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RECORD OF THE THREE HUNDRED AND FIFTY-THIRD PLENARY MEETING

Held at the Austria Center Vienna
on Monday, 27 September 1993, at 10.30 a.m.

Temporary President: Mr. ADEKANYE (Nigeria)

President: Mr. AL-ATHEL (Saudi Arabia)

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[*] GC(XXXVII)/1085.

The composition of delegations attending the session is given in document GC(XXXVII)/INF/328/Rev.2.

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Abbreviations used in this record

ABACC	Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials
CTBT	Comprehensive Test Ban Treaty
DPRK	Democratic People's Republic of Korea
ECOSOC	Economic and Social Council (UN)
FAO	Food and Agriculture Organization of the United Nations
G-7	Group of Seven
IFMAP	Advisory Programme for the Management of Irradiated Fuel
NPT	Treaty on the Non-Proliferation of Nuclear Weapons
RADWASS	Radioactive Waste Safety Standards
RCA	Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology (for Asia and the Pacific)
SAGSI	Standing Advisory Group on Safeguards Implementation
TACF	Technical Assistance and Co-operation Fund
TC	Technical co-operation
Tlatelolco Treaty	Treaty for the Prohibition of Nuclear Weapons in Latin America
UNDP	United Nations Development Programme
UNSCOM	United Nations Special Commission
WANO	World Association of Nuclear Operators

OPENING OF THE SESSION

1. The TEMPORARY PRESIDENT declared the thirty-seventh regular session of the General Conference open.

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

All present rose and stood in silence for one minute.

3. The TEMPORARY PRESIDENT, after welcoming all the participants, said that the Agency's smooth operation in Vienna owed a great deal to the unstinting support of the Federal Government of Austria which he thanked on behalf of all the participants.

4. The current session of the General Conference was taking place at a momentous point in the Agency's existence. Striking events had taken place in South Africa and the Middle East which had had repercussions on the Agency's functions. Challenges had been mounted against the Agency and subtle attempts made to erode its credibility and authority. It was reassuring that those challenges had been met, confidence in the Agency had been boosted and its membership had increased.

5. The challenges had been particularly evident in the area of safeguards. Prompted by failures on the part of some Member States to meet their obligations under their safeguards agreements, the Board of Governors had completed a review of the safeguards system and, as a result, more extensive use was being made of data collected by the Agency and a new system of universal reporting by both importers and exporters of nuclear material and equipment had been instituted. The Agency's right to perform special inspections under existing safeguards agreements had been reinforced, its information base broadened and more discriminating use was being made of safeguards information to enhance the Agency's capacity to detect clandestine activities.

6. Concern about the safety of nuclear installations had stimulated research, development, and the application of advanced technologies. Nuclear safety culture was growing. With the assistance and co-operation of the Secretariat, Member States were actively considering a new draft safety convention which it was hoped would be adopted in the not-too-distant future. Together with a draft convention on liability for nuclear damage,

a safety convention would provide the international legal framework required for the safe development of nuclear power. He urged Member States to give full support to those ventures.

7. Projected growth in the nuclear power sector to meet future energy needs had resulted in intensified co-operation among Member States and between the Agency and other multilateral organizations. The implications of nuclear energy for the environment and development were also under close scrutiny.

8. It was imperative that Member States pursue vigorously the promotional aspects of the Agency's work by accelerating and expanding the application of nuclear energy through the transfer of nuclear technology. That was essential if the majority of the Agency's Member States, including those of the African region, were to identify fully with the Agency's work. The mistaken impression that the Agency's technical co-operation activities were of secondary importance should not be allowed to gain ground.

9. The prospects for a multilateral non-proliferation regime had never been brighter. South Africa's accession to the NPT and the continuing efforts to draw up a treaty on a nuclear-weapon-free zone in Africa were a welcome move to emulate Latin America which was completely committed to non-proliferation and the peaceful uses of nuclear energy. In the Middle East, steady progress continued to be made towards the application of IAEA safeguards to all nuclear activities and installations. It was also encouraging that all five nuclear-weapon States were now party to the NPT. As the NPT Extension Conference which was to be held in 1995 approached, the role of the Agency in strengthening the non-proliferation regime would attract great interest. Events over the past year had shown how dependent the Agency was on the goodwill of Member States in that area. The political commitment of Member States to non-proliferation should be firm and unambiguous. The non-proliferation regime could gain ground only if multilateral commitments like the NPT were adhered to.

10. The growing demands which Member States were making on the Agency could only be fully met if the Agency had adequate resources. Over the past year, funds had been limited and the Director General was to be commended on the imagination he had shown in

coping with that situation. The Secretariat would be in an even better position to serve Member States if the Agency's resource base improved significantly. He therefore urged Member States to co-operate among themselves and with the Secretariat to find a solution to that problem which took account of the financial situation of all Member States.

11. In conclusion, on behalf of all the participants, he thanked the Agency's staff who continued to serve Member States with devotion, loyalty and enthusiasm, and commended the Director General on the leadership he had provided for the organization.

ELECTION OF OFFICERS AND APPOINTMENT OF THE GENERAL COMMITTEE

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

13. Mr. BAKSHI (India), speaking on behalf of the Middle East and South Asia Group, proposed Mr. Al-Athel (Saudi Arabia) as President of the thirty-seventh regular session of the General Conference. The credentials of Mr. Al-Athel, who was currently the President of the King Abdulaziz City for Science and Technology in Saudi Arabia, were impeccable and impressive.

14. Mr. Al-Athel (Saudi Arabia) was elected President by acclamation.

15. The TEMPORARY PRESIDENT, on his own behalf and on behalf of all the delegates, congratulated Mr. Al-Athel on his election and wished him every success.

Mr. Al-Athel (Saudi Arabia) took the Chair.

16. The PRESIDENT said that he appreciated the honour done to himself and his country by his election as President of the thirty-seventh session of the General Conference. He promised to work diligently for the success of the Conference, and felt sure that he could count on the co-operation of all delegations to that end. He also expressed his gratitude to Mr. Adekanye, the outgoing President.

17. The current session of the General Conference coincided with two historic events. A few months previously the nuclear community and the whole world had observed the fiftieth anniversary of the first successful test of a nuclear fission chain reaction in the United States of America. That test had started a new era, providing a new energy source which

could be utilized for the benefit of mankind, but which could at the same time cause the extermination of human life and the destruction of the globe. Secondly, the NPT was approaching the end of its term and soon the countries of the world would be gathering together to review the Treaty and determine its fate.

18. The NPT was an important international instrument which had stood the test of time. The Agency had played an effective role in its success, since it had been entrusted with the responsibility of applying the safeguards system provided for by the Treaty. The forthcoming NPT Review Conference would provide an opportunity for all peace-loving countries to strengthen the Treaty, ensure its continuity and encourage all countries which had not yet signed it to do so.

19. Energy demand throughout the world, and especially in the developing countries, was constantly increasing and world energy consumption was expected to double over the coming two decades. Much debate had surrounded the various alternative sources of energy, and many claims and counter-claims had been made regarding the relative effects on the environment, comparative efficiencies and the like. Such arguments had hindered the optimum development of the alternatives available and their public acceptance. Every energy source had its advantages and disadvantages, and a more realistic view should be taken of the situation which would encourage efforts to develop all energy sources and make them more acceptable to the public.

20. Nuclear safety was an issue which aroused great public concern, and the Agency had made great contributions to that field. Also, the work that some Member States had done on the development of a new generation of nuclear power reactors would, it was hoped, lead to the production of a reactor that was capable of achieving the desired safety levels.

21. In conclusion, he looked forward to presiding over a fruitful session which he trusted would be marked by a spirit of co-operation.

22. Turning to the business of election, he recalled that, under Rules 34 and 40 of the Rules of Procedure, the Conference had to elect eight Vice-Presidents, the Chairman of the Committee of the Whole, and five additional members of the General Committee. From the consultations which had taken place he understood that there was a consensus on the matter,

and he therefore proposed that, under Rule 34 of the Rules of Procedure, the delegates of Canada, Chile, Ethiopia, the Philippines, Qatar, the Russian Federation, Switzerland and Thailand be elected as Vice-Presidents and Mr. István Posta (Hungary) as Chairman of the Committee of the Whole; and that, under Rule 40, the delegates of Bulgaria, Colombia, France, Nigeria and the United States of America be elected as additional members of the General Committee.

23. Mr. YUN (Democratic People's Republic of Korea) said that, during its consultations, the Far East Group had not in fact reached a consensus on their nominee for Vice-President.

24. Mr. ARCILLA (Philippines) confirmed that the Far East Group had not been able to reach a consensus on their nominee for Vice-President. Two candidates had been put forward, the delegate of the Democratic People's Republic of Korea and the delegate of the Philippines.

25. The PRESIDENT, said that in the circumstances a vote was unavoidable and accordingly, under Rule 79 of the Rules of Procedure, he invited the Conference to hold a secret ballot.

26. Mr. YUN (Democratic People's Republic of Korea) said that he had hoped that, in line with previous practice, the President would consult with the members of the regional group with a view to achieving a consensus. However, since a secret ballot had been requested, his delegation was prepared to stand down, in order to save time.

27. The PRESIDENT reread the list of nominees for the eight Vice-Presidents, the Chairman of the Committee of the Whole, and the five additional members of the General Committee.

28. The President's proposals were accepted.

APPLICATIONS FOR MEMBERSHIP OF THE AGENCY (GC(XXXVII)/1053, 1054, 1055, 1056, 1057 and 1083)

29. The PRESIDENT informed delegates that there were six applications for membership before the General Conference which had been submitted by the Slovak Republic

(document GC(XXXVII)/1053), the Czech Republic (document GC(XXXVII)/1054), the Republic of the Marshall Islands (document GC(XXXVII)/1055), the Republic of Armenia (document GC(XXXVII)/1056), the Republic of Kazakhstan (document GC(XXXVII)/1057) and the State whose application was the subject of document GC(XXXVII)/1083. In the latter case, the Board had recommended that in accordance with the practice adopted by the United Nations General Assembly, the State concerned be provisionally referred to for all purposes within the Agency as "the former Yugoslav Republic of Macedonia" pending settlement of the difference that had arisen over that State's name. The applications had all been endorsed by the Board which had also submitted draft resolutions dealing with each of those cases for adoption by the General Conference.

30. He assumed that the Conference wished to adopt the six draft resolutions in question.

31. It was so decided.

32. On behalf of the Conference, he extended a warm welcome to all the six countries which had just been approved for membership.

33. Mr. MISAK (Slovak Republic) expressed his profound gratitude to all those present, on behalf of the Slovak Republic, for accepting his country as a Member State of the International Atomic Energy Agency. Slovakia would strive to meet fully its obligations under the Agency's Statute.

34. His country was one of the few still expanding their nuclear programmes and nuclear energy accounted for approximately 50% of its power generation. Consequently, it attached high priority to upgrading the safety of its nuclear power plants.

35. The Slovak Republic and the Agency had maintained close links despite the former losing its membership following the dissolution of the former Czechoslovakia, and his country was now willing and able to make an important contribution to the Agency's activities by making available its experts and facilities.

36. Mr. BRATINKA (Czech Republic) thanked all those present on behalf of his country for endorsing the Czech Republic's application for membership of the Agency.

37. His Government attached high priority to furthering the peaceful uses of nuclear energy and to that end intended to prepare as soon as possible long overdue legislation to regulate its nuclear activities, particularly in nuclear waste management, the back end of the nuclear fuel cycle, nuclear damage liability and the associated insurance of nuclear utilities.

38. The Czech Republic would co-operate fully with the Agency to ensure that its regulation of such sensitive areas complied with the highest international standards.

39. His country intended to give its unreserved support to all the Agency's activities. Czech experts would collaborate closely with the Agency's Secretariat, and would receive the necessary support from the Czech Government when the Agency so required. As a developed nuclear power, the Czech Republic intended to send its experts to developing countries and accept trainees from them, organize courses and seminars and participate in co-ordinated research programmes.

MESSAGE FROM THE SECRETARY-GENERAL OF THE UNITED NATIONS

40. Mr. PETROVSKY (Representative of the Secretary-General of the United Nations) conveyed the Secretary-General's regret at not being able to address the Conference personally at an important time for the Agency and for the international community as a whole.

41. As the new challenges of the post-cold-war era began to emerge with greater clarity, the time had come to integrate disarmament and non-proliferation into a broader international agenda. Both were crucially important objectives in the international peace process but they could only be achieved in conjunction with other issues of a political, economic and social nature.

42. The structure of international relations and the nature of international priorities had changed dramatically. During the cold war, international relations had been conditioned by the political dynamics of superpower competition, in which context States everywhere had learned to calculate their interests and seek security.

43. The end of the cold war had brought new possibilities for co-operation. Political understanding, economic co-operation and social dialogue had supplanted geopolitical rivalries, bringing concrete and tangible results throughout the world.

44. However, the end of the cold war had also revealed a dark side. Freed from its constraints, long suppressed ethnic, religious and factional rivalries had burst forth into violent and open conflict. Ultrationalism and micronationalism were threatening to fragment many States. The relatively weak had again become the prey of the relatively strong. Unable to sustain cold war expenditures in the absence of cold war subsidies, a number of States had simply ceased to function.

45. In order to address such challenges in the post-cold-war era, a new conceptual framework for security was needed. The outlines of such a framework had already begun to take shape, based on three essential objectives. First, in order to ensure mankind's survival as a species, it was necessary to stop the competition in weapons of mass destruction. Second, in order to avoid conflicts based on misconceptions and mistrust, it was necessary to promote transparency in armaments and develop other confidence building measures. Third, in order to deter potential aggressors it was necessary to exhibit a greater collective determination to oppose aggression.

46. In the context of non-proliferation and disarmament, the end of the cold war had had a dramatic effect. A decade previously, military expenditure worldwide had been rising dramatically and the nuclear arms race was set to spread into outer space. There had been widespread public apprehension and justified alarm over the seemingly relentless build-up in both nuclear and conventional military forces.

47. Much had changed. Impressive cuts had been made in strategic and nuclear arsenals. In particular, the signing of the latest Strategic Arms Reduction Treaty (START 2) promised a 70% reduction in the global nuclear warhead total over the next decade. The elimination of ground-based multiple warhead missiles had substantially defused the nuclear arms race by removing the fear of a nuclear first strike.

48. The 16 bilateral agreements concluded between the United States of America and Russia had provided greater transparency and security, and encouraged and facilitated

multilateral co-operation on a global scale. Worldwide nuclear testing had declined dramatically, and negotiations towards the completion of a nuclear test ban treaty had been given a new lease of life. The Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction had at long last come into effect. A register of conventional arms, designed to increase transparency and build confidence, was now in operation.

49. Such developments had profound implications for the activities of the Agency, opening the way for a new level of co-operation. However, new threats and challenges had also arisen.

50. The world remained a dangerous place. As superpower disarmament gathered momentum, international concern was focused on ensuring the non-proliferation of nuclear, chemical and biological weapons. At a time when substantial disarmament was finally taking place, there could be no justification for any State to acquire the tools and technologies of mass destruction.

51. The NPT continued to provide an indispensable framework for the global nuclear non-proliferation effort. All 5 nuclear-weapon States were now among the 160 parties to the Treaty.

52. The international community had to be steadfast in ensuring compliance with the terms of the NPT. Iraq's secret and extensive efforts to develop nuclear weapons and the DPRK's threat to withdraw from the NPT and refusal to comply fully with its obligations under the Treaty served as a warning against complacency and highlighted the resolve that would be required from the international community to avoid the perils of nuclear proliferation. Vigilance, determination and perseverance would continue to be necessary.

53. It was vital to maintain the credibility of Agency safeguards and ensure full implementation of the NPT. The experience of dealing with the challenges posed by Iraq and the DPRK demonstrated the importance of strong international backing, including the active involvement of the United Nations Security Council when necessary. It was imperative to prevent the proliferation of nuclear weapons. The consequences of failure

would be far reaching with the risk of triggering a chain reaction in the proliferation of dangerous weapons of mass destruction.

54. The recent confrontations in which the Agency had been involved clearly demonstrated the need to strengthen the provisions of the NPT. Verification and safeguards arrangements needed to be improved. In that context, the Secretary-General fully supported the actions taken by the Director General and the Board of the Agency to strengthen reporting requirements and conduct special inspections of undeclared facilities in order to reinforce the safeguards system.

55. In order to maintain progress, three outstanding issues needed to be dealt with. First, it was vitally important that the NPT be extended indefinitely and unconditionally when it was reviewed in 1995. Second, the de facto moratoria on nuclear testing by nuclear-weapon States should be maintained and a comprehensive nuclear test ban treaty concluded at an early date. Third, the momentum gained from the reduction in nuclear arsenals should be followed up by efforts to halt completely the production of fissile material for weapons purposes.

56. Traditional concerns over disarmament and non-proliferation rightly remained central to the Agency's mission, but increased international attention was also being paid to other aspects of the Agency's work such as the safe storage and disposal of fissile materials, enhancing the safety of nuclear power plants, and dealing with the consequences of past nuclear practices.

57. Ensuring the safety and security of fissile materials recovered from dismantled warheads posed an important challenge to the Agency. International supervision of the storage of such materials was an important aspect of confidence building and nuclear transparency. It was essential that the newly independent States commit themselves immediately to legally binding non-proliferation undertakings, and that full transparency exist in the trade and storage of plutonium and highly enriched uranium.

58. A related concern, that of ensuring the safety of nuclear power plants, had received wide international attention over the past year. Countries which operated outdated plants, and their neighbours, were anxious to receive advice and support from the Agency.

59. In particular, the need for specific attention to be given to the safe operation of Soviet-designed reactors had been widely noted. The nuclear safety convention which would hopefully soon be adopted, was designed to serve as the basic international frame of reference for safety and review procedures at nuclear power plants. Its implementation would be an important step forward.

60. In pursuance of the relevant General Assembly and ECOSOC resolutions, there had been continued close co-operation between the United Nations and the Agency to mitigate the consequences of the Chernobyl accident. Further such collaboration was essential in order to accurately assess the damage, prevent further harm and alleviate suffering.

61. Much progress had indeed been achieved. The United Nations Trust Fund for Chernobyl had funded the application of an innovative technique developed by the Agency and FAO to cut caesium levels substantially in milk and meat. The Agency and UNDP had undertaken a joint initiative to strengthen the national institutions responsible for radiation protection and nuclear safety in the republics of the former Soviet Union. Furthermore, tangible financial support was now available for safety system improvements and for combining alternative sources of energy. Such co-operation was essential. It was the duty of all concerned to ensure that the world never again had to face the consequences of a similar nuclear accident.

62. The United Nations Conference on Environment and Development in Rio de Janeiro had underlined the need to husband resources, avoid waste and create safe, abundant and sustainable sources of energy, in order to preserve a fragile ecosystem and provide a better life for all peoples around the world.

63. Nuclear science had made valuable contributions to many areas of modern life. However, if nuclear power was to be a truly viable global option, the Agency would need to help ensure that nuclear energy was produced safely in accordance with the highest international standards, that nuclear wastes were disposed of securely and that adequate safeguards were deployed to prevent commercial technologies being diverted to military uses.

64. As the United Nations, like the Agency, prepared to face the difficult challenges that lay ahead, the Secretary-General wished the Conference every success in its deliberations.

65. Speaking on his own behalf as United Nations Under-Secretary General and Director-General of the United Nations Office at Geneva, Mr. PETROVSKY said that in his recent report, "New Dimensions of Arms Regulation and Disarmament in the Post-Cold-War Era", the Secretary-General had advocated the integration of non-proliferation issues into a broader international security agenda, globalization of arms control and revitalization of the disarmament process. That meant that measures to support the NPT should be combined with others aimed at the reduction and limitation of nuclear weapons at both global and regional levels. More vigorous efforts would also be needed to strengthen the five other main non-proliferation regimes namely, biological weapons, chemical weapons, missile technology, export control and conventional weapons.

66. Globalization with regard to the NPT meant that all States should sign it, while the revitalization of the non-proliferation regime implied, *inter alia*, exploiting the full potential of the Treaty. Any problem that Member States might encounter with regard to nuclear weapons could and should be solved within the framework of the Treaty, and any violation of its provisions should be followed by prompt and severe international sanctions.

67. The Agency's recent activities, conducted under the able leadership of its Director General, had served to demonstrate practically a number of the ideas contained in the Secretary-General's report. Firstly, its safeguards system had become one of the undisputed pillars of the contemporary international security structure and, secondly, the Agency had made itself an undisputed authority in the areas of development of peaceful uses of atomic energy, establishment of standards for nuclear safety and environmental protection and assistance provided to countries with their atomic energy programmes.

68. In conclusion, he expressed confidence that the excellent co-operation between the United Nations and the Agency would continue to prosper.

STATEMENT BY THE DIRECTOR GENERAL

69. Since the thirty-sixth General Conference in September 1992 there had been many events and developments which had called for, or would call for, action in the Agency. Indeed some had focused world attention on the Agency. South Africa had been the first State to abandon its nuclear-weapon status - giving the Agency a number of important

verification tasks in the process. Latin America and Africa might soon emerge as nuclear-weapon-free continents. In the Middle East, the peace process seemed to be accelerating, inter alia increasing the prospect of a nuclear-weapon-free zone in that region. The nuclear disarmament process seemed to be gathering momentum, with possibilities for agreements on a complete test ban and a cessation of production of fissionable material for weapons purposes, as well as the release of large quantities of nuclear material from dismantled nuclear weapons. Such developments would help to create a favourable climate for the 1995 Conference on the Non-Proliferation Treaty and would also focus attention on the Agency as a possible international mechanism for verification.

70. There were also new problems, such as the dismantling of Iraq's near-nuclear-weapon capacity; the presence of nuclear weapons in some of the States of the former Soviet Union; and the ambiguous attitude of the Democratic People's Republic of Korea to the NPT and to Agency safeguards.

71. In the field of nuclear power the outlook was extremely diverse. Most western industrialized countries were still in recession and that factor, together with significant opposition to nuclear power in many western countries, had led to a stagnation in nuclear power construction. In contrast, in East Asia, with several booming economies and rapidly growing electricity needs, nuclear power was fast expanding. The countries of the former Soviet Union and Eastern and Central Europe, facing grim economic realities, remained committed to nuclear power while at the same time working hard on upgrading safety.

72. There was a growing awareness that some of the world's most serious environmental threats were linked to the massive and careless use of energy. The present understanding that global CO₂ emissions would have to be reduced to avoid a greenhouse effect might lead to renewed consideration of the CO₂-free nuclear power option. The interim should be used to enhance nuclear safety, both in reactors and in the handling of nuclear waste. By the time the sceptics were prepared to look at the nuclear option again, features which had raised doubts earlier should have been dealt with.

73. For developing countries, many of which did not yet have the capacity to use nuclear power, various nuclear techniques in the field of health care, agriculture and industry offered

great benefits. Those countries rightly maintained that there should be a balance in the Agency between promotional and regulatory activities. In stressing the Agency's promotional role they were on firm historical ground. Almost 40 years ago, in a speech before the United Nations General Assembly in December 1953, President Eisenhower had proposed the creation of the Agency. He had stated:

"The more important responsibility of this atomic energy agency would be to devise methods whereby this fissionable material would be allocated to serve the peaceful pursuits of mankind. Experts would be mobilized to apply atomic energy to the needs of agriculture, medicine and other peaceful activities. A special purpose would be to provide abundant electrical energy in the power-starved areas of the world. Thus the contributing Powers would be dedicating some of their strength to serve the needs rather than the fears of mankind."

It was on that lofty mandate that the technology transfer activities of the Agency were founded.

74. The limited but vocal opinion that was so resistant to nuclear energy that it urged the Agency to abandon its role in promoting, say, mutation plant breeding, or the use of radiation in medicine or in industry, would not meet much understanding among governments that continued to share the aims proclaimed by President Eisenhower.

75. Having briefly outlined the situation, he now wished to make some comments on the Agency's work on the transfer of nuclear techniques.

76. Many nuclear techniques provided highly cost-effective means of solving problems in medicine, agriculture and industry. The ability of the Agency to help transfer such techniques to developing countries was dependent upon several factors, namely the resources contributed, the efficiency of the TC operations and the ability and commitment of the recipient countries. Although the main resource base - the Technical Assistance and Co-operation Fund - had grown steadily, the substantial devaluations which had occurred in non-convertible currencies and pledges below targets by a few industrialized countries had regrettably reduced the resources available.

77. For a long time the RCA - the regional co-operation agreement for Asia - had been a very constructive tool in the transfer of nuclear technology to the countries of Asia. Similar benefits were being sought through ARCAL (Regional Co-operative Arrangements

for the Promotion of Nuclear Science and Technology in Latin America) and through AFRA (African Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology). In a specialized area such as nuclear techniques, positive effects could be gained through regional approaches. However, a strong commitment from members of the regions and a steady flow of resources were called for. He was glad that a meeting of co-ordinators and managers of the regional programmes would take place during the General Conference to discuss common issues and collaboration.

78. Training played an important part in almost all transfer of nuclear techniques. The Agency wished to express its appreciation to the many nuclear institutions and laboratories in both industrial and developing countries which received trainees in the most diverse fields. He also drew attention to the important training function of the Agency's laboratories in Seibersdorf and Monaco. He was glad to note that the Government of Monaco would be providing the Marine Environment Laboratory with excellent new premises in 1994. The Laboratory, which would then also include a training centre, provided important continuous analytical control services for the measurement of nuclear and non-nuclear environmental contamination. In recent years it had provided key assistance in the radiological assessment of radioactive waste dumping in the Arctic Seas, evaluation of post-war environment recovery in the Persian Gulf and a nuclear and conventional pollutant survey in the Danube river basin.

79. A large amount of advanced and highly specialized training in physics had been provided through the International Centre for Theoretical Physics at Trieste, for which the Agency had had administrative responsibility. With increasing and very generous contributions by Italy and the dynamic leadership of Professor Abdus Salam, the Trieste Centre had been an intellectual North/South hub of great excellence. As the subjects treated had gradually extended far beyond the Agency's domains, it had been agreed that UNESCO should take over the day-to-day administrative responsibility. However, the Agency could take pride in having helped to create and develop the Centre. The Agency would continue to support it financially and to rely on it as an important training institution.

80. Some new approaches were being followed to increase the effective use of the resources available for the Agency's technical assistance. First, the Agency would seek

increased assurance that requests for assistance were based on national development priorities. That could be done through intensified contacts with the Member States, e.g. through pre-project missions. With a firm basis in national priorities the prospect of effective implementation would increase. Second, the Agency would verify - at the time of project design - that projects were consistent with the policy of sustainable development. In fact, surveys of Agency programmes showed that a very high proportion did fulfil that criterion. What had been done in the past as a matter of common sense would become conscious policy. Third, the Agency would also, in accordance with the statutory requirement, require the application of its Basic Safety Standards to all TC projects. Fourth, the Agency would develop some practical, end-user oriented projects, which would provide the recipients with immediate benefits and might serve as models. Examples of such projects included the use of the sterile insect technique in tsetse fly eradication and the use of radiation sterilization for a human tissue bank.

81. Other concrete examples of what the Agency was doing were the following: one project had been using Prussian Blue boli very successfully to reduce radio-caesium contamination of meat and milk in areas affected by nuclear fallout in Ukraine, Belarus and Russia. It had been calculated that the use of \$5000 worth of boli had resulted in savings of \$30 million. The Agency appreciated Norway's funding and technical support for the project.

82. Another project was a joint FAO/IAEA venture to develop and support the use of nuclear and molecular-based technologies to diagnose rinderpest - a devastating disease of livestock. Under the project the laboratory in Seibersdorf sent diagnostic kits to the affected countries in Africa, the Middle East and Asia. The economic benefits of the scheme could ultimately be counted in billions of dollars.

83. Another project planned was for the eradication of the tsetse fly in Zanzibar using radiation-sterilized insects. The economic and social development of a large portion of sub-Saharan Africa was greatly impeded by both human sleeping sickness and African animal trypanosomiasis transmitted by tsetse flies. If resources became available, there was an opportunity to overcome the scourge on the island of Zanzibar in Tanzania. The project would build on the work over a number of years by Agency and FAO experts who had been

collaborating with Tanzanian scientists to develop methods for combating the tsetse fly and trypanosomiasis. Progress had been so encouraging that the Agency was preparing to launch a Model Project for the complete eradication of the tsetse fly from Zanzibar.

84. In the field of industry, the Agency had helped several States to introduce irradiation techniques for sterilizing medical products and to improve products by radiation polymerization.

85. The laboratory in Seibersdorf had assisted laboratories in Africa in using nuclear analytical techniques for trace element analysis in air, water, soil and biological samples. Those techniques enabled important information to be obtained on the¹⁰ movement of air pollutants.

86. In Poland a very successful pilot project was being conducted using ammonium and an electron beam to transform into fertilizer the SO₂ and NO_x contained in the flue gases of a coal plant. The upgrading of the technique to industrial scale was now being studied and several countries had requested assistance with introducing it.

87. Lastly, a study had been made and a document prepared on the possibilities of using nuclear energy to produce potable water. Several countries had contributed to the work, notably the Libyan Arab Jamahiriya which had provided AS 600 000 and two experts.

88. Coming back to nuclear power, he said that international co-operation in that field remained a large and important function of the Agency. Continued and increased reliance on nuclear power was a controversial issue in most countries. The Agency - as an intergovernmental organization consisting of many States making extensive and increasing use of nuclear power and of others which rejected that option - was not seeking to persuade Member States collectively or individually to use nuclear power. Decisions in that regard were entirely up to the countries themselves. Rather, the work of the organization in that area was based on the simple premise that nuclear power was in fact used in many countries, that other States were considering introducing it and that there was a need for factual information, the exchange of views and experience, the harmonization of standards, and a variety of services, especially in the field of nuclear safety.

89. The Agency compiled and distributed to its Members a great deal of information relevant to the nuclear power industry, for example on uranium production, on the performance of the world's nuclear power plants, and so forth. For countries considering the nuclear power option, the Agency could offer advice and expertise. The recent publication "Policy Planning for Nuclear Power" identified some of the issues which such countries would need to consider. The Agency also convened technical meetings to discuss matters such as the burnup of fuel with a view to achieving optimal fuel economy. It provided fora for experts dealing with the design and construction of various new types of power reactors. However, most of the work in the sphere of nuclear power was devoted to safety and waste handling. He would revert to that later.

90. The long economic recession that many countries had been experiencing and the continuous improvements in energy efficiency tended to make people ignore the fact that the use of energy, notably electricity, was expected to grow significantly over the coming decades - especially in developing countries but also globally. Since energy production and use were one of the principal threats to the environment, it was appropriate that Agenda 21, which had been adopted at the United Nations Conference on Environment and Development in Rio de Janeiro in 1992, had stressed the role of energy in sustainable development and the need to design and implement environmentally sound energy strategies. That was going to be a difficult task. All energy generation and use carried some degree of risk to health and environment. Fossil fuels dominated by far commercial energy sources and it was those fuels which gave rise to the most ominous health and environmental effects, for example, forests dying from acid rains and global warming, linked inter alia, to carbon dioxide emissions.

91. In its search for agreement to prevent or impede climate change and transfrontier pollution, the international community would need the best possible basis in science and data. Blind opposition to the use of nuclear power should not be allowed to prevent a factual and rational examination and comparison of the data relating to that energy source with those of other sources. For several years the Agency has been involved in an inter-agency project on databases and methodologies for comparative assessment of different energy sources for

electricity generation. The main conclusions and findings should be ready for presentation and discussion at a Symposium on Electricity, Health and the Environment in 1995.

92. While no one, least of all in the Agency, was forgetting the health and environmental consequences of the Chernobyl accident, he was convinced that the absence of SO₂ and NO_x and especially CO₂ emissions from nuclear power installations, would prove to be of great importance. At the present time, some 17% of the world's electricity was generated by nuclear power. If expansion of CO₂-free energy generation became a vital objective, nuclear power could be used not only to increase the production of electricity but also for industrial heat, desalination and district heating. Modern windmills and solar cells were welcome sources of energy but they were not likely to provide the substantial amounts of power needed to meet the growing needs of industrial development in the decades to come.

93. It was impossible to foretell what conclusions would emerge from the impending discussion of energy and environment. What was fortunately clear, however, was that the Agency's programme could build on a consensus that, whatever future role were given to nuclear power, immediate efforts had to be made to achieve secure global disposal of radioactive waste and to increase nuclear safety, especially in those areas where weaknesses had been found.

94. The Agency's activities relating to spent nuclear fuel and radioactive waste consisted of information exchange, expert assistance, advice and services and elaboration of international norms. The organization's work on the marine dumping of radioactive waste involved all those activities. Under the London Convention, the Agency provided the technical basis for establishing norms relating to disposal of radioactive materials at sea. The IAEA Marine Environment Laboratory had supported both the 1992 and the 1993 Kara Sea expeditions organized by Russia and Norway. In co-operation with the Governments of those two States and as a part of its responsibilities under the London Convention, the Agency had initiated the International Arctic Seas Project to assess the possible health and environmental impacts of the radioactive wastes dumped in the shallow waters of the Arctic. Samples collected in 1992 and analysed at Monaco had shown no evidence of increased activity, but a considerable amount of information was needed before a reliable assessment of the potential impact of the dumping could be made. The Agency was also exploring ways of assisting in

examining the dumping of radioactive wastes in the North Pacific, including the Sea of Japan, where, fortunately, the quantities dumped appeared to have been much smaller than in the Arctic.

95. Due to the increasing number of reactors in operation around the world, the amount of spent fuel to be stored was continuously growing. To disseminate information about new technologies and good operating practices in that field, the Agency had initiated an advisory programme for the management of irradiated fuel (IFMAP). It was also engaged in the preparation of safety guides dealing with the design and operation of spent fuel storage facilities, which were expected to be ready for publication in 1994.

96. The Agency was continuing the programme to develop Radioactive Waste Safety Standards - RADWASS. Twelve high-priority documents were being prepared under that programme, including the RADWASS Safety Fundamentals, which had been sent to Member States for review in July 1993 and could be submitted to the Board of Governors in 1994. It was hoped that those documents, when approved, would serve as a basis for a convention on the safe management of radioactive wastes - paralleling the convention now being drafted on nuclear safety. The voluntary contributions made by the Republic of Korea to those activities were of great help.

97. Much effort had been devoted to nuclear safety in the past year, both nationally and internationally. He welcomed among the participants at the General Conference many heads of national nuclear safety bodies, who would be meeting with a separate agenda during the Conference. It was of great importance that there should be consistency in the safety policies applied around the world, and meetings between national regulators promoted such consistency. He also welcomed the presence at the meeting of Mr. Rémy Carle, Chairman of the World Association of Nuclear Operators (WANO), which played an increasingly important role in helping nuclear operators to increase safety by learning directly from each other.

98. As in the field of nuclear waste, the Agency's activities in nuclear safety were geared both to information collection and analysis, advice and services and the development of norms.

99. For many years the Agency had sought to obtain authoritative and accurate reports about serious nuclear events. A case in point had been the accident in April 1993 at the Tomsk-7 nuclear centre in Siberia. Less than 24 hours after the Agency had received an invitation to be present, three experts had left for Siberia to seek first-hand information about the radiological effects of the accident and their consequences for the population and the environment. He had cited that case, not to report on the results of the inquiry, which had been made available to interested States, but rather to stress the quest for openness and ways of increasing safety by learning from significant nuclear events.

100. Major efforts were being made by authorities and experts in the former Soviet Union and in East and Central European countries to upgrade the safety of their nuclear installations. Assistance from other countries, from OECD's G-24 Group and from the Commission of the European Communities, as well as from WANO, had been and remained important. The Agency's activities, which had received considerable financial support from Japan, had focused on the implementation of consistent international safety assessments of various Soviet-designed nuclear power plants and the elaboration of recommendations for upgrading their level of safety. Progress had not always been smooth or rapid in that great endeavour, but he believed that all the work had been imbued with a sincere wish to bring all the installations concerned - if at all possible - to an acceptable modern safety standard. Although the work was still in progress, significant improvements in safety had already been made.

101. One specific area in which the Agency, together with UNDP, had taken an initiative was in the strengthening of radiation protection and nuclear safety infrastructures in the States of the former Soviet Union, which was of special relevance for safety in research reactors, uranium mining and milling and facilities using radiation sources in medicine, agriculture and industry. The first phase of the project - an information exchange forum - had been successfully undertaken in Vienna from 4 to 7 May 1993. In a second and a third phase, assistance packages would be prepared and implemented for individual countries. The Soviet Union had possessed an impressive capacity in the field of radiation protection. As that centralized system had been broken up, the individual States now needed to acquire their own

capacity - individually or, preferably, in co-operation with each other. The project launched by the Agency and UNDP sought to assist and facilitate such development.

102. Referring to work on the international conventions on nuclear safety and liability, he said that a consensus on the structure and main contents of the nuclear safety convention had emerged in an open-ended working group of legal and technical experts. The Chairman of the Group, Mr. Domaratzki, had now prepared a single text as a basis for discussion at the next meeting in October 1993. The convention would be limited in its scope to civil nuclear power reactors. It would oblige the parties to comply with fundamental safety principles developed from the nuclear safety fundamentals approved by the Board in June 1993. An important feature would be an obligation of the parties to report at agreed intervals to a meeting of contracting parties on the national application of the principles laid down in the convention. The reporting would be linked to a system of international peer review. The Agency might be asked to assist the parties in the review process and to function as the secretariat of the convention.

103. It was gratifying that the discussions seemed to be heading toward concrete results. If progress was maintained, a draft convention might be available to the Board of Governors in February 1994, and could be considered and approved by a diplomatic conference to be held in conjunction with the General Conference in 1994, or earlier as a separate event.

104. The Vienna Convention on Nuclear Liability and the Joint Protocol that linked it with the Paris Convention were important parts of the international legal infrastructure required for the operation and acceptance of nuclear power. In the past year or so, it had become clear that accession to the convention by countries in Eastern Europe and the former Soviet Union would remove some obstacles to international co-operation to upgrade nuclear safety in those regions. He was glad to report that the negotiation of possible amendments to the Vienna Convention had advanced considerably, but mutual concessions were needed to settle the issue of supplementary compensation. In the light of the outcome of the consultations on the issue, a new target date for a diplomatic conference would be considered in October 1993.

105. The safeguards and verification activities of the Agency had often been at the centre of political and media attention in the past year. In the case of Iraq, some 21 inspection missions sent by the Agency and considerable staff work in Vienna had made it possible to conclude that in all essential aspects the nuclear weapons programme had been fully identified, and had been destroyed through the war or neutralized thereafter. The declared non-irradiated highly enriched uranium had been removed from Iraq in November 1991 and the declared irradiated highly enriched uranium was now scheduled for removal in the coming five months. Upon completion of that operation, no highly enriched uranium and no capacity to produce it should remain in Iraq. There were still some disturbing gaps in the Agency's knowledge about the nuclear supply and procurement channels of Iraq and about its sources of scientific and technical information.

106. It was hoped that those last pieces of the picture would soon be clarified by the Iraqi side, which was anxious that the Agency and UNSCOM should conclude that Iraq had complied with the requirements of United Nations Security Council resolution 687. The Agency had already phased in some of the elements required for long-term monitoring in Iraq, including arrangements for environmental sampling. In recent discussions in New York with the Iraqi side, the Agency and UNSCOM had clarified how ongoing monitoring and verification would be pursued. Such monitoring would not, of course, preclude the Agency from utilizing, if necessary, the extensive rights of inspection laid down in the plan approved by the Security Council.

107. He wished to make two points regarding the Agency's work in Iraq: first, the extensive work of inspection and analysis of the Iraqi nuclear programme had been performed by an Action Team that had never comprised more than five full-time Professionals and two very capable secretaries in Vienna. For the inspections and much of the analysis, the Agency had been able to draw on the resources of its Safeguards Department, the Seibersdorf Laboratories and a chain of support laboratories in Member States. For some types of inspection expertise, it had obtained specialized personnel from Member States. As international organizations were often criticized for lack of effectiveness and efficiency, he thought that both the fulfilment of the Agency's mandate in Iraq and the cost-effective manner in which it had been carried out should be noted. Second, the

operations in Iraq had given the Agency vast experience with new techniques which could be of great value as it worked to strengthen the capability of the safeguards system to detect undeclared material and installations.

108. The revelations in Iraq had highlighted the fact that normal safeguards inspections were focused on declared nuclear material and declared installations, and had led to efforts to strengthen the Agency's capability to discover material and installations which should have been declared but had not been. The discovery of a non-declared nuclear programme in a country having comprehensive safeguards had also led the Secretariat to add further precision to certain important conclusions it had drawn from its safeguards activities. Thus, the Safeguards Implementation Report for 1992 (GOV/2653) contained the following formulation:

"On the basis of all the information available to the Agency, it is considered reasonable to conclude that nuclear material and other items which had been placed under Agency safeguards remained in peaceful nuclear activities or were otherwise adequately accounted for."

109. That statement was deliberately limited to declared nuclear material and other items. Even so, it was qualified by a footnote to the effect that the safeguards system was not so fine-meshed that it was likely to detect diversions of less than a significant quantity. Those circumspect formulations might appear pedantic, but it was important that the Agency should not offer more reassurance than could in practice be obtained from the safeguards system. However desirable it would be to have a clear affirmation that no non-declared nuclear installations existed in a country with comprehensive safeguards, such categorical formulations could not be made on the basis of the results of the Agency's verification activities. All that could be done was to report on the results of the inspection and analysis effort to verify the correctness and assess the completeness of State declarations, to point to evidence which supported or undermined the veracity of the declarations and to note the presence or the absence of any evidence casting doubt on the credibility of the declarations. Even in the case of Iraq, where the Agency had had exceptional means of investigation and rights of access, the task of assessing the absence of further non-declared nuclear items was difficult. Where the Agency operated under normal NPT-type safeguards rights, the task of assessing the completeness of a declaration was still more difficult. The transparency of the

nuclear programme and the co-operation offered were decisive factors in the fulfilment of that task. Current discussions on increasing the effectiveness and efficiency of the safeguards system centred around those factors.

110. Since the conclusion, in September 1991, of the safeguards agreement between South Africa and the Agency pursuant to the NPT, the Agency had been engaged in activities to implement the agreement and verify the completeness and assess the correctness of South Africa's initial report. As could be seen from the report in document GC(XXXVII)/1075, no less than twenty-two missions had been carried out in South Africa over the past two years. It was only fair to report that the Agency had encountered a highly co-operative attitude on the part of the South African authorities. With time, effort and co-operation, its inspectors had been able to resolve many apparent discrepancies and inconsistencies which they had identified. As stated in the report, the apparent discrepancies relating to low enriched uranium - which had been accorded lower priority - remained to be clarified and would call for continued efforts. No evidence had been found casting doubt on the veracity of the initial declaration.

111. A new dimension had been added to the Agency's work in South Africa when, in March 1993, President de Klerk had declared that South Africa had developed a nuclear weapons capability, that the weapons had been dismantled and destroyed before South Africa had joined the NPT and that figures referring to the resulting quantity of recovered highly enriched uranium had been included in the initial report submitted to the Agency. The Agency had been invited by South Africa to examine all the facilities that had been involved in South Africa's nuclear weapons programme, to inspect all remaining records, to observe that the programme had, in fact, been terminated and to gain assurance that all the nuclear material involved had been placed under safeguards. A team of senior Agency staff and nuclear weapon experts had visited South Africa in April, June and August 1993 for those purposes. Their report was to be found in GC(XXXVII)/1075. The team had seen substantial evidence of the destruction of equipment used in the development and making of the nuclear weapons and of the termination of the programme. It had found no indications to contradict South Africa's statement that all the highly enriched uranium from weapons had been reported in the initial declaration. Nevertheless, the Agency planned to utilize the

standing invitation of the South African Government - under its reiterated policy of transparency - to provide the Agency with full access to any location or facility associated with the former nuclear weapons programme, in order to satisfy itself on a continuing basis that such facilities were now dedicated to commercial non-nuclear usage or to peaceful nuclear usage, and to request access, on a case-by-case basis, to other locations or facilities that the Agency might wish to visit.

112. As regarded the DPRK, he did not propose to give a chronological report on safeguards in that country since the 1992 session of the General Conference, since a fairly detailed paper was available in document GC(XXXVII)/1084. The most important problem encountered was that the Agency's analysis of samples obtained from the DPRK suggested that some nuclear material existed that had not been included in the initial report. Consequently, the Agency was not in a position to verify the correctness and assess the completeness of that report. The Agency had not asserted that the DPRK was diverting nuclear material for weapons development, but so long as the inconsistency between the report of the DPRK and the Agency's findings was not resolved by credible explanations through additional information and visits to additional locations, the Agency could not exclude that the nuclear material had been diverted.

113. A Government which stated that it was committed to non-proliferation and was faced with questions from the Agency about the completeness of its declaration should have strong reasons to show maximum openness, in order to clarify the matter as speedily as possible. He regretted that the initial policy of the DPRK of allowing Agency officials to visit any place at any time had not been maintained and the Agency had finally been constrained to ask formally for additional information and for special inspection of two sites which it had reason to believe were related to nuclear waste and might shed some light on the inconsistencies found.

114. Full nuclear transparency was a means of creating confidence, and comprehensive Agency safeguards were a mechanism to create that transparency. Without a State's effective co-operation in fully implementing its obligations under a comprehensive safeguards agreement, the results of the verification activities would be inadequate, and they could not create confidence. That was the background to the resolutions of the Agency's Board of

Governors and of the Security Council urging the DPRK to co-operate fully with the Agency. Regrettably, the readiness of the DPRK to implement the safeguards agreement appeared to have diminished rather than grown. While in April the Agency had been assured there had never been any obstacle to ad hoc and routine inspections, such inspections had now been declined, and the DPRK expressed only readiness to accept limited safeguards activities, mainly for maintenance. The area of non-compliance with the comprehensive safeguards agreement was thus widening.

115. There had been earlier uncertainty regarding the possible existence of non-declared nuclear material. If effective inspection of declared nuclear material and installations could not be performed, no further assurance could be given about their exclusively peaceful use. Only the implementation of systematic, effective and timely safeguards could give such assurance. Whenever the DPRK was ready to accept such inspection, the Agency was ready to provide it. It was also ready at any time to consult with the DPRK about ways to resolve the inconsistencies which had been found.

116. The DPRK had resented the insistence with which the Agency was seeking explanations for the inconsistencies it had found and was suggesting merely token safeguards measures. On reflection, most would agree that all countries, including the DPRK, needed to be sure that the Agency would display all the diligence required of it under the safeguards agreements in order to fully implement those agreements, and that the Agency would pursue any discrepancies or inconsistencies it might find. Confidence in the Agency and its safeguards verification required that it live up to that demand.

117. Turning to efforts to strengthen the effectiveness of the safeguards system while keeping costs low, he remarked that there was sometimes a tendency in public debate to expect from safeguards more than they could conceivably achieve. The development of the safeguards system over the last few decades was a valuable contribution to arms control efforts, and the system was potentially of important use beyond its present applications. It was necessary, however, to appreciate what it could and could not do.

118. Safeguards inspectors were not supranational police who could parachute in anywhere to stop violations of non-proliferation commitments. They were not an executive force but

inspectors who reported observations which, if they were reassuring, might create confidence and détente, and if they were alarming, might trigger action - in the last resort by the Security Council and its members. Inspection was accepted by States only on the basis of explicit safeguards agreements which were entered into voluntarily. The present model rules embodied in INFCIRC/153 and 66 reflected a balance between the interest that States had collectively in credible inspection, and the interests they had individually in not being subjected to excessively intrusive or cumbersome international control. While such a balance would always be required - and was indeed to be found also in the recent chemical weapons convention - there was room for measures which would strengthen the effectiveness of the present safeguards system, and the Agency was seeking to introduce such measures.

119. In the past few years the Board had repeatedly examined different ways of improving the effectiveness of safeguards while keeping the costs low. Much had been attained, but considerable challenges lay ahead. Action had been taken *inter alia* to allow the Agency to receive design information concerning nuclear installations earlier than previously. States might also supply information on the export and import and production of nuclear material and relevant equipment. The Secretariat would seek to extract more pertinent information from data already available to it and would look to other sources, like public media, for relevant facts. While, in his view, the Secretariat should be keen to obtain all safeguards-relevant information, it would have to subject that information to critical analysis to avoid relying on erroneous data or disinformation.

120. As it was very much in the interest of Member States that the safeguards system should be strengthened, notably in order to give greater assurance against the existence of nuclear installations which should have been declared but had not been, he hoped that Member States would give positive effect to the actions of the Board, for instance by agreeing to modifications in subsidiary arrangements and by providing safeguards-relevant information.

121. In parallel with efforts to make the safeguards system more effective, efforts were continuing to deploy resources in such a way as to ensure that increases in the number of nuclear installations and amounts of nuclear material to be safeguarded did not lead to cost increases. Over the eight-year period of zero-real-growth budgets, the cost of safeguarding

nuclear material per significant quantity had been halved. The agreement reached in 1992 with the European Community on partnership in the performance of safeguards in the Community had meant a very significant saving of resources precisely at the time when they were acutely needed, namely for safeguards in South Africa and the DPRK.

122. He hoped that current discussions in the Secretariat and in the Standing Advisory Group on Safeguards Implementation on alternative safeguards approaches might lead eventually to both cost savings and greater confidence about the absence of undeclared nuclear facilities and activities in States with comprehensive safeguards agreements. It was clear that several of those cost-saving approaches would require a greater measure of transparency and co-operation by Member States. Several new methods and approaches, including environmental monitoring, also needed to be thoroughly tested and assessed before they could be generally used. A few States had offered to test environmental monitoring and various methods to increase nuclear transparency. That was valuable. Indeed, it would be useful if a small but representative group of both industrialized and developing countries were to take part in the testing of the new approaches and methods. He invited further States to join in those efforts.

123. A very important development had started several years ago when Argentina and Brazil had decided to embark on extensive bilateral nuclear co-operation. The dividends that could be expected from such co-operation were not only in the area of economics and scientific and technical development but also in mutual confidence. With the bilateral openness broadening to an international transparency through acceptance of comprehensive Agency safeguards, the path had been opened to ratification of the Tlatelolco Treaty, as recently amended. If, as seemed likely, Cuba were to join the Tlatelolco Treaty, that Treaty would enter fully into force, and Latin America would have formally and legally renounced nuclear weapons and nuclear explosives.

124. An important milestone had been the signing in Vienna in December 1991 of a quadripartite safeguards agreement between Argentina, Brazil, the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (ABACC) and the Agency. The Argentine Parliament had approved the agreement the previous year, and he was pleased to

note that the lower house of the Brazilian Congress had approved it the previous week, together with the amendments to the Tlatelolco Treaty.

125. Since then discussions had taken place among the four parties about the implementation approach, including the verification of the Initial Report, and about the subsidiary arrangements. The co-operation with Argentina, Brazil and ABACC had been intensive and fruitful, with visits to the Agency and seminars and training of operators and inspection staff. He himself and the Deputy Director General for Safeguards, Mr. Pellaud, had visited Brasilia and Rio de Janeiro in August to discuss principal points in the future safeguards arrangements with Ministers and with the Argentine-Brazilian leadership of ABACC. A strong and effective ABACC would facilitate the Agency's task of performing comprehensive safeguards and reaching independent conclusions. Even so, the safeguarding of the broad and advanced nuclear programmes of those two large States would place added demands on Agency resources. He had assured the representatives of the two countries that, far from hampering nuclear scientific and technical development, comprehensive Agency safeguards were likely to facilitate such development by removing certain obstacles to international co-operation. Extensive talks had taken place in Rio de Janeiro recently on the subsidiary arrangements to the quadripartite agreement, and he was glad to say that not many points remained to be resolved.

126. In anticipation of their accession to the NPT, a great deal of preparatory work had been undertaken for the introduction of comprehensive safeguards in States of the former Soviet Union. It was of great importance that effective national systems of nuclear accountancy and control, compatible with the Agency's safeguards system, be established. Both individual Member States and the Secretariat had helped by providing information and equipment and by organizing seminars on those matters. A co-ordinated support programme for the newly independent States with substantial nuclear programmes was currently being developed, with Agency participation.

127. Fact-finding missions and technical visits had allowed Agency staff to familiarize themselves with the nuclear installations which were expected to come under safeguards. Actual implementation of safeguards, however, would need to await the conclusion of formal safeguards agreements. To date only one such agreement had come into force - with

Lithuania. Clearly the introduction of comprehensive safeguards in those countries would generate a considerable amount of additional work for the Agency.

128. He would now deal with potential uses of Agency experience and resources in the verification of the peaceful use of nuclear material and installations, and first of all the question of safeguards in the Middle East.

129. There was no way of knowing when the parties to the present peace negotiations in the Middle East would be able to agree on the establishment of the hoped-for nuclear-weapon-free zone. There was, however, keen interest in the region in examining appropriate modalities of applying safeguards verification in such a zone, and he had been charged under GC(XXXVI)/RES/601 to continue consultations to facilitate the early application of full-scope Agency safeguards to all nuclear activities in the region.

130. As would be seen from the Report he had submitted (GC(XXXVII)/1072), he had continued consultations with States in the region during the past year by requesting their written comments and by personally visiting some States, namely Israel, Jordan and Saudi Arabia.

131. With a view to familiarizing relevant experts from the Middle East with the many aspects of effective verification of a nuclear-weapon-free zone, the Agency had also arranged a workshop in May on "The Modalities for the Application of Safeguards in a Future Nuclear-Weapon-Free Zone in the Middle East". The lectures given in that workshop had now been published in compendium form to enable them to reach a broader audience.

132. As he had stated in the report, it was clear that the long-standing tension between parties in the region could be dissipated only through the combined effects of many different types of measures, including political and military confidence-building. The nuclear activities of each party would be the subject of interest of all parties, and the climate of confidence would be affected by the way in which those activities were pursued and verified. Legally binding commitments by every party for the elimination of all weapons of mass destruction, and for the exclusively peaceful use of nuclear energy, would be vital elements. In addition, ways had to be found of creating reasonable guarantees for reliance on such commitments, and for the early discovery of departures from them, should such occur. That was where an

effective verification system came in. It should also not be overlooked that some joint experience - notably among European countries and between Argentina and Brazil - pointed to the usefulness of active co-operation between parties in the nuclear field in creating confidence through both openness and interdependence.

133. Recent developments in the peace process in the Middle East offered hope that the positive attitude among all the parties in the Middle East to a nuclear-weapon-free zone could be translated by them in due course into an agreement. The Agency remained ready to provide whatever assistance might be deemed useful by the parties in the Middle East to facilitate implementation of the resolution adopted by the General Conference. The Secretary-General of the United Nations had recently stressed the importance of assistance provided by the United Nations system in connection with the accord between Israel and the Palestine Liberation Organization. Regional co-operation projects involving nuclear techniques might be a useful instrument for confidence-building.

134. Article XII.A.5 of the Agency's Statute contained provisions governing the deposit with the Agency of any excess of any special fissionable materials. It was evident that the current process of nuclear disarmament in the United States and the Russian Federation, as well as the ongoing reprocessing of spent civilian nuclear fuel, would lead to substantial quantities of plutonium and highly enriched uranium, which would have to be stored before they were used or otherwise disposed of. There was a clear international interest that such storage should take place under conditions of adequate physical security, nuclear safety and - not least - under conditions which provided a very high degree of assurance that the fissionable material would not be diverted, or - in the case of material recovered from the military sector - returned to use in weapons or explosives.

135. An agreement on an international regime for the management of plutonium and highly enriched uranium might be a means of achieving that objective. The Secretariat had undertaken some work to prepare for discussion of those issues, should any member governments wish to examine the advantages, problems and modalities involved. Clearly, the safeguards experience of the Agency would be a major element in such a regime, but how heavy a burden it would place on the Agency would of course depend on the modalities of the regime, and the quantities of fissionable material States would want to place under it.

136. A verified termination of production of plutonium and highly enriched uranium for weapons or other explosive purposes had been under international discussion for many years, and in the present international climate that discussion could lead to concrete proposals for an agreement involving all States on an equal basis. The premise would be that there was already more than enough weapons-usable material and no need for further production of such material. Methods and techniques of verification existed, but might need to be further developed. It had to be realized, however, that should Agency safeguards be applied to the operation or dismantling of all installations capable of such production, the added workload of verification would be large. It would probably have to be assumed in stages and would require adequate funding.

137. Among the arms control measures now subject to international discussion was an agreement on a complete ban on the testing of nuclear weapons and other explosives, and it had been suggested that the Agency might be given a central role in the verification of such an agreement. Some old and some new techniques for safeguards verification, for example environmental sampling, might indeed be valuable in the verification of a complete test ban. Although the Agency had not had an international role in the central verification method discussed for a complete test ban, that of seismic measurements, it did have some experience and expertise in that area. With some added capacity, it could probably undertake the task of compiling and co-ordinating information provided by national institutions about seismological measurements - the so-called clearing-house function.

138. The Agency had been called upon to participate in the preparation of the 1995 NPT Conference, which was to review the operation of the Treaty and decide on its extension, and would prepare the customary reports on its own role in the implementation of some of the articles of the Treaty. There was little doubt, however, that the most important contributions which the Agency could make to that Treaty were the increasing of the effectiveness and credibility of safeguards applied under the Treaty, the extending of safeguards to the new parties to the Treaty and the continued promotion of nuclear technology transfer for peaceful purposes.

139. He wished to conclude with a few brief comments on matters relating to the Agency's finances, budget, programme and personnel.

140. The financial situation of the Agency remained precarious. It had avoided crises only because the substantial shortfalls in budgetary contributions to its activities had been met by curtailment or deferment of activities, amounting to a 12% cut in expenditure in 1993. Although the size of the present shortfall was mainly attributable to the arrears of a single major contributor, he felt bound to say that a virtually across-the-board improvement of discipline was needed to pay, to pay fully and to pay on time.

141. The budget for 1994 marked almost a decade of zero real growth. While it was evident that important demands representing priorities for one group or another had not been responded to, the Agency could take pride in the fact that so many new needs of governments for international action in the nuclear field had been met in its programme. Member States should also be aware that some vital activities were financed not through the Regular Budget, where they should properly be accommodated, but through voluntary extrabudgetary contributions.

142. When resources were so scarce it became particularly important that they be used to satisfy the interests of different groups of Member States in an equitable manner. Resolutions 587 and 596 of the 1992 General Conference were a reminder of that. The lengthy process in which the programme and budget were thrashed out between Member States and the Secretariat provided the best means of securing a balance acceptable to all. The Secretariat, for its part, was committed to drafting and implementing a programme designed to satisfy the priority interests of all groups.

143. Skill in perceiving and identifying the needs of different Member States, innovation in devising means of responding to those needs, and effectiveness in action could only be achieved if the organization was staffed by broadly-recruited and highly-competent professionals and a dedicated general service staff. Not all Groups and Member States would be happy with every recruitment decision, and there were still some underrepresented States and Groups. However, he could assure the Conference that he would do his best to maintain both the highest level of professional competence and a broad geographical basis for recruitment. The success of that effort had to be judged over a period of time, and had above all to be gauged by the quality of service that the Secretariat provided to the organization. In that regard he had every confidence. By financial necessity the Agency was

understaffed, but it was well staffed in terms of quality to meet the many challenges facing it, and to perform the tasks which Member Governments might wish to place before it.

144. Finally, he wished to express his thanks to the Government of Austria and the City of Vienna for their hospitality.

VOLUNTARY CONTRIBUTIONS TO THE TECHNICAL ASSISTANCE AND CO-OPERATION FUND FOR 1994

145. The PRESIDENT said that the Agency's Policy-making Organs had, since 1982, followed the practice of recommending indicative planning figures for use in establishing annual targets for voluntary contributions to the TACF. In June 1992 the Board had reached agreement on increases in the targets for voluntary contributions to the TACF from the 1992 level of US \$52.5 million to \$55.5 million in 1993, \$58.5 million in 1994 and \$61.5 million in 1995. Accordingly, in the draft resolution relating to the TACF - contained in Annex IV to document GC(XXXVII)/1062 - the Board recommended the figure of \$58.5 million as the target for voluntary contributions to the TACF for 1994.

146. Early pledging of voluntary contributions was of considerable help to the Secretariat in planning technical assistance programmes. He therefore urged all delegations that were in a position to do so, but had not done so as yet, to notify the Secretariat during the current session of the voluntary contributions which their Governments would be making to the TACF in 1994.

147. He would report at the end of the session, under a later agenda item, on the voluntary contributions which had been pledged up to that time, and was confident that he would then be in a position to report favourably on the percentage of the 1994 target figure already pledged.

GENERAL DEBATE AND ANNUAL REPORT FOR 1992

148. Mr. KIM (Republic of Korea) congratulated the Director General on his reappointment and welcomed the admission of the Czech Republic, the Slovak Republic, the Republic of the Marshall Islands, the Republic of Armenia, the Republic of Kazakhstan and the former Yugoslav Republic of Macedonia to the Agency.

149. He commended the Secretariat on its important achievements in the promotion of peaceful uses of nuclear energy. Given the limitations of the use of fossil fuel and the tardy development of alternative energy technologies, nuclear power had emerged as the best available option for large-scale energy generation. While there was increasing acceptance of nuclear energy as the only viable energy source at present, concern was growing in the international community about the potential misuse of nuclear technology and materials as well as the safety of nuclear power reactors. The Republic of Korea appreciated the important role entrusted to the Agency in that sphere by the international community.

150. He reiterated his Government's full support for the Agency's safeguards activities and expressed appreciation for the efforts being made to strengthen the safeguards system and enhance the efficiency and effectiveness of safeguards. The Republic of Korea welcomed the initiatives taken by the Director General to examine alternative safeguards approaches through SAGSI and looked forward to his recommendations concerning the development and implementation of new procedures such as environmental monitoring for more efficient detection of undeclared nuclear facilities and activities.

151. His Government had also noted with great interest the endorsement by the Board of Governors in February of the establishment of a reporting scheme for nuclear material and specified equipment and non-nuclear material as a means of strengthening the Agency's safeguards system. He expressed deep concern about the security of surplus plutonium and high enriched uranium resulting from the dismantling of nuclear warheads and from commercial reprocessing activities. At the previous session of the General Conference his delegation had suggested that the Agency play a more active role in the field of international storage and management of such sensitive surplus fissionable materials. Following the suggestion made by the Director General in his opening statement, he invited other Member States to consider starting consultations on the issue on the basis of preparatory work undertaken by the Secretariat.

152. Turning to nuclear safety, he said that the horrific Chernobyl accident remained fresh in the minds of many people. That experience had unfortunately intensified the international community's fears about the use of nuclear technology. On the other hand, it had also strengthened the common resolve to improve safety procedures in nuclear operations and had

drawn attention to the need for international co-operation on nuclear safety. He noted with satisfaction the Agency's implementation of nuclear safety projects in Eastern Europe. His country was ready to support the Agency in those efforts, particularly in providing technical experts.

153. The Republic of Korea had taken great interest in the discussion at the Board of Governors meeting the previous week concerning the drawing up of safety principles for future nuclear power plants, since it was currently developing safety principles and technical guidelines for the development of the next generation nuclear power reactor. His delegation also looked forward to adoption of a nuclear safety convention at a diplomatic conference the following year and hoped that it would play an important role in intensifying co-operation in the field of nuclear safety.

154. His Government had taken note of the measures taken by the Agency relating to the dumping of radioactive materials at sea by the former Soviet Union. It proposed that the Agency also provide technical assistance in dealing with waste dumping in the "East Sea" (Sea of Japan) to the countries concerned. It welcomed the RADWASS programme established by the Agency to provide Member States with criteria for the safe management of radioactive waste. The special contribution that the Republic of Korea had made to the project reflected the high priority it attached to effective nuclear waste management at an international level. He urged Member States to support the RADWASS programme.

155. The Republic of Korea appreciated the Agency's sustained effort for the RCA programme in the Asia and Pacific region. Implementation of phase three of the UNDP/RCA project was expected to accelerate co-operation among countries in the region. His Government remained committed to its proposal the previous year that a regional co-operation mechanism be established among the countries of North East Asia to promote a joint effort on nuclear safety.

156. He restated his Government's view that the Agency's Statute, which had last been revised in 1973, was due for overhaul. The time had come for the Agency to seek ways of restructuring its main policy-making organ to reflect fully the post-cold war situation and the state of development of nuclear technology, as well as to ensure greater functional

effectiveness. The Republic of Korea urged Member States and the Secretariat to pursue consultations on that important issue more vigorously in the months to come.

157. He reiterated his Government's unequivocal commitment to denuclearization of the Korean Peninsula. Non-proliferation of nuclear weapons and complete nuclear transparency were essential to ensure peace and security on the Korean Peninsula and in the world as a whole. His Government was gravely concerned about the recent worsening of the situation with respect to the DPRK's suspected nuclear programme. Inconsistencies between the DPRK's declaration on nuclear material and the Agency's findings remained unresolved because the DPRK had refused to provide access to additional information and to two sites, as requested by the Agency's Board of Governors and the United Nations Security Council. DPRK non-compliance with its comprehensive safeguards agreement with the Agency was now becoming even wider with its refusal to allow normal ad hoc and routine inspections of declared nuclear facilities.

158. The world community was greatly alarmed by the DPRK's serious challenge to the authority and integrity of the Agency. If nothing was done, the international non-proliferation regime and the safeguards system would be seriously undermined, posing a serious threat to world peace and security. His Government therefore called on the General Conference to deal with the issue, as recommended by the Board of Governors, and pronounce its firm and unequivocal stand in favour of prompt and full implementation of its safeguards agreement and of the associated Board and Security Council resolutions by the DPRK. Early and full implementation of the South-North Joint Declaration on the Denuclearization of the Korean Peninsula was also essential in order to build mutual confidence and ensure transparency. It was the Republic of Korea's earnest hope that the South-North dialogue would be resumed as soon as possible, so that an agreement could be reached on a mutual inspection regime.

159. Mr. EDA (Japan) said that his country's recently installed coalition government should be seen as marking a new point of departure for Japan, which was determined to assume responsibilities in the international community commensurate with its status.

160. As the only country in the world ever to have experienced the devastation of an atomic bomb, Japan fervently hoped that such a tragedy would never be repeated. In that regard, he felt that respect was due to the authors of Japan's Atomic Energy Basic Law of 1955, which stipulated that the research, development and utilization of atomic energy should be limited to peaceful purposes, aimed at ensuring safety and performed independently under democratic management, and that the results thereof should be made public in the interests of international co-operation. The new Government under Prime Minister Hosokawa had undertaken to follow the previous administration's main policies on nuclear power and the Atomic Energy Commission, of which he (Mr. Eda) was Chairman, would continue to abide by the principles of the aforementioned law.

161. Nuclear energy provided Japan with an indispensable source of base-load energy and supplied almost 30 per cent of its needs. Japan would be maintaining its nuclear energy option on the basis of strict safety standards. In that context, the plutonium issue was unavoidable, since nuclear fuel recycling to facilitate plutonium utilization was vital both for countries like Japan with meagre energy resources and for long-term global energy security. His country had therefore been promoting the programme to construct nuclear fuel cycle facilities at Rokkasho-mura. In that connection, he wished to express Japan's gratitude to the governments concerned for their understanding and co-operation regarding its recent plutonium shipment.

162. In co-operation with other leading nuclear powers, Japan had been steadily promoting fast breeder reactor development with a view to ensuring proper plutonium utilization and improving the efficiency of uranium utilization. The Monju reactor was due to reach criticality in spring the following year and would provide a focus for wide-ranging international research. In addition, the Atomic Energy Commission was currently reviewing Japan's long-term programme for the development and utilization of nuclear energy, which would be guided by the policy of developing plutonium utilization within the constraints imposed by the most exacting safety standards.

163. The Agency's timely activities in the past year in the sphere of safety were to be commended, since the improvement of nuclear safety through global co-operation, together with the fostering of each country's nuclear safety culture, deserved the highest priority. In

that context, he called for the early completion of the drafting of a nuclear safety convention, urged the Agency to continue to concern itself with Russia's ocean dumping of radioactive waste and expressed his country's readiness to support the Agency's efforts to ensure that swift, effective action was taken to improve the safety of nuclear power plants in the former Soviet Union and Central and Eastern Europe.

164. His country also highly commended the Agency's safeguards programme. In that context Japan strongly urged the DPRK to retract its decision to withdraw from the NPT and to fulfil its obligations under its safeguards agreement with the Agency and the Joint Declaration on Denuclearization of the Korean Peninsula. It fully supported the Agency's efforts to that end. With its 158 signatories, including all nuclear-weapon States, the NPT was beginning to achieve the universality so important for global disarmament, peace and security. The NPT also provided the best guarantee that its Parties would be able to enjoy the benefits of the peaceful uses of nuclear energy.

165. His country welcomed negotiations at the disarmament conference in Geneva aimed at elaborating a multilateral comprehensive test ban treaty (CTBT), which would serve the cause of non-proliferation. It was Japan's earnest hope that Ukraine and Kazakhstan, together with other (non-nuclear-weapon) States not yet party to the NPT, would accede to it at an early date.

166. With regard to the dismantling of nuclear arsenals in the former Soviet Union, it was vital to ensure that the utilization for energy purposes of nuclear materials derived from warheads should exclude any risk of their diversion or that of the technologies involved. At the G-7 Joint Ministerial Meeting in April Japan had declared its intention to allocate approximately \$100 million to support denuclearization in the former Soviet Union as a part of a new aid package for the Russian Federation. Japan was very interested in the idea of an international regime for the management of plutonium and highly enriched uranium derived from the dismantling of nuclear warheads and of plutonium originally separated for peaceful purposes, and was currently exploring a proposal in that regard. It hoped to pursue that matter with interested countries and with the Agency.

167. Despite the Agency's growing importance in the areas of non-proliferation, nuclear technology and nuclear safety, it was facing serious financial difficulties which were forcing it to sacrifice some activities for the sake of others and juggle with its resources. It was to be hoped that, like Japan, the Agency's other Member States would do their utmost to respond to requests for funds and so assist the Agency in its vital role of helping to create a new order for world peace. Japan was determined to play an ever more positive part in achieving that goal.

The meeting rose at 1.10 p.m.

