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President: Mr. CHUNG (Republic of Korea)

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[*] GC(XXXIII)/871 and Add.1-3.

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

ARRANGEMENTS FOR THE CONFERENCE

(a) ADOPTION OF THE AGENDA AND ALLOCATION OF ITEMS FOR INITIAL DISCUSSION
(GC(XXXIII)/871 and Add.1-3)

1. The PRESIDENT announced that the General Committee had recommended that the General Conference include in its agenda all the items on the provisional agenda contained in document GC(XXXIII)/871 as well as the three supplementary items A, B and C requested for inclusion by Member States in documents GC(XXXIII)/871/Add.1, 2 and 3. The General Committee also recommended that the items be allocated for initial discussion as indicated in those documents.

2. It further recommended that supplementary item A in document GC(XXXIII)/871/Add.1 and supplementary item B in document GC(XXXIII)/871/Add.2 be inserted immediately after the present item 20 of the provisional agenda in document GC(XXXIII)/871 in the order referred to above and that supplementary item C in document GC(XXXIII)/871/Add.3 be inserted between the present items 13 and 14 of the provisional agenda.

3. In addition, the General Committee recommended that the order of items proposed for the agenda - with the inclusion of the supplementary items and appropriate renumbering of the items - remain unchanged, on the understanding that changes might have to be made in the course of business both in plenary session and in the Committee of the Whole in order to make best use of the time available.

4. The General Committee's recommendations were accepted.

(b) CLOSING DATE OF THE SESSION AND OPENING DATE OF THE NEXT SESSION
(GC(XXXIII)/871; annotation to item 4 (b))

5. The PRESIDENT said that the General Committee had authorized him to inform the General Conference that it recommended setting Friday, 29 September 1989, as the closing date of the thirty-third regular session and Monday, 17 September 1990, as the opening date of the thirty-fourth regular session of the General Conference, which would be held in Vienna.

6. The General Committee's recommendations were accepted.

REQUESTS FOR THE RESTORATION OF VOTING RIGHTS (GC(XXXIII)/INF/276)

7. The PRESIDENT said that the General Committee recommended that the General Conference should accede to the request made by Peru that the last sentence in Article XIX.A of the Statute be invoked in order that Peru might be permitted to vote during the current session of the General Conference.

8. The General Committee's recommendation was accepted.

GENERAL DEBATE AND ANNUAL REPORT FOR 1988 (resumed)

9. Mr. ETTINGER (Israel) joined previous speakers in congratulating the Director General on his re-election and reiterated his delegation's appreciation for the excellent work done by the Secretariat under his leadership.

10. In his previous year's statement, he had made reference to the slow-down in the development of nuclear energy which had continued to affect the nuclear community during the past decade. That regression had had far-reaching consequences for the status of the nuclear industry and nuclear research the world over. Such developments, which could adversely affect the provision of adequate energy supplies in a clean and habitable environment in the future, were mainly due to the growing impact of the anti-nuclear energy movement on public opinion.

11. Much of that opposition resulted from insufficient public education, lack of knowledge, and latent fears related to nuclear and radiation safety issues. The IAEA should therefore further its efforts to recapture the initiative and draw up a broad programme aimed at regaining trust and confidence. At the same time the IAEA should be commended for its unsparing and tireless efforts in developing and updating safety-related standards and codes of practice, and for its excellent professional conferences, particularly those dedicated to nuclear reactor safety and accident prevention and management, as well as those dealing with future trends in nuclear energy and technology.

12. Israel advocated a greater role for the IAEA in two areas, of great value to the future of nuclear energy, and other peaceful applications: expert systems, a rapidly growing area in artificial intelligence, were

currently being implemented in numerous branches of technology and engineering. Two of those, nuclear power and space technologies, involved problems of an interdisciplinary nature, and required expertise in various fields of science and engineering. In both cases operators had to deal simultaneously with a large number of actions and analyse more information than could be handled efficiently under real-time constraints. In abnormal situations, time limitations could lead to incomplete or incorrect analysis of the data and result in errors of judgement. Expert systems could provide a reliable analysis and recommend corrective actions in real time, based on competent and up-to-date knowledge and experience. Thus, the safety of nuclear power plants could be greatly improved by the judicious use of expert systems.

13. Regretfully, many experts and trained professionals were moving away from the nuclear discipline to other fields where much of the know-how and ability would be lost as the trend continued. In five or ten years' time, when the need for nuclear energy re-emerged, it would be difficult to retrieve that body of knowledge, important to all Member States. One way of preserving and utilizing it was to build expert systems based on the vast realm of knowledge available. The IAEA should assume a leading role in that respect.

14. The Director General, in his opening address, had referred, inter alia, to the issue of food irradiation and its advantages. Many nations, and particularly the developing countries, were plagued by serious economic, nutritional and health problems resulting in severe malnutrition, famine, disease and mortality. Those problems could be alleviated by widespread application of irradiation techniques to foods, thus ensuring widespread food security and food safety. Irradiation of sprouting vegetables would reduce losses and almost double availability of those foods, and the same process could be applied to other staple foods such as dry cereal, legume crops, fish and meat. Moreover, the introduction of food irradiation technology would provide additional benefits by augmenting industrial development. The experience gained in related food handling technologies, such as packaging, storage and transportation would catalyze and accelerate industrialization of such technologies, thus creating much-needed jobs in rural areas, to the benefit of local agriculture and industry.

15. International organizations such as the Joint FAO/IAEA Division and WHO, in co-operation with UNCTAD-GATT, had recently contributed significantly to facilitating international trade in irradiated foods and had also helped considerably through the direct activities of the individual agencies in training local professional and scientific manpower.

16. However, further efforts were called for. The involvement of the IAEA in enhancing the priority status of the food irradiation programme could have a significant impact on future progress in that field. The present stage of commercialization of irradiated foods required new activities, namely, the development of less expensive food irradiation facilities for adaptation in developing countries; the development of methods for detection and validation of treatment in irradiated foods and, not least, an extensive public information and education campaign to acquaint consumers with the benefits of irradiated foods.

17. Israel had developed, over the past 25 years, technologies and processes for irradiation of numerous foods which were of great value to developing nations. That success was the result of highly fruitful co-operative programmes between its agricultural and nuclear research centres.

18. The representatives of the Member States convened yearly at the General Conference of the IAEA in order to enhance international co-operation. The majority of those delegations expressed their endeavour to seek better ways of implementing scientific and technical progress for the benefit of all Member States. It was, therefore, regrettable that irrelevant issues of a political nature, such as item 8 of the agenda, were brought up and that much valuable time was wasted on political issues which the Agency was never intended to handle and which could not possibly be solved by the present assembly. It was to be hoped that common sense and a positive approach would prevail and enable the General Conference to reject extraneous political issues.

19. Mr. WAKEHAM (United Kingdom) said that, as he had only very recently been appointed as Britain's Secretary of State for Energy, he would concentrate - initially at least - on what had struck him most as a newcomer to the nuclear scene, particularly in the light of the World Energy Conference which he had recently attended in Montreal.

20. First, the concept of sustainable development was now clearly at the top of the international agenda. The debate focused on environmental problems attributable to the production and consumption of energy, which energy - it should not be forgotten - had also been instrumental in raising living standards to unprecedented levels in much of the world.

21. Secondly, the world would soon no longer be able to put off making some fundamental choices about energy, and perhaps particularly about the future of nuclear power. Even on the most optimistic assumptions about improvements in energy efficiency, a major re-ordering programme for world generating capacity would be needed between now and the end of the century simply to replace the growing number of power stations that were reaching the end of their useful lives, let alone to keep pace with the latest projections of the rise in future international demand.

22. Thirdly, nuclear power, which was currently meeting nearly a quarter of the electricity demand within the Organisation for Economic Co-operation and Development (OECD) area, and considerably more in a number of countries, would be enormously difficult to replace as one of the world's leading energy resources.

23. Although some environmentalists still argued that further improvements in energy efficiency could offer a practical alternative to the continued development of nuclear power, it did not follow that to be strongly for energy efficiency was to be against nuclear power. Energy efficiency, while having a key role to play, could never be the total answer because it was not an additional energy resource, although it was still sometimes presented as one. Energy efficiency saved energy, it did not produce it; it could help restrict the expansion of energy demand, but could not contribute towards meeting that demand. Above all, it did not obviate the need for some increasingly urgent decisions to be taken in the context of growing worries about environmental pollution, about the nature and mix of the power stations which would serve the world's energy needs into the late 1990s and beyond.

24. As could be seen from a number of recent and apparently conflicting reports, the question of climatic change was still the subject of very considerable scientific uncertainty and controversy. The report of the Intergovernmental Panel on Climate Change (IPCC) to the Second World Climate

Conference scheduled for autumn 1990 was now assuming increasing importance in helping to shape an agreed international response to the problem. However, many apparently dispassionate observers already believed that, in a world beset by problems such as global warming, acid rain and major oil spills, nuclear power offered one of the greenest sources of reliable energy yet devised. The world was crying out for cleaner energy: the challenge for the nuclear power industry was to show that it could provide it safely and economically.

25. In that context, the United Kingdom's own experience was perhaps instructive. Recent legislation to privatize the electricity industry had had to take into account the undeniable fact that the cost of nuclear power in the United Kingdom was currently higher, and more subject to uncertainties resulting from changes in regulatory requirements, than fossil-generated power. Future changes in energy costs were also uncertain, however, and his Government believed that nuclear energy had a strategic role to play in providing security through diversity and in helping to reduce the environmental impact of electricity generation.

26. The practical effect of the non-fossil fuel obligation under the Electricity Act would be to maintain nuclear capacity at close to the existing levels until the end of the century. That would give nuclear power the fullest opportunity to prove itself and would provide the maximum flexibility to respond to future shifts in energy demand, whether as a result of economic or environmental developments.

27. It had been widely reported that privatization had had the effect of bringing to light the true costs of nuclear power in Britain and, if so, that was clearly no bad thing. One outcome had been to demonstrate that the costs of decommissioning a particular type of nuclear power station - the ageing Magnox stations - now seemed likely to be considerably higher than previously estimated. His Government had accepted the view that the new private electricity companies and their customers should not be burdened with costs which related mainly to the previous working life of those stations, and had therefore decided to exclude those costs from the privatization.

28. However, contrary to some reports, what had not been demonstrated was that nuclear power as a whole would remain essentially uneconomic in the

medium to long term. Current Nuclear Energy Agency (NEA) and International Energy Agency (IEA) studies confirmed that nuclear power continued to be the option favoured on economic grounds for base load power generation within the majority of OECD countries. In the United Kingdom, the advanced gas-cooled reactor (AGR) and the new pressurized water reactor (PWR) stations would be retained after privatization by the National Power Company and Scottish Power, reflecting his Government's continuing faith in the future of nuclear power.

29. The partial privatization of his country's nuclear power plants would not change the industry's safety regime. Britain's nuclear regulations made no distinction on the basis of forms of ownership. Safety policy would continue to be based on a strong, independent regulatory body and on operators which had the competence to meet their safety responsibilities to the full.

30. Nuclear safety was also an international issue by nature, and his country wholeheartedly supported the Agency's role as the world's focus for the vital work being performed in that area. The work of the International Nuclear Safety Advisory Group (INSAG) and the Nuclear Safety Standards Advisory Group (NUSSAG), whose chairman was Britain's Chief Inspector of Nuclear Installations, were both of major importance.

31. The help provided by the Agency's Operational Safety Review Teams (OSARTs) was now being welcomed by a growing number of nations. A visit by an OSART team to Oldbury earlier in the summer had proved to be a valuable peer review of the United Kingdom's safety arrangements as well as a very useful exchange of information.

32. The Agency's Waste Management Assessment and Technical Review Programme (WATRP) had undertaken an evaluation of the Nirex deep repository post-closure safety research and development and site assessment programmes in 1989. He was pleased to report both the very high quality of the panel undertaking the evaluation and the valuable nature of their report, and recommended the use of that service to other nations.

33. The World Association of Nuclear Operators (WANO), inaugurated under the chairmanship of Lord Marshall, had also made an extremely valuable contribution in the nuclear safety field.

34. His country's regulators were helped and strengthened by regular contacts and discussions with their overseas counterparts, and he very much welcomed the exchange of views on regulatory practice at the previous autumn's Munich conference. It was encouraging to see the response the Agency had received to the United Kingdom's proposals for a third stage of the "regulatory initiative", involving an exchange of views and information on safety practices between small groups of countries drawn from different international groupings.

35. The nuclear market itself was also becoming increasingly international. The recent agreements on co-operation on the fuel cycle between the Federal Republic of Germany and the United Kingdom had provided the political framework for important commercial contracts. The same was true of a similar co-operation agreement between the Federal Republic of Germany and France. There now seemed to be a growing tendency for major suppliers to move closer together.

36. The world's nuclear industry would continue to face many probing questions and challenges in the years ahead, both from committed opponents and from people with genuine uncertainties. The Agency would have a central role in that debate, as the forum in which a worldwide consensus on technical questions - above all on safety and waste disposal - could be reached. It would continue to maintain its unique role in making the benefits of nuclear energy available to all countries and in adapting them to the special needs of developing economies. Above all, it would continue to play a crucial role in maintaining non-proliferation.

37. The importance of the safeguards system would be highlighted by the following year's NPT Review Conference. His country was particularly gratified by the growing number of signatories to the NPT, and strongly urged those signatories which had not yet concluded safeguards agreements with the Agency to do so.

38. Mr. KAHILUOTO (Finland) said that his country continued to be committed to the utilization of nuclear power and therefore attached great importance to the Agency's activities in the field of nuclear power and safety. The recently published Basic Safety Principles for Nuclear Power Plants and Safety Principles and Technical Criteria for Underground Disposal

of High Level Radioactive Wastes were good examples of successful work and would help to ensure a high level of safety at nuclear facilities, which was a precondition for the general acceptance of nuclear power. The main emphasis in the foreseeable future should be on systematic and sustained efforts to ensure the safe operation of existing nuclear power plants. With regard to the development of the new generation of nuclear reactors, the Agency's contribution should take the form of promoting international co-operation.

39. It was imperative that Agency assistance to Member States in planning nuclear power programmes be in harmony with overall national energy planning. The Agency could well assume a more important role in that respect because of its proven capacity and experience and because no other United Nations body was better equipped to do so. As the number of countries intending to introduce nuclear power was limited, that work should be addressed only to specific interested countries.

40. The Agency's unique and universal role in collecting and disseminating information and data on issues such as nuclear power production and performance, operational experience and raw material resources should be maintained and further developed in the future, in close co-operation with - in particular - OECD/NEA.

41. Recent developments in the Agency's public information activities, including the new Yearbook, were highly commendable. Factual information on the Agency's activities and on the nuclear power option was especially important at a time when the role of nuclear power was being seriously discussed in the context of the global greenhouse effect. He was pleased to note that the Director General had recently drawn attention to that issue in several fora. He was confident that the Senior Expert Symposium on Electricity and the Environment to be held by the Agency in Helsinki in spring 1991 jointly with a number of other United Nations organizations would make a valuable contribution to future discussions on that important issue.

42. Turning to safeguards, he noted that the quantity of nuclear material and equipment under safeguards was growing steadily and that the volume of safeguards activities was expected to have increased considerably by the mid-1990s. The Agency's reputation and political credibility rested on its ability to meet its safeguards obligations fully. The Agency had reported

that objections by some Member States had hampered the introduction of sophisticated new techniques that required less manpower. In order to reduce costs and to facilitate the Agency's work, the use of such techniques should be accepted.

43. The safeguards system was a vital instrument in enhancing confidence among the international community and, as such, it benefited all members of the IAEA. Every Member State should therefore pay a reasonable share of safeguards costs. That notwithstanding, the safeguards financing system could be based to a larger extent on the principle that the user of safeguarded materials should pay. While his delegation supported the resolution on an interim arrangement for the financing of safeguards, it urged the Board and the Secretariat to resume consultations without delay to find a long-term arrangement.

44. In the field of nuclear applications, the Agency had greatly contributed to the introduction of a number of useful methods based on radioisotopes and radiation. Although many of those methods were widely used, some had been superseded by newer techniques such as biotechnology. It was important that, once nuclear techniques had reached a state of maturity, other organizations such as FAO and WHO should judge which technique would best serve actual needs and, when appropriate, call on the Agency to contribute. In agriculture, it would be highly desirable for FAO to increase considerably its contribution to the joint FAO/IAEA programme. FAO could also utilize the potential of the Joint FAO/IAEA Division and the Seibersdorf Laboratory more efficiently in relation to its own programmes.

45. The importance of technical co-operation was widely recognized. The assistance rendered to developing Member States should be co-ordinated with their national development programmes and, as appropriate, with the programmes of other organizations. Although the Agency's procedures for the approval of the technical co-operation programme had been revised the previous year, some further adjustments were necessary in order to increase substantially the Director General's authority to approve projects.

46. Finland attached great importance to the successful outcome of work on the 1991-92 programme and urged Member States to give the Secretariat clear guidance regarding their needs and wishes. Also, the Administrative and

Budgetary Committee should discuss the programme in more detail than in the past. The programme should be considered first on its own merits, with budgetary conclusions being drawn subsequently on the basis of that examination. The Agency needed a realistic programme that responded to the needs of Member States. A programme that was drawn up only for the purpose of meeting the zero-growth principle was not worthy of the Agency.

47. Mr. UTCHANAH (Mauritius) said that he had first addressed the Regular Session of the International Atomic Energy Agency following the Chernobyl incident, when the whole world was concerned about the likely impact of nuclear disasters. Now at the thirty-third session there was clearly a major change of approach to nuclear issues, and nations were more willing to consider the world as a global village.

48. As the political will towards international stability was translated into positive results, the pressures to stockpile nuclear weapons would reduce. The recent arms reduction agreements were significant not only because they constituted the first step towards the elimination of nuclear weapons systems, but also because they permitted unprecedented on-site inspection to verify compliance with their provisions. Although that was a positive step away from the destructive aspect of nuclear energy, the appropriate diplomatic pressures for the total abolition of nuclear arms should be maintained at all levels. The financial and human resources thus freed could more appropriately be used for social and economic development. In a world still burdened with famine, all technological efforts should be geared towards ensuring sustained economic development on a worldwide scale rather than the development and maintenance of a technological capacity to destroy mankind.

49. Concern was frequently expressed about the negative human impact on the world environment, and technico-political issues were considered to be of a transnational nature. All too often, however, regional imbalances created the tensions that tended to endanger world stability.

50. One regional issue of great importance to Mauritius concerned the island of Diego Garcia which, along with the Chagos Archipelago, was detached from Mauritius prior to its independence and leased to the United States for military purposes, including possible nuclear capabilities. That still

represented a very real danger to the countries of the Indian Ocean region both from the point of view of a possible nuclear war and, more important and more probable, from the point of view of an accident to a nuclear vessel or submarine in the Indian Ocean. With the consolidation of East/West détente, it was anomalous for any superpower to maintain a military build-up in a region which had repeatedly called for the demilitarization and declaration of the Indian Ocean as a Zone of Peace. The Government of Mauritius believed that the military installations at Diego Garcia created unnecessary tensions in the region and should be removed. The Indian Ocean States had always believed in the peaceful development of the region and would continue to do so.

51. In a world of fast evolving technology, it was important that Organizations should not lose sight of their main objective. It was gratifying to note that after thirty-three years, the IAEA still had at heart its objective "to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world". During the past eight years, the IAEA had been effectively guided by Dr. Hans Blix, who was to be congratulated on his appointment for a third term of office. The challenges ahead of him were still as great as when the IAEA was set up.

52. Atomic energy, in its widest sense, covered practically all aspects of modern living: in some countries nuclear energy accounted for over 60% of electricity requirements, and the use of food irradiation was increasing as was the use of isotopes in scientific research. However, the IAEA should transmit the benefit of its knowledge and experience to all countries. The challenge lay not only in ensuring that the benefits of nuclear science were available to all but also that all countries, especially developing ones, had the necessary qualified personnel to make use of that knowledge for the betterment of their fellow citizens.

53. Mauritius had been involved in the Agency's technical co-operation programme for more than five years. The success of one project, which concerned the use of nitrogen fertilizers for optimum production, had led the Government to seek the assistance of the Agency in another programme of extreme importance to the country, namely groundwater flow measurements, as over 40% of the country's domestic water supply came from underground water resources.

54. Mauritius adhered to the principle that nuclear energy should be used for peaceful purposes. It had therefore been gratifying to note the successful outcome of the Geneva Conference that had been held the previous year on the acceptance, control of and international trade in irradiated food. In a world where starvation still existed, any attempt to help preserve food should be welcomed. Some guidelines concerning the radioactive contamination of foods had recently been approved by the Codex Alimentarius Commission, and it was to be hoped that they would help reduce the level of food wastage worldwide.

55. Another matter of immediate concern to Mauritius was radiation protection. Aware of the potential health hazards of ionizing radiation, Mauritius welcomed the use of Radiation Protection Advisory Teams in order to assist Member States in preparing strategies for the use and control of ionizing radiation. It firmly believed in the need for such a strategy and would welcome a RAPAT mission as early as feasible.

56. Electricity consumption on a per capita basis was increasingly being used in economic development models as a measure of national growth, and the disparity between countries in terms of per capita electricity consumption was very wide. He therefore endorsed the Agency's view that safe and reliable nuclear energy had a role to play in the energy matrix of the world. Mauritius, which had moved into its growth path three years previously, had experienced an increase in electricity demand at the rate of 10% per year. That level of electricity demand could be expected in developing countries given the right social and economic conditions. All countries had to review their energy options regularly, and nuclear energy was but one of them. The scientific meeting on "The New Generation of Nuclear Power" to be held during the General Conference would provide delegations with an insight into that issue and open their eyes to the possibility of including nuclear energy in their countries' energy options. The Secretariat was to be congratulated on that initiative, and it would be most useful if a topical theme could be selected each year as the subject of a special scientific meeting during the General Conference.

57. The previous year, delegates of the African group had raised the issue of a regional programme for Africa, which would bring that region into line

with all the other regions. Addressing the Thirty-Second Regular Session of the IAEA, he had recalled that development would not be easy in the African region, which had the highest need for appropriate training. Nuclear science and technology would help the region to proceed on the path of sustained development. However, economic growth should not be promoted at the expense of the environment. As a region, therefore, it should give priority to setting up the appropriate structures which would allow the safe utilization of nuclear energy. The Mauritian Government was painfully aware of the need to provide increasingly sophisticated levels of training for its nationals to enable them to cope with fast technological change. Information technology and computer-aided designs might be day-to-day issues in the developed world, but to the developing world implied a major leap forward with the accompanying needs for appropriate training and infrastructure. The IAEA was therefore to be commended for having prepared for the African group the priority definitions of an action programme for the region. Attention should be focused on easily identifiable targets before the wider range of nuclear science applications was tackled.

58. As the world entered the last decade before the 21st century, words like "glasnost" and "perestroika" had entered daily use, yet there was still an urgent need for the Agency to coin a word that would evoke not only its function but also its objective. There was, in other words, a need for nuclear literacy. Nuclear literacy not only referred to the need to make the public aware of the benefits of the nuclear sciences, but more importantly, should imply a conscious effort by the developed countries to narrow the technological gap that existed between them and the developing countries.

59. With the growing political consensus of the world as a global village, the heavy debt burden of the developing countries and its potential economic upheavals were of great concern to finance ministers meeting in Washington. In Vienna, government representatives should consider their future orientation in terms of knowledge-sharing in the field of nuclear science and technology, and not allow one part of the world to be drip-fed with knowledge while the other part hoarded it. As a result of a better international environment, the developed world was in a better position to redirect its energy and resources to help the developing world to achieve the level of nuclear literacy so

essential for it to move along the path of sustainable development. The IAEA, as the catalyst between the developed and developing areas of the world, had a major role to play and he endorsed the concern of the Director General with regard to its precarious financial situation. Only if the IAEA was made financially strong would the developing countries be in a position to benefit from its technical assistance and training programmes.

60. The IAEA, with its specialized institutions like the International Centre for Theoretical Physics at Trieste and its Laboratory at Seibersdorf, had the infrastructure to organize appropriate training programmes. Why, therefore, should the infrastructure available in a number of developed countries not be used to help close the technology gap?

61. One of the items on the agenda concerned the financing of technical assistance. It was a matter of concern that almost a decade had passed and as yet no consensus had been reached as to whether the technical assistance programme should be financed by the Regular Budget or by voluntary contributions. Countries should first of all agree on the long-term desirability of the technical assistance programme. However, in addition to the indicative planning figures used the previous year for the Technical Assistance and Co-operation Fund, governments needed a blue-print of the technical assistance programme for the next decade. That would, beyond doubt, determine the long-term strategy essential to the accelerated development of the deprived areas of the world.

62. Where there was a political will there was always a possible solution to a problem. All the previous speakers had referred to the willingness to move towards the peaceful use of nuclear energy. The present session should try to ensure that political will was translated into effective action so that the world could look forward to a safer and better tomorrow.

63. Mr. AAMODT (Norway) said that, subject to parliamentary approval, his delegation supported the programme and budget for 1990 submitted by the Board, the proposed target of US \$45.5 million for the Technical Assistance and Co-operation Fund in 1990, and the planned increase in the level of the Working Capital Fund for 1990 to US \$6 million.

64. His Government considered the protection of the environment and natural resources to be of vital interest to the entire international community and consequently attached considerable importance to the contribution the Agency could make in that area. The Secretariat was to be commended on the comprehensive report it had drawn up in response to resolution GC(XXXII)/RES/494, which provided a useful review of the Agency's surprisingly large contribution to the goal of environmentally sound economic development. His delegation urged the Agency to provide active assistance to the preparations for the United Nations conference on environment and development envisaged in General Assembly resolution 43/196.

65. The Agency should continue to be the main international organization concerned with the regulatory and promotional aspects of nuclear energy and, although his country attached more importance to the regulatory aspects, it recognized both the dual role laid down for the Agency by its Statute and the need to maintain a balance between the two. The extensive use of nuclear energy in the long run would be acceptable only if the strictest safety and environmental protection standards were observed. To that end, vigorous action was required to improve the international nuclear safety and radiation protection regime. The Agency could play a vital part by promoting international co-operation, assisting in solving common problems and providing an international forum for the discussion of safety topics. As part of those efforts, it should strive to develop more stringent and comprehensive criteria on all important safety issues. The meeting the Agency had arranged with international trade unions in April 1989 was worth recalling in that connection. His delegation supported the growth envisaged in the nuclear safety and radiation protection programmes for 1990. The Agency's role in the nuclear safety field should be duly reflected in future programmes also.

66. Norway welcomed the establishment of WANO and hoped that it would be a useful complement to, and partner for, the Agency in implementing the common objective of further improving nuclear safety and performance.

67. He was gratified to note the substantial increase during 1988 in the number of Member States that had ratified the Convention on Early Notification of a Nuclear Accident and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency. However, a few incidents

involving nuclear power sources had occurred recently which were not covered by those Conventions, but which had caused great public concern and demonstrated the need for rapid and reliable information. The question of how the Agency could play a more effective role in the case of such incidents should be studied further, without prejudice to the two Conventions.

68. Norway had on several occasions expressed concern about the dumping of radioactive waste at sea. Other methods of disposal were also causing concern. In that context, he was pleased to learn that the technical working group set up to elaborate an internationally agreed code of practice for international transactions involving nuclear waste had made some progress during the year. The increasing amount of nuclear waste throughout the world and the mounting alarm about the environmental consequences thereof made it paramount for the Agency to be involved in those matters. The Agency should continue to take a strong lead in the global effort to define proper methods for the final disposal of hazardous nuclear waste. His country would like to see the introduction of internationally agreed norms on that issue.

69. Norway was pleased to note that Bahrain and Saudi Arabia had acceded to the NPT in 1988 and that safeguards agreements with Nigeria pursuant to the NPT and with Albania and India had entered into force. It was regrettable, however, that the number of non-nuclear-weapon States parties to the NPT that had not concluded safeguards agreements with the IAEA within the prescribed period of 18 months after ratification had been 52 at the end of 1988, the same as at the end of 1987, and included States with significant nuclear activities. He urged those States to fulfil their NPT obligations.

70. Norway had now waived the right of advance approval of designated inspectors and would accept automatically those duly designated by the Board. It invited those Member States which had not yet done so to follow suit.

71. His country could accept as a provisional solution the proposal contained in document GC(XXXIII)/877 on the financing of safeguards for a three-year period. Safeguards were politically the Agency's most important task and the collective responsibility of all Member States. A permanent solution to the problem of financing of safeguards would have to secure sufficient resources to ensure the efficient functioning of the system and thus uphold continued international confidence in Agency safeguards.

72. His country had reviewed its export control legislation in the light of non-proliferation considerations. A new and stricter export control act had been enacted and a ban on the export of heavy water - except for minor research quantities - had been introduced. His Government had recently informed the Director General that, when considering the export of nuclear and non-nuclear material, equipment and technology, it would act in accordance with INFCIRC/254, an undertaking which was in addition to a previous undertaking to act in accordance with INFCIRC/209. Norway would like to see a strengthening of the international regime applying to the export of non-nuclear material.

73. Mr. SOWINSKI (Poland) said that the past year had been marked by further progress in the field of nuclear disarmament and in the implementation of the Treaty between the United States of America and the Union of Soviet Socialist Republics on the Elimination of their Intermediate-Range and Shorter-Range Missiles (INF), the commencement of and encouraging progress in talks on the reduction of armed forces and conventional armaments in Europe and the continuation of the Soviet-American dialogue on deep reductions of strategic nuclear weapons. All that had contributed towards expanding international co-operation in almost all spheres and had indisputably created a favourable climate for the work of international organizations, which had now become a genuine forum for solving, through concerted efforts, the problems determining the world's future. One of the most urgent problems was that of ensuring sustainable global development while paying due attention to the protection of the environment and the rational use of natural resources.

74. He noted with satisfaction that the United Nations General Assembly resolution on the question of the world's sustainable development and the report by the World Commission on Environment and Development (WCED) had aroused such a positive response within the IAEA. The Agency's report of May 1989, entitled "Nuclear Energy and the Environment", deserved widespread distribution in all countries. The Agency's capabilities in that field, however, were even greater than suggested by that report. Closer co-operation between the IAEA and the United Nations Environmental Programme (UNEP) might, for example, be worth consideration. Such co-operation might help to solve complex environmental problems and to clear up the fundamental

misunderstandings which had brought about the paradoxical situation whereby atomic energy - the environment's most promising ally - was often considered its enemy. It would be useful to examine all the different forms of possible co-operation, including the creation of a joint department, analagous to the FAO/IAEA department, or a laboratory. Poland shared the view expressed by the USSR two days previously on that subject. If the Agency was interested in such a project, his country was prepared to establish such a laboratory in Poland, possibly in Krakow.

75. The above-mentioned report to the 44th Session of the United Nations General Assembly concerning the Agency's contribution to the world's sustainable development accorded top priority to the problem of meeting the world's steadily increasing demand for energy. In that connection, particular attention should be given to the undeniable importance of nuclear power as a means of curbing the irreversible processes of the destruction of the world's forests, soil acidification and global warming.

76. The considerable role that nuclear power could play in reducing the emission of gases responsible for the greenhouse effect was underlined in a joint declaration of the leaders of the seven most industrialized Western nations at a meeting in Paris last July. In that connection, he expressed his delegation's appreciation to the Director General for the initiatives he had undertaken at various multilateral fora concerning energy, environment and responsibility for the future development of the world.

77. In a number of countries and in the most varied circles, however, the merits of continuing to construct nuclear power plants or even operate the existing ones were now coming into question. Polish experience showed that the public's objections concerned safety, the storage of radioactive waste and the economic efficiency of nuclear power. Those issues, as well as the problem of the non-proliferation of nuclear weapons, were also reflected in the WCED report. In view of the current threat of irreversible changes in the natural environment, the Agency seemed justified in giving priority to efforts aimed at helping States to solve the complex problems of energy policies on the basis of complete and objective data taking account of both economic and ecological factors.

78. He therefore considered it a matter of urgency that the Agency continue its comparative analyses of the various methods of electricity generation, taking into account all aspects of the interaction between power production and the environment. At the same time, wide and active support should be given to initiatives by individual Agency Member States aimed at sharing their experience in ensuring maximum safety and protection for the public and the environment. Among such initiatives should be included the proposals by the Soviet delegation regarding international co-operation in research planned at the laboratory being set up at Chernobyl and in the field of radioactive waste.

79. The WCED report pointed to the irrefutable fact that sustainable development was conceivable only in an atmosphere of peace and disarmament. Consequently, measures for preventing the proliferation of nuclear weapons should also be viewed as one of the Agency's major tasks. His delegation hoped that the Fourth Review Conference on the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) would confirm the indispensability of maintaining and strengthening the Treaty as one of the fundamental components of the global security system. The steady, albeit slow, increase in the number of parties to the Treaty was certainly encouraging.

80. Bearing in mind the need further to increase the Agency's efficiency in the area of safeguards and responding to the Director General's request, to that effect Poland had decided to discontinue its practice of approving inspectors. The only condition remaining for Poland's acceptance of an Agency safeguards inspector was the maintenance of diplomatic relations with the country of which the inspector was a national.

81. Summing up, his delegation considered that the Agency's work constituted a unique contribution to the cause of sustainable development and that its many accomplishments in 1988 should be highly commended by the General Conference. The following deserved a special mention: its measures to ensure nuclear and radiological safety, including co-operation and assistance in the event of a nuclear accident and the organization of Operational Safety Review Team (OSART) and Waste Management Advisory Programme (WAMAP) missions; its safeguards activities; the development of new technologies for the protection of the environment and production of wholesome food products; and its search for optimal solutions to the problem of nuclear liability.

82. The International Conference on the Acceptance, Control of and Trade in Irradiated Food, in which the Agency had participated in December 1988, confirmed the correctness of its policies in that area and enabled agreement to be reached on several principles. The results of that conference would yield substantial benefits to countries which, like Poland, were introducing irradiation technologies for food processing.

83. Poland's technical co-operation with the Agency was a significant factor in the activities of Polish nuclear research institutions. The co-ordination of Agency-related projects in Poland had led, for example, to an increased range of applications of irradiation technologies and to improved quality control and safety in nuclear installations.

84. Poland was actively co-operating on several regional projects such as the application of irradiation technologies for food processing, safety analysis of the WWER-type reactors and, since 1989, in-service inspections of nuclear power plants. It was also interested in establishing a regional project on radioactive waste management.

85. Regarding the applications of atomic energy, Poland attached particular importance to the programme for the electron-beam purification of flue gases at coal-fired power plants. With the Agency's assistance, it had in 1988 started constructing a pilot station for the simultaneous removal of sulphur dioxide and nitrogen oxides. At the workshop organized in June 1988 in co-operation with the IAEA the Polish design had been subjected to thorough analysis. Agency experts had expressed their approval of both the design and the construction of the facility. His delegation was pleased to note the considerable interest aroused by the project both in Poland and among the participants in the workshop. The programme would enable the necessary data to be collected for designing an economically competitive, industrial installation. According to the workshop participants, electron-beam technology could be applied very successfully in Poland.

86. He noted with satisfaction the considerable progress achieved in implementing the General Conference resolution of 1988 concerning nuclear liability. The May meeting of the working group had made a significant contribution towards improving and strengthening the international nuclear liability system. The shortcomings of the system had been identified and

would now provide the direction for further efforts to find a satisfactory solution to the problem. The invaluable assistance provided by the Secretariat's Legal Division in the preparation of the group's meeting deserved special mention in that connection.

87. Poland would continue to aim towards regulating questions of nuclear liability on the basis of State liability. However, bearing in mind that such a challenge would call for considerable time and effort and not wishing in any way to belittle the value of international instruments in the field of civil liability, Poland had decided to accede to the Vienna Convention and to the Joint Protocol, instruments which it regarded as a first step towards finding a comprehensive solution to the problem.

88. His delegation fully endorsed the Agency's Annual Report for 1988 and also accepted its draft budget for 1990. In conclusion, Poland would continue to do its utmost to ensure the successful implementation of the Agency's programme.

89. Mr. WIRYONO (Indonesia) recalled that 1989 marked the 50th anniversary of the discovery of fission which had transformed the world and taken it into a new era. The world now seemed to be entering a completely new international political atmosphere, marked by the relaxation of tension and renewal of confidence in multilateralism as well as international co-operation. In such a situation, the role of science and technology was crucial to the progress of nations - particularly developing countries. Having initially taken second place to military uses, the peaceful uses of nuclear energy now had the opportunity to come to the fore and to be fully developed. While it was true that, as with any technology, nuclear fission and its by-products entailed a certain degree of risk, the technology to minimize those risks - or even to eliminate them - had been making tremendous progress.

90. However, after a series of serious nuclear accidents, efforts to maximize safety had led to the introduction of many redundant systems. Consequently, the capital costs of new-generation nuclear power plants might increase to such an extent that the peaceful uses of nuclear energy were put beyond the reach of many developing countries. The Agency's challenge lay precisely in that field: to ease the many difficulties faced by developing

countries that were in need of technical and other assistance. A seminar on the financial aspects of nuclear power plants was to be convened in Indonesia the following year, and he hoped that experts from both the developed and developing world would attend and that creative ideas would result from a full discussion of the problem.

91. The Agency had been successful in promoting closer regional co-operation in nuclear activities. In his own region, the Regional Co-operation Agreement (RCA) programme was proving very beneficial.

92. The papers prepared by the Secretariat for the NPT Review Conference in 1990 were satisfactory and comprehensive. The IAEA had an important role to play in implementing the NPT, and in particular Article IV, which was concerned with the provision of assistance to non-nuclear-weapon States party to the Treaty in obtaining the benefits of the peaceful uses of nuclear energy.

93. The Annual Report for 1988 provided an excellent record of the Agency's activities during that year, including technical co-operation. One aspect of such co-operation which might need more attention was the sharing of experience and knowledge between States that had achieved a certain degree of progress in nuclear technology and those States embarking on a nuclear programme. Indonesia looked forward to co-operating with the Agency in that area.

94. The dissemination of accurate and balanced information on nuclear energy was of the utmost importance. The conflicting views that came from debates among experts only led to further confusion among the general public. It seemed that the Agency's publications, while of the highest quality, did not always reach those who needed them or who were in a position to pass on that information to the general public. Consequently, a more creative approach in distributing those publications to the media, decision-makers and those involved in the medical and other uses of nuclear technology would be in order and might ultimately lead to better public acceptance. It would then be easier for governments to formulate rational energy policies based on a variety of sources. Many technological advances, such as the development of passive reactors with built-in safety features, deserved to be made more widely known.

95. His delegation welcomed the proposed establishment of a centre for international research at Chernobyl and of an international research project in waste disposal at a site in the USSR and looked forward to further developments in that respect.

96. Indonesia itself continued to make great strides in the development of nuclear science and technology and, before the end of 1989, it would be inaugurating various new facilities at the Serpong nuclear establishment: a radioisotope centre which initially would be able to satisfy domestic needs and would later contribute to regional needs; an experimental nuclear fuel facility; and a centre for nuclear engineering and equipment which would provide support for a nuclear power programme. His country was ready to welcome experts and trainees from the region to share both new and existing facilities. In addition, his Government had initiated a programme of research on nuclear waste management following the entry into operation in December 1988 of a radioactive waste treatment plant located in the Serpong complex. Finally, his Government had just taken the decision to initiate a final site evaluation as part of a comprehensive feasibility study for the construction of a nuclear power plant. It would be seeking the Agency's co-operation in connection with that plan.

97. With regard to Article VI of the Statute, his delegation considered that any organization whose policy-making organ had last undergone change almost two decades previously ought to be able to adjust to the developments which had taken place in the meantime. It was to be hoped that some progress could be made in the next working group on Article VI as a whole, but it would be helpful if the current session of the General Conference engaged in a more substantive debate so as to facilitate the working group's consideration of that matter.

98. Mr. SHENSTONE (Canada) said that many States parties to the NPT were preparing for the Fourth NPT Review Conference to be held in Geneva in 1990. Two weeks previously, the Second Preparatory Committee had successfully completed its agenda, including discussion of three excellent Agency papers. It was important to bear in mind the close links between the NPT and the Agency's work, especially in safeguards and technical assistance activities.

99. He had been pleased to note from the Annual Report for 1988 that, as in previous years, the Agency had not detected any diversion of a significant amount of safeguarded nuclear material. The Department of Safeguards had taken commendable measures to increase efficiency and productivity: however, there were limits to what such measures could achieve, and budgetary pressures should not be allowed to lead to the deterioration of safeguards. The Agency would soon be releasing new safeguards evaluation criteria for the period 1991-95. Canada looked forward to the period of stability that would result, as it would greatly assist both the Agency and Member States in the planning of inspections and in budgetary forecasting.

100. Through safeguards support programmes, Member States were able to provide significant assistance to the Agency, particularly during periods of budgetary restraint. Canada's support programme concentrated on the development and procurement of equipment to improve safeguards in on-load refuelled reactors. He looked forward to enhanced co-ordination of various countries' support programmes through the Agency's support programme initiative and the creation of a support programme administration office, and strongly supported the move to define more clearly the relationship between the Agency and activities in Member States.

101. At the Darlington nuclear power station, the Agency and Canada had elaborated an innovative safeguards approach involving software packages and new devices. Final preparations were under way to ensure that the safeguards equipment installed was functional before criticality was reached at the first reactor unit.

102. At its current session, the General Conference would be considering the thorough report prepared on the Agency's study of the modalities of application of safeguards to the Middle East. He called on all States in that region, and indeed in all regions, which had not yet done so to accede to the NPT and to accept Agency safeguards on all their nuclear activities.

103. Canada had taken an active role in a recent technical committee on the physical protection of nuclear materials and agreed with the planned revisions to INFCIRC/225 which had resulted from the meeting and which took into account the Convention on the Physical Protection of Nuclear Material. Canada had fully implemented that Convention in its law and practice. A conference of

States parties should be convened in 1992, five years after the entry into force of the Convention, to review its implementation and its adequacy.

104. The technical working group on international transactions involving nuclear wastes was to be commended on its efforts to elaborate a code containing principles for the proper care, control, management and disposal or long-term storage of radioactive wastes. Equally satisfying was the progress made in the open-ended working group on liability for nuclear damage, which at its first session had identified a number of important issues. Although his country was committed to exploring means of improving the existing civil liability regime, it remained convinced that a State liability regime could provide answers to liability problems that might result from nuclear accidents causing damage in more than one jurisdiction.

105. Canada fully supported the two nuclear accident conventions and would deposit an instrument of ratification of the Convention on Early Notification of a Nuclear Accident before the end of 1989. Ratification of the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency was expected to follow shortly thereafter.

106. His Government welcomed the report to the General Assembly on the Agency's contribution to sustainable development. The Agency was participating in a number of environment-related programmes and studies being undertaken by United Nations agencies, and the Director General was playing a constructive role in international discussions on energy and the environment. He was pleased to note that the economic summit meeting in Paris in July had recognized that nuclear power played an important role in reducing the emission of greenhouse gases. One of the conclusions of the World Energy Conference (WEC) that had met recently in Montreal, had been that the majority of observers expected increased electricity demand in industrial countries to be accompanied by a growing perception of nuclear energy as an essential means for producing electricity economically and safely. The WEC had also recognized the crucial importance of urgently tackling the question of public acceptance of nuclear power. The increased importance accorded to those matters in various Member States and in the Agency was a matter of satisfaction.

107. Canada needed nuclear energy. Abundant supplies of uranium and advanced electricity generation technology meant Canada was independent in its nuclear fuel cycle. That independence, combined with the high level of technical safety of the nuclear programme, represented a major asset for Canada and its trading partners. His Government had undertaken a major initiative aimed at maintaining the nuclear option as one means of meeting future growth in energy demand. The key part of that initiative was an evaluation of alternative organizational structures for the nuclear industry.

108. His country attached great importance to the Agency's technical co-operation activities, particularly in Africa, and commended the Agency's focus on building manpower capacity in developing countries and concentration on providing practical assistance in such areas as pollution control, desertification, deforestation, insect and disease control and food preservation. The Agency should continue to concentrate its resources in those areas (such as agriculture and health) which would bring tangible and sustainable benefits to those most in need. Finally, a greater effort should be made to share the results of the Agency's evaluation activities with other development organizations.

109. Mr. VISHNEVSKIJ (Ukrainian Soviet Socialist Republic) said that the current positive changes in the world were creating favourable conditions for the development of more extensive international co-operation in the peaceful uses of atomic energy, and for the constructive involvement of the Agency in the solution of global problems in the fields of power generation and ecology. The Soviet initiatives in the areas of international security and nuclear disarmament, and the proposals on the banning of nuclear tests and discontinuation of the production of fissionable materials for military purposes had been a worthy contribution to the establishment of a nuclear-free world and the reinforcement of stable international relations. A non-nuclear world could only be achieved via a new political approach which rejected current stereotypes in the clear understanding that there was no alternative to a secure world based on mutual trust and co-operation of all countries.

110. The Agency could certainly make a major contribution to the achievement of that noble aim. It had already demonstrated its capacity to monitor effectively the non-proliferation of nuclear weapons whilst respecting the

sovereign rights of States; it supported their interests in the field of the peaceful use of atomic energy and helped reinforce international co-operation. Agency safeguards were a worthy activity deserving of every support. The Agency could further expand its activities in that area by developing a reliable system of measures to prevent any form of nuclear terrorism, and an international legal instrument to regulate liability for nuclear damage. The Agency's reaction to the Chernobyl accident in 1986 had been swift and had resulted in the drawing up and acceptance of two important conventions, the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency and the Convention on Early Notification of a Nuclear Accident.

111. He lent his support to the Agency's Programme and Budget for 1989-90. It was essential that the role and position of nuclear power within power generation as a whole be determined and criteria generated for the selection of energy sources to be used. The negative effects of thermal facilities were already evident in the raised carbon dioxide content in the atmosphere and the disturbance in atmospheric processes as seen in the abnormal weather conditions. Nuclear power would probably help avoid some of the ecological catastrophes which threatened, but to evaluate its competitiveness one had to have a clear picture of the complex problems posed by the construction, operation and decommissioning of nuclear power plants, and by waste management. Capital expenditure for the construction of nuclear power plants was constantly rising. Part of that was due to the drive for increased reliability and safety. But what constituted a reasonable level of increased cost for reactor construction, and what were the costs involved in constructing a nuclear power plant which conformed to all the safety standards developed by the Agency? There was also a need for comparative data on the total cost of the nuclear fuel cycle right from the point where the fuel was mined, through its processing and enrichment, manufacture of fuel elements, to reprocessing and disposal of nuclear power plant waste. The effect of decommissioning of reactors which have outlived their lifetimes on the cost of power produced by nuclear power plants was also important. He suggested that it might be useful if the Agency organized an international symposium on the theme "Comparison of the economic and ecological consequences of the operation of thermal and nuclear power stations, and selection of an optimum course of

long-term development for the world energy base". The Agency might include research into that problem in its programme for subsequent years.

112. The Ukrainian Soviet Socialist Republic valued highly the Agency's technical assistance activities and supported their development and improvement. The Ukraine received 3-4 groups of specialists from the developing countries every year. Those specialists either came on scientific visits or to attend training courses. They were shown the achievements made by the Ukraine in the use of accelerators in the national economy, the use of nuclear energy in biology, agriculture, medicine, and in other fields. In the interests of widening its participation in that programme, the Ukraine intended to keep up its voluntary contributions to the Agency's Technical Assistance and Co-operation Fund.

113. The nuclear power development programme in the Ukraine had undergone both a qualitative and quantitative change subsequent to the accident in the Chernobyl nuclear power plant. Measures had been implemented to improve safety conditions for operational nuclear power plants by ameliorating the reactor emergency protection systems, increasing the reactivity reserve, increasing the fuel enrichment, and other technical measures. Training demands for power plant staff had been raised considerably. In the 5 nuclear power plants in the Ukraine, 13 power units with a total capacity of 12 000 MW were currently operating and producing 15% of all the power generated in the Republic. All deviations from the normal operating regime were investigated, and in every case measures were taken to avoid the repetition of such events. Not one incidence of a serious problem in reactor operation which could have given rise to an accident had been registered since the Chernobyl accident. The Republic's nuclear power development programme had been reviewed. Economic, ecological and social factors relating to the construction of nuclear power plants in a particular region were taken into account. It was planned to limit the number of power units at power plants already in existence. Construction of certain new nuclear power plants had been halted because their sites did not fully comply with nuclear power plant safety standards. In the 30 km zone surrounding the Chernobyl nuclear power plant various biomedical research projects were being carried out into the action of ionizing radiation on plants and animals, and a lot of material had been

collected. Since the conditions for carrying out such research were unique it would be appropriate for foreign scientists to take part also.

114. There was perhaps no area of the national economy where nuclear energy could not make a contribution. The Ukrainian Soviet Socialist Republic fully supported the activities of the Agency, and it would continue to promote the constructive co-operation of all countries in the interests of utilizing nuclear energy for the good of mankind.

115. Mr. MONDINO (Argentina) said that the budgetary cuts which had become necessary in recent years on account of Argentina's difficult economic climate had had considerable impact on the progress of work within its nuclear programme. However, it remained convinced that nuclear energy was the only safe alternative source of energy for the early decades of the twenty-first century. Proof of that lay in the reaffirmation by President Menem of the new Government's political will to continue developing the country's technological capacity to achieve economic progress and the well-being of the its people. Due to that political will, the necessary steps were now being taken to reactivate work which had been held up so that the installations could come on line at an early date. At the same time priority was being given to the production of the necessary raw materials to maintain Argentina's position in nuclear power, and to complete all stages of the nuclear fuel cycle, with a view to reasonable self-sufficiency and freedom of decision.

116. Nuclear power had continued to gain ground in Argentina. Its two power stations, whose total power in 1988 accounted for only 8.10% of its grid power, had produced 13.18% of the total generated. The remarkable performance of the Embalse nuclear power plant was also worthy of note. Between August 1988 and August 1989, its load factor was 98.36%, in other words it had practically worked at full power continuously for an entire year, significantly contributing to alleviating the serious energy crisis which the country had experienced the previous year, due principally to abnormally difficult hydrological conditions.

117. Another significant fact was the recent completion of the experimental heavy water plant, built with Argentinian technology and by Argentinian companies and technicians.

118. Once again the past year had been very successful for Argentina from the point of view of international co-operation in the peaceful uses of nuclear energy, both at the multilateral and at the bilateral level. As far as the former was concerned, in spite of its economic difficulties, Argentina had managed to maintain a high level of co-operation with the Agency's technical co-operation programme. Once again the number of experts made available to the Agency had been the highest among the developing countries, and had put Argentina in fourth place among all the Member States with regard to the number of experts provided, and in sixth place with regard to fellowships, visiting scientists and trainees studying in Argentinian plants, at the request of the Agency. Argentina was prepared to co-operate without any discrimination whatsoever. For the ninth consecutive time, Argentina was running the interregional postgraduate course in radiological protection and nuclear safety in Buenos Aires, with the assistance of the Agency.

119. As far as the ARCAL programme was concerned, Argentina fully supported its development and continuity. Its importance to the region was demonstrated by the fact that in just over four years it had implemented 13 projects and the number of countries participating had risen to 15, thus covering almost the whole of the region.

120. At the bilateral level, there had been co-operation with a large number of friendly nations of all continents, and 20 specific co-operation agreements in the peaceful uses of nuclear energy had been concluded, the last of which had been with Egypt. In that context special mention should be made of the inauguration in December 1988 of Peru's nuclear research centre, which included the 10 MW RP-10 research reactor, with auxiliary laboratories, a radioisotope production plant and a radiological protection laboratory, as well as other relevant service facilities and the inauguration in April 1989 of the 1 MW NUR research reactor in Algeria, both of them examples of strong south-south co-operation, in which Argentina had demonstrated its political will to co-operate and its technical capacity as a responsible and reliable supplier of nuclear technology to other developing countries.

121. Special emphasis was placed on the recent reaffirmation by the Presidents of Argentina and Brazil of the political will of their Governments to maintain their promising political and technical co-operation in the peaceful uses of nuclear energy.

122. Argentina was ready to establish close co-operation with all nations of the world on a basis of juridical equality and mutual respect. The benefits deriving from the peaceful uses of nuclear energy should be made available to all peoples, without restriction but with proper guarantees on all sides that the nuclear technologies, plants and materials transferred would only be used for those purposes. In that context the Agency's safeguards system provided the proper way to guarantee non-proliferation of nuclear arms; any additional requirement which implied restrictions on the transfer of technology in the so-called "sensitive" areas would be suspected of concealing intentions, through the guise of non-proliferation, to preserve political and commercial hegemony.

123. Turning to the Agency's activities during the past year, Argentina much appreciated the efforts made by the Secretariat in its technical assistance activities to optimize the use of the scarce available resources. Substantial improvements had been achieved in the past decade with regard to the quality and level of the technical co-operation activities pursued.

124. With regard to safeguards, it had been gratifying to note that there had been no case of nonfulfilment of the undertakings of Member States and that consequently the Secretariat was once again able to ensure that no safeguarded materials had been diverted for non-peaceful uses. As far as the ongoing problem of financing safeguards was concerned, the Argentinian Government was convinced that the solution lay in rationalizing their application. The Secretariat should therefore concentrate its efforts on applying safeguards to materials directly used in the manufacture of arms and to plants in which such materials could be produced, processed or stored.

125. As far as the Committee on Assurances of Supply was concerned, as Argentina had already stated at the June meeting of the Board of Governors, it was not the lack of negotiating formulas or compromise texts which had for so long prevented a consensus, but a lack of political will, and until that will was restored, and the extreme positions thereby made more flexible the Committee would not be able to achieve the purposes for which it was created.

126. On the subject of liability for nuclear damage, Argentina supported the principle of international liability of States for damage caused by their plants, equipment, staff, etc. outside their territories to foreign property

or nationals. The development of the "juridical community" was no doubt responsible for the widespread adoption of that principle.

127. The Agency was to be congratulated on its activities in radiological protection and nuclear safety and also for its results in agriculture, food, and biological and physical sciences. In the latter context, special mention should be made of the work and results of the International Centre for Theoretical Physics in Trieste.

128. The Director General was to be congratulated on his re-election and for his tremendous efforts in implementing the Agency's technical programmes. The Secretariat staff, too, were to be congratulated for their efforts and achievements in spite of the very real difficulties which they had to face and of which the Argentinian Government was fully aware. It therefore guaranteed its full support and participation in all the activities of the Agency as it had done for many years.

129. Mr. ARTIGAS (Mexico) said that the rate at which the world was developing gave rise to environmental and energy-related problems of such a global nature that it was now primarily the task of the international organizations - and not least the Agency - to save the situation.

130. A major effort was now required to combat the anti-nuclear movement and to convince the peoples of the world of the benefits to be derived from the peaceful use of the atom. Food irradiation, for example, offered great benefits to tropical countries, which were among the least developed. Here, however, the effect of hostile publicity could in some cases be that people would continue to suffer hunger and poverty rather than turn to such technology. In order to overcome those negative influences and to place the power of the atom fully at the service of mankind, the Agency must throw itself into the arena with far more vigour and daring than it had previously permitted itself. It must, in effect, assume a leading role rather than always seeking out the common ground among its Member States.

131. Such a fundamental strengthening of purpose would of course cost money, and in that connection he questioned the validity of maintaining the zero-growth policy at a time when it was more than ever vital that the Agency - alongside other key organizations - play its part in warding off the danger that increasingly menaced the survival of the planet. However, should

it prove impossible to budge the developed Member States from their entrenched position on that matter, it would be necessary, through the Director General, to push for the establishment of special funds to enable the Agency to pursue its vital task. He had every confidence that the Director General possessed the necessary strength of character and imagination to carry through such a mandate.

132. Also essential was a thorough review of many of the Agency's component parts, starting with the Board of Governors, which could only become the effective forum it was made out to be when its membership was adjusted to reflect the true composition of the Agency, and when concerns which had thus far not been permitted to disturb its esoteric calm were at last given a proper airing.

133. Reforms were also necessary within the Agency's safeguards system, under which the same standards continued to be applied to States which differed fundamentally in terms of their relationship to the use of nuclear energy for exclusively peaceful purposes. Mexico was also concerned at the manner in which the Non-Proliferation Treaty extended safeguards to States which were engaged in a nuclear arms race, and also, of course, at the fact that the system - perhaps through lack of flexibility - had failed to become universal. There had been talk during the present Conference of establishing a committee to study the financing of safeguards. Since its mandate should cover absolutely every aspect of the matter, perhaps it would be appropriate for the committee to be set up by the Conference itself, being thereafter directly accountable to it.

134. Such reform measures as he had indicated must also extend to the regional groupings which depended on the Agency, in which connection he wished to refer in particular to the ARCAL programme. While commending its work, he also noted with concern that a process of crystallization, caused by the same kind of limitations that bound the Agency, had begun. ARCAL absorbed a large volume of technical co-operation funds, since its programmes lacked the originality and foresight which might otherwise attract extrabudgetary funds. It must not be allowed to stagnate, but must move ahead to become a torch-bearer for world nuclear development.

135. Mexico was now subjecting its own activities to the same kind of scrutiny. The quality of work within the framework of technical co-operation with the Agency was improving considerably, and it would continue to strive for further improvements. It took particular pride in its medfly programme, as well as in the assistance it had provided when an accident involving radioactive equipment had occurred in El Salvador.

136. In that connection, he voiced the concern felt by many countries over the lack of an adequate regulatory framework governing the sale of such equipment - a situation which had much to do with the vested interests of major international consortiums and so-called free trade. Clearly there was a responsibility on the part of the vendor both to ensure that only trained staff would use the equipment and to advise the respective government of the sale. In that way the three accidents involving the misuse of radioactive equipment which had occurred in Latin America could easily have been avoided.

137. Such a lack of adequate control measures was merely one indication of the flagrant contradiction surrounding the exploitation of the atom, an activity which by its very nature transcended political boundaries, but to which standards from a bygone age continued to be applied. A further example was that of Mexico's Laguna Verde nuclear power plant, where the series of obstacles his country had had to overcome in order finally to bring the plant into operation had had much to do with the problem of rapid obsolescence and the resulting additional costs - a problem which commonly hampered developing countries in their attempts to take up the nuclear option.

138. Despite such problems, he was nevertheless pleased to announce that the plant's first unit had now been commissioned and that a progressive power build-up had since been effected. Using its own resources, moreover, Mexico had overcome the various problems that had arisen in the course of commissioning operations. The plant had been visited by one RAPAT and three OSART missions, as well as routine safeguards missions which had begun several years previously. Mexico had for some years been a member of the INPO (Institute of Nuclear Power Operations) group and was also a member of the World Association of Nuclear Operators (WANO).

139. Considerable time and resources had been invested in operational safety - the highest priority - at Laguna Verde. Many full and partial

simulations had been carried out to ensure the complete co-ordination of all activities at the plant. Approximately 50% of capacity had recently been achieved, and he was pleased to confirm that a part of the electricity now being consumed in his country was of nuclear origin. Finally, he was confident that Mexico would distinguish itself by the safety of its nuclear installations.

140. Mr. KIENER (Switzerland) said that nuclear energy was already making a far from insignificant contribution towards the protection of the environment and that its potential in that respect was still not fully exploited. It therefore offered a workable solution for meeting the growing demand for electricity.

141. An increasing number of countries now recognized the threat which the greenhouse effect posed for the entire world, and it was becoming ever more obvious that carbon dioxide emissions must be reduced worldwide. All regions and all countries must contribute towards that objective by taking whatever political and technical measures proved necessary, including the adoption of policies for the rational utilization of energy and the use of energies which respected the environment. It was not enough simply to construct a large number of electricity-generating reactors of the present type. It would be necessary to replace fossil fuels in both electricity generation and heat production. The nuclear community should therefore define how it saw the increasing contribution of nuclear power with reference to environmental protection. Switzerland supported the efforts undertaken to re-evaluate nuclear energy in measures to control air pollution. In Switzerland, for example, the replacement of nuclear by coal-fired power stations would increase carbon dioxide production by approximately 40%.

142. Reactor operators and government authorities were in complete agreement regarding the crucial question of safety, an area which demanded further common effort. The safety of existing installations was of paramount importance.

143. Regarding the future development of nuclear energy and the frequent references made to the absolutely safe reactor, it should be emphasized that no system was completely infallible. Even modern light water reactors could be further improved. However, there were at present no urgent grounds for

radically changing their design. The development of new and even safer reactors should be directed towards the design of equipment which placed less of a burden on operators and towards the greater reliability of certain components. The Agency was an important forum for airing the safety problems raised by such new reactors.

144. Switzerland was keenly interested in the international research centre which the Soviet Union planned to set up in Chernobyl. For its part, the Agency should support that initiative and contribute to the exchange of information and experience which would take place in its connection.

145. The Agency's safeguards system continued to be a prerequisite for the international exchange of nuclear material. Moreover, the large number of States involved in the preparations for the Fourth Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) demonstrated the growing interest in the future of the international non-proliferation regime after 1995. Switzerland was convinced that it was in the interest of all to maintain the present NPT regime and hoped that more States would accede to the Treaty and that all the Parties which had not yet done so would soon conclude safeguards agreements in connection with NPT.

146. Switzerland had repeatedly stressed the importance which it attached to safeguards. While supporting the principle of zero growth, it had none the less shown a flexible attitude to the limited budgetary increases which might arise in that regard from an increase in statutory obligations. As it had clearly stated to the Board of Governors in June, it also considered that the present scale of assessment used to meet the cost of safeguards was not satisfactory. The fact that the safeguards budget had not increased from 1989 to 1990 was partly due to special circumstances. It should be remembered, however, that a significant increase was expected after 1990. Information on the long-term programme, i.e. covering at least five years into the future, would be extremely useful for the purposes of financial planning.

147. With regard to the question of financing the Agency's programme as a whole, his delegation strongly supported the Director General's criticism of Member States which had failed to pay their contributions on time.

148. Regarding nuclear energy in Switzerland, there had been little change since the previous year. Two anti-nuclear initiatives were to be put to the popular vote, probably in 1991. The first called for a 10-year moratorium on the construction of new nuclear installations, excluding radioactive waste disposal facilities, while the second called for the abandonment of nuclear power as soon as possible. The Swiss Government wished to reserve the nuclear energy option and was recommending to the public that they reject both initiatives.

149. The future utilization of nuclear energy continued, therefore, to be a highly political issue. Since a large part of the Swiss population was either sceptical or actually opposed to nuclear power, the decision to abandon the nuclear power station project at Kaiseraugst was now final. In view of the impossibility of building new power stations, at least in the near future, and because of the increase in consumption, the electricity companies had been obliged to conclude a number of long-term contracts for the importation of foreign nuclear electricity. A parliamentary majority had supported the Government in affirming the necessity of pursuing and further developing the peaceful uses of nuclear energy.

150. Swiss reactors had continued to have a very good availability rate, averaging 83%. The five nuclear power plants had provided almost 40% of the electricity produced in Switzerland. Continual efforts were being made to improve safety in those plants. For example, additional emergency cooling systems were being installed in the oldest power plants at Beznau and Mühleberg. The Swiss safety authorities had also requested that a risk study be undertaken for each reactor. Containment venting systems for operation in the event of accidents were also being designed. The question of how far the new Nuclear Safety Standards (NUSS) codes were already being applied in Swiss power plants was currently under study.

151. His delegation was well aware of the difficulties facing the peaceful uses of nuclear energy and the contribution which it could make with respect to long-term changes in the earth's climate. His delegation therefore welcomed the fruitful world co-operation which had begun under the Agency's auspices. Whatever political differences and conflicts of interests might exist between the Member States, the Agency had always succeeded in giving

priority to their common goals and pursuing its vital work of promoting the peaceful uses of nuclear energy.

152. Mr. van GORKOM (Netherlands) said that the Director General's observation that the environment had been one of the most prominent issues in public discussion during the past year had been borne out by the important role that topic had played in the elections to the European Parliament in March and in the recent elections in the Netherlands. On the basis of a national environmental survey for the period 1985-2010, his Government had drawn up a National Environmental Plan in which long-term environmental goals had been formulated and specific measures for the period 1990-94 proposed. Sustainable development was a central concept in the Plan and his Government therefore welcomed the introduction of that concept into the programmes of international organizations. The Agency should continue its commendable efforts related to sustainable development, notably in such fields as enhanced nuclear safety, reactor technologies with passive safety features, risk limitation and the elaboration of dose commitment concepts, high-level radioactive waste management and disposal and, in particular, comparative analysis of the environmental effects and associated risks of the various options for electricity generation. He noted with satisfaction that many of those topics had received adequate attention in the first outline of the Agency's work programme for 1991-92. His delegation welcomed the report submitted to the United Nations General Assembly on the Agency's contribution to sustainable development and appreciated the Agency's technical input to international meetings on climate change.

153. The cornerstone of the Netherlands' foreign policy remained the prevention of the further spread of nuclear weapons. The NPT was by far the best instrument for that purpose and his Government consequently attached great significance to the Fourth Review Conference to be held in 1990. Prospects for the Review Conference seemed good. In a climate of much greater mutual confidence than a few years previously, the United States and the Soviet Union were pursuing negotiations on drastic reductions in long-range nuclear weaponry. The destruction of intermediate- and shorter-range missiles in accordance with elaborate verification procedures was proceeding smoothly.

The previous week had seen progress on a verification protocol for American and Soviet nuclear weapon tests. Ratification of the threshold treaties could pave the way for further limits on testing.

154. The situation regarding Article VI of the NPT was therefore satisfactory. The same was true of Article III, under which the Agency had a vital role in applying safeguards to all nuclear installations of non-nuclear-weapon States party to the Treaty. The Agency had developed an efficient and effective safeguards system which had again enabled it to draw the welcome conclusion that no nuclear material had been diverted.

155. The Agency's role under Article IV was clear and important. A paper prepared by the Secretariat for the NPT Review Conference provided convincing proof of the relevance of the Agency's work under that Article and demonstrated that the record of both the Agency and Member States was quite satisfactory.

156. Saudi Arabia, Bahrain and Qatar had acceded to the NPT during the past year, and urged all Member States not parties to the NPT to follow their example. That applied particularly to South Africa. The recent statement by the South African Government had been very interesting, and he welcomed the forthcoming talks with the depositary powers. Decisions on the part of that Government were now required.

157. His delegation urged all parties, and especially those with significant nuclear programmes, which had not yet done so to conclude a safeguards agreement promptly in conformity with Article III of the NPT. The conclusion of such an agreement with Viet Nam was to be commended.

158. His delegation called on nuclear-weapon States to place all their civil nuclear installations under safeguards and to consider reporting fully on them to the Agency. A further and clear separation between civil and military parts of the fuel cycle would make it easier to achieve that.

159. Although policy differences between NPT parties and non-parties clearly existed, there was undeniably a commonality of political and economic interests between them and between traditional and emerging suppliers. With virtually all Member States accepting the need for effective non-proliferation measures on nuclear exports, there was a large measure of agreement on

principles and practice in that area which it was important to translate into a new consensus on practical nuclear export policies. In that context, his delegation had noted with great interest the statement made earlier by the Argentine delegation. Also, it fully supported the Director General's request that all suppliers state that it was their policy to ensure that exported nuclear material or equipment would be subject to Agency safeguards and to inform the Agency in a timely manner about all intended exports and actual shipments.

160. The previous year, he had stressed the importance of communicating information on a broad range of topics to a wider audience: the new Yearbook was precisely the type of publication he had had in mind. The Yearbook provided an opportunity to clarify the work of the Agency in areas such as radiation protection, nuclear waste disposal and safeguards, where misunderstandings continued to occur.

161. It was gratifying to note that the Emergency Response System had been put into operation earlier in 1989. A number of small incidents and accidents had occurred over the past year, but the IAEA had been unable to function as a focal point in the dissemination of information on those events. The Agency would be in a better position to do so if all Member States supplied it with sufficient information in a timely manner.

162. The Netherlands, together with its European Community partners and the European Commission, was ready to become a party to the Convention on the Physical Protection of Nuclear Material later that year.

163. Alongside nuclear safety and safeguards, technical co-operation was the third vital component of the Agency's mandate. His Government would pledge its full voluntary contribution of US \$741 650 for technical co-operation activities, and was also considering funding a biotechnology project.

The meeting rose at 1.15 p.m.