation and export of a natural resource could not be expected to make sacrifices which industrialized countries were not prepared to make.

106. The Agency should be commended for the effective work it was doing in the area of environmental protection, which was supported by a large number of technical assistance projects. In his statement, the Director General had pointed out, as an example, that the programme on nuclear applications was particularly significant in terms of its focus on the environment and the related question of sustainable development. That was the most important contribution which the Agency could make to international co-operative efforts to slow down environmental degradation: while it was in line with one of the Agency's fundamental activities, namely technical assistance and co-operation, that activity also helped to promote the sustainable development of the least developed countries.

107. The Agency's activities in the area of nuclear safety and radiological protection deserved to be praised once again. Nuclear safety was of vital importance, since it benefited the whole of humanity. His delegation therefore regarded favourably the increase in the activities planned in that area by the Agency. However, since certain activities in the area of nuclear safety and radiation protection were of more immediate benefit to developing countries, his delegation recommended that those directly related to power reactor safety be financed with extrabudgetary resources. That would make it possible to set aside the necessary financial resources for improving the safety of nuclear techniques used in medicine, agriculture, industry and research and strengthening the radiation protection infrastructures in developing countries.

108. Given the importance which Venezuela attached to the Agency's technical assistance activities, particularly those relating to the applications of nuclear techniques in agriculture, medicine, geology and food, and despite the fact that Latin America was the region which had been the highest implementation

rate, his delegation felt it was necessary to recall the recommendations it had already put forward previously with a view to increasing the programme implementation rate. It was essential to modify certain existing internal administrative procedures and financial regulations which hampered the Department of Technical Co-operation in the performance of its work. Similarly, despite the progress achieved in that area by the Secretariat, efforts should be continued to solve the problems of equipment maintenance and spare parts as soon as possible. Countries which paid contributions in non-convertible currencies should help the Secretariat in overcoming the problems raised thereby. The formalities relating to fellowship requests should also be expedited, both within the Agency and in the countries providing fellowships. The Secretariat should also consider redistributing its staff so as to strengthen the Departments which administered the greatest number of projects, namely the Department of Technical Co-operation and the Department of Research and Isotopes.

109. His delegation was pleased that the increased use of experts from Latin America had contributed to the success of activities under the ARCAL programme, thus confirming that the use of more experts from developing regions could facilitate the implementation of programmes and contribute to the scientific and technical development of countries in those regions.

110. Similarly, efforts should be continued to achieve a more balanced distribution of budgetary resources between the Agency's various activities and to ensure that the policy of zero growth did not hamper technical assistance activities. It was particularly disturbing to note that the financing of those activities continued to depend largely on voluntary contributions to the Technical Assistance and Co-operation Fund (TACF) which, though appreciable, did not guarantee assured and predictable resources for the implementation of projects. It should also be stressed that the pledges of contributions to the TACF continue to diminish and that pledged contributions were not necessarily paid on time.

111. With regard to the medium-term plan, two recommendations had been made by his delegation during the meetings of the Board of Governors preceding the General Conference. The first was that, in order to achieve its aim of enabling the Agency to meet present and future challenges arising from its

objectives, the plan should be prepared taking into account, firstly, the fact that the interests and needs of Member States with regard to the use of nuclear energy for peaceful purposes differed, and, secondly, the fact that nuclear science was a dynamic area, characterized by constant progress and unpredictable circumstances which must be applied in a changing world. The second recommendation was to uphold the basic criterion that the technical co-operation programme should meet the specific needs of Member States.

112. In conclusion, he thanked the Director General, the Secretariat and, in particular, the staff of the Department of Technical Co-operation for the efforts they had made in implementing the Agency's programmes.

113. Mr. ANGUIANO ROCH (Mexico) said that the General Conference, which gathered together all Member States every year, was a political act which brought with it the duty to make a thorough analysis of the results already achieved and to review policies and trends in the development of nuclear energy. It also meant taking full international responsibility for the peaceful use of a source of energy which involved risks but also had enormous benefits for humanity. In that context, the Agency had a vital role to play in promoting the safe and reliable use of nuclear technology while ensuring that the benefits of its multiple peaceful applications made an effective contribution to peace and progress throughout the world.

114. The Annual Report for 1989 showed convincingly that the Agency had achieved positive results in all areas of its activities. His delegation was pleased with that success and warmly congratulated the Director General and the Secretariat, and in particular the Department of Technical Co-operation, for their untiring efforts in conscientiously carrying out their duties, despite the constraints imposed by a zero-growth budget.

115. Mexico was firmly resolved to develop its nuclear power programme and was proud of operating one of the largest nuclear power plants in the developing world. The first unit of the Laguna Verde power plant had been fully operational since July 1989 and every effort had been made to ensure the highest levels of safety.

116. Mexico attached paramount importance to nuclear safety and therefore strongly supported the Agency's activities in that area. In many countries, the risks of an accident dominated the debate on nuclear power. All

Member States had an unfailing duty to stand by the Agency in ensuring the highest levels of safety in the peaceful use of nuclear energy. Mexico had committed itself fully to that obligation. It was party to the Conventions on Early Notification and on Emergency Assistance and had acceded to the Convention on the Physical Protection of Nuclear Material, and the nuclear safety codes (NUSS) were an integral part of Mexican legislation. In addition, Mexican experts had participated actively in the preparation of the code of practice on the international transboundary movement of radioactive waste which had been submitted to the General Conference for its consideration. In his delegation's view, safety had thereby been strengthened and the international community had provided itself with a broad framework of co-operation for improving nuclear safety margins.

117. Mexico believed that safety and the safeguards system were essential requirements for the peaceful applications of nuclear techniques and was therefore grateful to the Agency for its unstinting efforts to strengthen the safeguards system. His delegation welcomed the accession in 1989 of two new States to the NPT. It also noted with satisfaction that, during the same year, the Agency had concluded five new safeguards agreements under the NPT or the Tlatelolco Treaty, and it hoped that other signatories to the NPT would honour that obligation in the near future.

118. The recent NPT Review Conference had enabled Member States to carry out a thorough analysis of the changes in the world situation regarding non-proliferation, disarmament and co-operation in the peaceful use of nuclear energy. From the frank and comprehensive dialogue which had characterized the meeting, it had emerged that it would be necessary, for the following five years, to continue to make a complementary and parallel evaluation of progress in the areas of non-proliferation and nuclear disarmament.

119. Mexico attached the greatest importance to the Agency's technical co-operation, which it regarded as an excellent mechanism for supporting the development and modernization of countries in the Third World. In that connection, he wished to recall Mexico's contribution to the use of the sterile insect technique through programmes such as those on the Mediterranean fruit fly and the New World screwworm, to which the Director General had referred in his opening statement.

120. It was encouraging to note that in 1989, for the first time, the resources allocated to the Agency's technical co-operation programme had exceeded $50 million. There was no doubt that the Agency's contribution to the development of agriculture, industry, food and medicine had been substantial. What the Agency did, it did well, and it deserved praise for that. However, consideration must be given to new ways of helping it discharge its vital responsibilities, bearing in mind that the extent of the Agency's efficiency was dependent on the will of Member States.

121. The twentieth century was drawing to an end and yet the impressive progress of science and technology had not made it possible to stamp out starvation, poverty and disease, which were the main threats to international peace and security. The Agency had a special, even unique, role to play in the battle against those threats.

122. The technical co-operation programme was an appropriate way of promoting progress in developing countries, and the work carried out by the Agency in that area was commendable. All the same, it should be recognized that its contribution towards meeting the immense needs of the developing countries was far from sufficient. It was therefore essential to strengthen the technical co-operation programme, but in order to do so, it was not enough to pledge and pay higher contributions. The access of developing countries to the peaceful applications of nuclear techniques also called for the removal of artificial obstacles based on political pretexts or spurious arguments regarding safety and non-proliferation. For their part, the non-nuclear-weapon countries should make a clear commitment to abide scrupulously by their obligation to apply nuclear techniques exclusively to promote the development and welfare of their populations. The resources allocated to that huge task were quite evidently insufficient. Together with the principle of zero real growth in the Agency's budget, which tended to favour safeguards activities at the expense of promotional programmes, there was reason to wonder about the real extent of the commitment which was repeated each year at the General Conference.

123. With regard to the financing of safeguards activities, whatever mechanism was adopted should take into account not only financial criteria, but also other elements such as the constitutional commitments of Member States and the level of development and nuclear capability of each country.

124. In the Agency's policy-making organs, the Mexican delegation had stressed that the safeguards system should be flexible enough to be applied properly to States which were essentially different with regard to the peaceful use of nuclear energy. It had already expressed its doubts about interpreting the NPT too restrictively by extending the application of safeguards to the civil facilities of nuclear-weapon States. In any case, the cost of such an extension should be borne by those States or covered from voluntary extrabudgetary contributions.

125. The attachment to a status quo decided 30 years previously had prevented progress towards new co-operation formulas that would enable the Agency to adapt to the accelerating changes in the contemporary world. There was a lack of political will to modify the archaic structure of the Board of Governors, to provide more substantial and assured resources for the peaceful applications of nuclear energy, to make a comprehensive review of the financing of safeguards, taking all the relevant factors into account, and to pursue efforts aimed at adopting binding principles and standards for international co-operation in the area of nuclear energy. Only with a constructive attitude and a vision for the future could the inadequacies of the Agency be overcome and the foundations for concerted action to provide present and future generations with a common hope of survival and prosperity.

126. Mr. CASTRO DIAZ-BALART (Cuba) said that the General Conference's full agenda called for thorough discussion if a consensus was to be reached on the priority items. The Agency's Annual Report showed that, in 1989, the total installed nuclear capacity worldwide had increased by 3%. The fact that 12 new nuclear power plants had been connected to the grid reflected both the scientific and technical progress of the past decade and the growing attention paid by the international community to radiation protection and nuclear safety, such attention being the best means of continuing to promote the peaceful uses of nuclear energy.

127. The policy of zero real growth of the Regular Budget should be reconsidered, because a modest annual increase would add to the resources available to the Agency for implementing its programmes while maintaining an equitable balance between the total funds allocated to safeguards activities and to promotional activities.

128. The positive impact of the technical co-operation programmes implemented through the Agency in developing countries was well known. Since voluntary contributions made up a significant proportion of the funds available to the Agency for financing technical assistance, his Government approved the indicative planning figures and, as every year, would pay its share to the TACF.

129. He thanked the Agency for its valuable co-operation and the support which had enabled his country to make substantial progress in the areas of radiation protection, evaluation of hydrological resources and the use of ionizing radiation in medicine and agriculture. Cuba also contributed to the implementation of the Agency's technical assistance programmes. Under the ARCAL programme, Cuba had undertaken to co-ordinate the international courses on radiation protection in medicine which would be held during 1990 in Guatemala and Costa Rica, and it was offering fellowships for three other regional courses which were to be held in the near future. During 1990, the second regional course on medical scintigraphy for specialists in the region had also been held.

130. With regard to the agenda items relating to Israel's and South Africa's nuclear capabilities, his Government maintained the position it had stated during previous sessions of the General Conference and in other international forums, namely that those countries should place all their nuclear facilities under Agency safeguards, abandon any aggressive attitudes towards neighbouring States, and put an end to the policy of apartheid.

131. During the past decade, his country's nuclear institutions, under the authority of the Executive Secretariat for Nuclear Affairs, had helped set up, within the framework of the national effort to attain the objectives of the nuclear programme, a large number of establishments for production, teaching and research. Despite a certain delay, the construction of the Juraguá nuclear power plant was progressing under very strict quality control, and an extensive training programme for future operating personnel was under way.

132. The technical standard and conscientiousness of the work being performed in his country in the area of nuclear power and of the nuclear programme in general had been publicly recognized by the specialists from

various countries and organizations who had visited his country, which had included representatives of the national atomic energy commissions of the Soviet Union and Mexico and of the World Association of Nuclear Operators (WANO), experts from the Agency and even representatives of the United States Nuclear Regulatory Commission. During the coming years, the commissioning of units 1 and 2 of the Juraguá plant and the nuclear research centre would be important milestones for the peaceful uses of nuclear energy in Cuba.

133. His country had also made progress with the applications of nuclear techniques. Studies on water resources had been carried out, radioimmunoassay techniques had been used more widely, and complex nuclear instruments for medical purposes had been designed and built. In addition, a growing number of locally produced labelled compounds and radiopharmaceuticals were being supplied to the country's medical institutions. Cuba had recently welcomed a RAPAT mission which had been able to confirm that the services in charge of radiation protection were performing their functions and duties in a satisfactory way.

134. The work on training specialist personnel had continued, and during the past decade 700 people with higher-education diplomas had joined the ranks of the technical staff in various branches of the economy. The organization of the third course on topical problems in nuclear science, co-sponsored by the International Centre for Theoretical Physics in Trieste and the Agency and attended by lecturers and specialists from more than 15 countries in America, Europe and Asia, was proof of the standard attained.

135. Those results were only a part of his country's effort, in which more than 30 000 technical and other specialists had contributed to the advancement of science in various areas and to significant progress in human health, as witnessed by the development of vaccines against meningitis and hepatitis B and work on the epidermal growth factor. His country had even attained standards exceeding those given by the United Nations Development Programme (UNDP) for all the industrialized countries with regard to the ratio of doctors to inhabitants, the reduction of infant mortality, and life expectancy and other health indicators. It was precisely those achievements which had enabled his country's authorities to propose to the Soviet Union

that Cuba receive annually up to 10 000 children from the areas affected by the Chernobyl accident in order to provide them with highly specialized medical treatment. That valuable experience would certainly be of great use for the in situ research which the Agency proposed to conduct at the Pripyat International Centre and in which his country was ready to participate actively.

136. The development of atomic energy for peaceful purposes, must be based on a climate of mutual trust and respect of internationally made commitments. While it was true that the past years had seen the conclusion between the United States and the Soviet Union of agreements to reduce confrontation and the danger of nuclear war, that favourable climate should not prevent détente from coming to all States, which meant renouncing colonial domination and the use of force as the sole argument of persuasion. Unfortunately, the world was threatened by a conflict which could attain extraordinary proportions in the Middle East. His Government had clearly expressed its position on that subject in the United Nations Security Council: it advocated a peaceful negotiated solution, as it considered the use of force to resolve international conflicts unacceptable.

137. On another aspect of current world politics, everyone was aware of the momentum that various groups were gaining which for various reasons strove to sow doubts about the future of nuclear power, in particular by exaggerating its potential negative impact on the environment. Those groups, however, appeared not to realize that it was industrial development itself which had led to an irrational battle between nature and man, a battle in which the latter would be the great loser. The environmental alarm very closely affected the energy production sector, which was responsible for the thousands of millions of tonnes of soot and harmful gases released each year into the atmosphere from the burning of fossil fuels. It was difficult to say how long that situation could last, but it was certain that the biosphere could not serve as a vast refuse dump for much longer. The volume of waste produced by modern civilization was already stretching the limits of the planet's capacity to assimilate them: industry produced as much sulphur dioxide as nature itself, 1.2 times more carbon dioxide and an intolerable quantity of chlorofluorocarbons, and it consumed a fifth of the oxygen which nature

produced. That disturbing trend threatened to unleash the greenhouse effect, to destroy the ozone layer and to poison the biosphere. It should be recognized that there was no ready formula for resolving environmental and energy problems. But that did not mean that the world was condemned to accept the consequences passively. Whether one welcomed it or not, the fact was that nuclear power, a non-conventional source of energy already exploited on an industrial scale, could make an important contribution to solving those problems. As the Director General had pointed out in his opening statement, if the 17% of electricity currently generated by nuclear power worldwide were to be produced by coal instead, some 1800 million tonnes of carbon dioxide would be added to the 20 000 million tonnes already released by the burning of fossil fuels.

138. Each session of the General Conference offered a new opportunity for comparing points of view and reflecting on the approach to be adopted in the future for helping to improve the Agency. The many problems which existed were complex and, as was well known, had causes that were not purely technological in nature. Resolving them called not only for good intentions, but above all for concrete action and a common political will. However, as long as the inequalities persisted which were the root of starvation, fratricidal wars, poverty, cultural backwardness and ill health, those intentions would lead nowhere. In those circumstances, international co-operation once again presented itself as the key by which - thanks to the transfer of the technology, material resources and know-how essential to the breathtaking progress of science and technology - the necessary conditions could be created for stabilizing the planet's population and meeting its basic needs, especially in the areas of education, health and food. Isolated actions would not suffice; only a co-operative effort on a global scale would give humanity full access to the fruits of progress and to the sources of energy which could support that progress. There undoubtedly lay a true challenge to human intelligence and activity.

139. Lord Marshall of GORING (World Association of Nuclear Operators) said that WANO, which had been established by electrical utilities throughout the world following the terrible nuclear accident at Chernobyl, was a newcomer compared with the Agency, having come into being at an inaugural meeting held in Moscow in May 1989.

140. Comparing the two organizations, he recalled that the Agency had been created decades previously to carry out the collective will of governments and had been given a very broad mandate covering the use of radioactive isotopes and nuclear research, technology, safety and non-proliferation. At the time of its creation, governments had believed that nuclear science and technology presented great opportunities for people throughout the world. The nuclear establishment in all countries had felt instinctively at the time that a conscientious application of science, technology and good regulation would automatically lead to good safety.

141. That idea had in fact been mistaken because it had not given sufficient recognition to the important role of operators, meaning the electrical utilities, in ensuring nuclear safety. It had taken the accident at Three Mile Island to make people aware of that. The fact that the United States had good technology and detailed regulation and that the Government played an important role in the nuclear sector had not prevented that accident from occurring.

142. To their great credit, the producers of electricity in the United States had reacted to the Three Mile Island accident in an extremely constructive way by setting up in Atlanta (Georgia) the Institute for Nuclear Power Operations (INPO) to oversee the management of nuclear power plants throughout the country. Although at that time some people had found it difficult to understand the need for a new organization, everyone now acknowledged that INPO had brought about dramatic improvements in the safety of American nuclear power plants by producing a whole new attitude and sense of responsibility in the management of nuclear power plants by the utilities.

143. Unfortunately, the world had not learned the lessons of the accident at Three Mile Island: less than a decade later the Chernobyl accident had occurred. It had immediately become apparent to the United States utilities that there was a need for a world organization with similar objectives to those of INPO. That point of view had soon been adopted by Electricité de France and other European utilities, and then by utilities worldwide. Moreover, the need to establish such an organization had been recognized by Soviet operators at a meeting held in Paris in October 1987, and all the

operators of nuclear power plants in the world had agreed to it in principle. After only a year's discussions, WANO had been inaugurated in Moscow in May 1989.

144. It was not an intergovernmental organization. It was also not an organization of researchers or designers of nuclear power plants, and even less was it an organization of nuclear regulators. It was concerned only with the operational safety of nuclear power plants. Its members were bound together by the fear that one of them might let the others down by a management error and another nuclear accident. Neither the accident at Three Mile Island nor certainly that at Chernobyl should have occurred, and it was to be hoped that Chernobyl would be the last.

145. Whether an accident happened did not depend on what governments, regulatory authorities or designers did, but on what was done by the nuclear power plant operators. Each of them had a powerful interest in the performance and management of the others, and it was for that reason that WANO had been created. It was sad that it had taken the accidents at Three Mile Island and Chernobyl to convince them of their proper responsibilities.

146. WANO was only 16 months old. It could therefore not be expected already to have transformed the world nuclear scene, but it had made a good start. Virtually all the operators of nuclear power plants had come to Moscow in 1989 and subscribed to its objectives. They had very clearly expressed their commitment to work together to improve the reliability and operational safety of their nuclear power plants. The way in which WANO's objectives were becoming a practical reality was extremely encouraging.

147. The main work of WANO was done by its members. To assist them, four regional centres, in Atlanta, Paris, Moscow and Tokyo, and a co-ordinating centre in London had been set up. The necessary communication networks had been established, and methods and procedures were being tested. WANO was now pursuing the goals which it had set itself. It still had many challenges to meet, but its success was assured.

148. WANO could not be effective if certain nuclear power plant operators decided not to join or if the commitment of its members was not complete. Fortunately, all the electrical utilities which operated nuclear power plants

were full members of WANO and, to all appearances, each of them fully supported its objectives. The electrical utilities of the People's Republic of China and of Romania had not joined WANO at the time of the inaugural conference, but they were both expected to do so before they started operating nuclear power plants.

149. One of WANO's objectives was the exchange of information, primarily on the safety of nuclear power plants. Each WANO member had an obligation immediately to report any incident to other members in a frank and full way. Although it was clearly difficult for them to report their own errors, it was important that the nuclear power plant operators should do so conscientiously. In order to reduce inhibitions, all members obeyed the golden rule that such reports were entirely confidential. They were not intended for publication nor, of course, to be communicated to the press. That rule was essential to ensure frank and effective discussions. After a brief period of hesitancy, that event reporting system was working well.

150. Another of WANO's important objectives was to stimulate direct dialogue between nuclear power plant operators. As was well known, while there had been a great deal of international co-operation in the past between scientists, designers, regulatory bodies and governments, it had been rare between nuclear power plant operators. That was a serious omission. For example, the station manager or chief engineer of a Soviet power plant would not normally expect to be able to visit a plant in a Western country at any time, but those were the people who had most influence on the safety of their plant. It was therefore important for them to visit plants in other countries in order to see how those plants were managed and how similar management techniques could be adopted in their own country.

151. It was equally important that power plant operating specialists from Western countries should visit plants in the Soviet Union and Eastern Europe, as a lasting worldwide co-operation could not be established unless information flowed both ways to the benefit of all. For that reason he had set WANO the target of getting every single power plant in the Soviet Union and Eastern Europe to participate in at least one exchange of visits. That ambitious programme should be completed before the second biennial meeting of the WANO General Assembly, which was due to be held in Atlanta in April 1991.

152. Those exchange visits were already contributing to an evolution of WANO. For example, the Zaporozhe plant in the Soviet Union and the Duke Power plant in the United States had agreed to repeat their exchange visits, but for three months instead of two weeks, and to concentrate on topics specified in advance. Thus, the exchange of information was in effect turning into technical assistance without there having been any intervention or suggestion from the Chairman, the co-ordinating centre or the four regional centres.

153. To sum up, it was fair to say that WANO was a kind of club where nuclear power plant operators having extensive experience gave assistance to those in need of it, for whatever reason. Although governments, regulatory bodies and, indeed, the Agency could do a lot, only WANO could stimulate direct contacts between one nuclear operator and another, and that was the unique task it had taken on. Thus, WANO would surely make an important contribution to nuclear safety, in a way which no other international organization could imitate. He therefore hoped it would assist the return of nuclear power worldwide.

The meeting rose at 1.20 p.m.