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President: Mr. MANOUAN (Côte d'Ivoire)

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GENERAL DEBATE AND ANNUAL REPORT FOR 1984 (continued)

1. Mr. TAKEUCHI (Japan) said that his country would do its utmost to support the Director General's efforts over the next four years to ensure that the Agency played a more decisive role in the world. In that regard, he noted with satisfaction that the application of nuclear energy had made steady progress in spite of the stagnation of the world economy. Nuclear power production had reached 220 GW by the end of 1984, which was an increase of 17%. According to the Annual Report for 1984, that rate was the highest recorded since the beginning of the 1970s, and in 1984 nuclear power plants had accounted for about 13% of the world's total electricity.
2. However, it was also reported that nuclear power programmes had levelled off, that new orders for plants were scarce and that orders had been cancelled, owing to excessive capacity, a slower increase in demand and difficulties involved in financing construction. Nevertheless, nuclear power generation was now considered a proven technology since it had gained the experience of 3470 reactor years of operation, and improvements in availability and operability had been achieved. It was to be hoped, therefore, that the role of nuclear energy would become more firmly established as an energy source through the efforts of the Agency, its Member States and the nuclear industry.
3. It was gratifying to see that the applications of radiation and radioisotopes in medicine had made great headway and that the interest in irradiation for the preservation of foodstuffs had been revived.
4. Japan had been actively engaged in nuclear research and the development and application of nuclear energy, which it regarded as a major alternative to oil. There were 32 nuclear power plants in operation in Japan, including one used for research and development, with a total generating capacity of 23.8 GW, or about 23% of the total production of electricity. Twelve other power plants, including a 280 MW prototype fast breeder reactor, with a total generating capacity of 11.1 GW, were under construction, while another six with a total capacity of 6.3 GW were being designed. During the preceding year nuclear power generation in Japan had attained the highest availability factor since its commencement, namely 74%, and the Japanese technology had steadily improved. His country was determined to make nuclear energy in the future more reliable, safer and more economically advantageous.

5. In promoting nuclear power generation, Japan had sought to make maximum use of the potential energy of uranium. For that purpose, extensive efforts had been devoted to developing, for the use of plutonium, an advanced thermal reactor, a fast breeder reactor and the technology for recycling plutonium in light-water reactors.

6. The creation of a national nuclear fuel cycle and the promotion of radioactive waste management at present enjoyed high priority in Japan. Preparations for the construction of a commercial uranium enrichment plant, a large-scale reprocessing plant and a final storage facility for low-level radioactive wastes were being made by private industry with the support of the Government. Japan was also engaged in research and development in the area of nuclear fusion technology, which would contribute not only to solving future energy problems but also to advances in science and technology as a whole. In April 1985, the Japan Atomic Energy Research Institute had inaugurated the Torus-60 facility and started experiments in it.

7. An essential part in promoting the peaceful uses of nuclear energy was implementing nuclear non-proliferation policies. However, measures required to ensure non-proliferation should not unduly hamper the development of those peaceful uses. From that point of view, he hoped that discussions would continue on the compatibility of the peaceful uses of nuclear energy with non-proliferation and that further fruitful talks on the subject would be held within the Committee on Assurances of Supply (CAS). The Non-Proliferation Treaty (NPT) played an important role in that regard. In 1985 countries such as Brunei, the Seychelles, Guinea and Bhutan had acceded to NPT. The countries which had not yet done so were urged to join the 130 States which were parties to the Treaty in order to strengthen its universality. It was desirable, in particular, that countries that had remained outside NPT but which were operating or constructing nuclear facilities without accepting Agency safeguards should accede to NPT at the earliest possible date; they should accept full-scope safeguards in order to allay the concerns of the international community.

8. In that context, he wished to emphasize the importance of reducing the inequality that prevailed between the nuclear-weapon and the non-nuclear-weapon States so as to make NPT more meaningful; Japan had already appealed to all nuclear-weapon States to accept voluntary safeguards on all their peaceful nuclear facilities, and was happy to note the positive response from the Soviet Union. In general, his country was anxious to see all facilities devoted to the peaceful uses of nuclear energy placed under Agency safeguards as early as possible.

9. He noted with pleasure that the Third Review Conference of the Parties to NPT had ended successfully and that its final declaration reaffirming the usefulness of the Treaty and the need to strengthen the non-proliferation regime had been adopted by consensus. A landmark had thereby been reached and he called upon all countries to continue such efforts. It was worth recalling that the Conference had commended the Agency for its contribution to promoting the use of nuclear energy for peaceful purposes.

10. In 1984 the Agency's safeguards system had continued to serve effectively the cause of nuclear non-proliferation. The agreement between the USSR and the Agency for the application of safeguards in that country had entered into force in June 1985, and the first inspection had taken place in August. Furthermore, China, another nuclear-weapon State, had also decided to accept voluntarily Agency safeguards as the outcome of its negotiations with Japan. Those were encouraging developments.

11. The Agency's safeguards system should adapt itself to the growing use of nuclear energy in the world. In view of current developments in using nuclear energy for peaceful purposes and progress in safeguards technology, the Agency's safeguards should be implemented with due consideration for improved safeguards evaluation and the cost-effectiveness of implementation. Japan urged the Secretariat to strive further to meet those objectives and hoped that the discussions of the Standing Advisory Group on Safeguards Implementation (SAGSI) would soon result in new safeguards approaches with allowance for the specific features of each national nuclear fuel cycle.

12. As for the application of Agency safeguards to the uranium enrichment pilot plant in Japan, the relevant authorities had decided on the entry into force of its Facility Attachment, which entailed a new safeguards approach based on the outcome of the Hexapartite Safeguards Project. Moreover, Japan had been co-operating with the Agency in improving the implementation of safeguards through meetings such as those of the Japan/IAEA Joint Committee on Safeguards and through Japan's support programme for Agency safeguards. That support would be strengthened.

13. Nuclear safety was another essential aspect of the promotion of the peaceful uses of nuclear energy. His country had always been aware of that fact and had done its utmost in that domain. The result had been high availability factors and low scram rates for the Japanese nuclear power plants. Those achievements were of great economic advantage. Furthermore, nuclear safety was increasingly of common international interest as the use of nuclear energy spread through the world.

14. The Agency's nuclear safety programmes were extremely valuable, particularly those relating to the nuclear safety standards (NUSS), including safe transport regulations; the exchange of information on incidents in nuclear power plants and missions by operational safety review teams (OSART) and radiation protection advisory teams (RAPAT). A great number of experts had participated in the NUSS programme, devising very comprehensive standards and guides to cover various topics from the siting to the operation of nuclear power plants. That programme would be completed by the end of 1985. He expressed his appreciation for the efforts made by those experts and the Secretariat, and hoped that the documents would be fully applied and further improved as nuclear power generation progressed.

15. The Agency's programmes on technical co-operation with developing countries should be put into effect in such a way as to enable those countries to share the benefits of the peaceful uses of nuclear energy as the common heritage of mankind. The steady growth of technical co-operation activities in response to requests from the developing countries indicated that Member States appreciated their importance, especially when one bore in mind the economic stagnation of many of those States.

16. Aware of the value of the Agency's technical co-operation activities, Japan had consistently paid the whole of its share of the voluntary contributions to the Technical Assistance and Co-operation Fund. Although his Government was still faced by a stringent financial situation, it would do all it could to continue that practice. It would likewise continue to make experts available, to receive fellows and host study tours, to hold training courses and to donate equipment, and he hoped that the Agency would make full use of those offers. Among the Agency's technical co-operation programmes with developing countries, he noted with satisfaction the progress made under the various projects falling within the framework of the Regional Co-operative Agreement for Research, Development and Training related to Nuclear Science and Technology (RCA). In November 1984, an electron beam facility had been started up at the Indonesian Nuclear Research Centre with Japan's assistance. In the very near future, medical irradiation equipment was to be provided through the Agency for Malaysia, where various training courses would be organized; it was hoped that an active transfer of technology would thus be achieved. It would be desirable for those facilities to operate as regional centres serving as a model for the Agency's technical co-operation programmes. Since the training of manpower was the very basis of development in any country, Japan considered assistance in that field to be vital for implementing technical co-operation programmes, and would therefore continue to offer its assistance. Lastly, Japan intended to step up the exchange of nuclear scientists with its neighbours.

17. The Agency's programme budget for 1986 was based on zero real growth, as it had been in 1985. Japan was well aware of the value of the Agency's activities, but one had also to bear in mind that an international organization's budget was dependent on the economic situation in Member States. Hence the Agency's budget was bound to reflect the financial difficulties of Member States' budgets. He urged the Secretariat to pursue its efforts to define programme priorities, as well as to review the allocation of resources and its administrative structure, especially the assignment of manpower, so that its programmes could be implemented to the maximum extent possible within the limited resources.

18. In conclusion, he wished to point out that the Agency's role in promoting the peaceful uses of nuclear energy was growing from year to year. Numerous technological problems remained, and the Agency should focus its efforts on resolving them. In the Agency, differences and conflicts of interest between Member States had never reached the stage of confrontation, and a spirit of co-operation had always prevailed. Problems had always been tackled as problems common to all Members, and that tradition was the greatest asset of the Agency for the future and should be nurtured with the greatest care. In that connection, it should be recalled that the Agency's raison d'être was to contribute to the prosperity and welfare of mankind and to world peace. Its Members should renew their determination to make a united effort for the advancement of the Agency's programmes - by combining wisdom and endeavour they would succeed in overcoming the difficulties faced and in enhancing the value of the Agency's activities still more.

19. Mr. RAMANNA (India) expressed his confidence that during the following four years the Director General would succeed in bringing about the changes necessary in the Agency to ensure the spread of nuclear power throughout the world, for his country was convinced more than ever before that it was nuclear power that held the answer to the world's energy needs.

20. Nuclear power remained one of the few realistic, economically viable and environmentally safe energy options for the foreseeable future. The Director General had stressed that the increase in installed nuclear capacity in 1984 had been the largest since nuclear power was first introduced. He had also made several proposals which the General Conference would no doubt examine in due course with all the attention they deserved.

21. The year 1984-85 had been a good one for the Indian nuclear power programme: two more reactors had gone critical in the preceding few months and the availability factors for some of the older nuclear power stations had reached figures never achieved before. It was also clear that nuclear power in India could be classified as a safe and steady source of electricity, perhaps even more reliable than other sources. The 40 MW Cirrus research reactor had celebrated its twenty-fifth year of continuous and trouble-free

operation. It had been used for research and isotope production and had made a major contribution to the widespread use of isotopes in medicine, agriculture and industry. He wished to pay tribute to those who had designed, constructed and operated it. But since even Cirus had a finite existence, it had been decided some years before to build another reactor at the same site to take over many of its functions. The new research reactor, which was naturally more modern and of higher capacity (100 MW), had gone into operation on 8 August 1985. Designed and erected entirely by Indian engineers with Indian components, it had been named "Dhruva" - meaning the pole star in Sanskrit - by the late Prime Minister, Indira Gandhi.

22. Another important achievement had been the commissioning of the second power reactor at Kalpakkam (MAPS-II), which had gone critical on 12 August 1985 and had been coupled to the grid. It had incorporated several design changes, as compared to MAPS-I, in the light of the problems encountered in the earlier RAPS-I power reactor. The approach to criticality in the MAPS-II had been so smooth that it could be said that India had mastered that problem as far as 235 MW(e) reactors were concerned. Four such standardized power reactors were currently under construction, and sites and licences for four more had been approved in the course of 1985.

23. During the past few years, India had been planning and designing 500 MW(e) pressurized heavy-water reactors (PHWR). The designs were complete and sources of equipment for those reactors had been identified within the country; the heavy water, too, would be produced domestically. In addition to building more 235 MW(e) reactors, it was planned to put into operation 500 MW(e) unit sizes and to complete the programme for the installation of 10 000 MW(e) of nuclear generating capacity from PHWRs by the end of the century.

24. The three-phase fuel cycle strategy adopted by India had started with the use of natural uranium in PHWRs, followed by plutonium-fuelled fast breeder reactors, and ultimately by the utilization of the thorium-uranium 233 cycle. The second phase had been initiated by the start of construction of the second fast breeder reactor at Kalpakkam some years before. Fuel loading of that complex 40 MW test reactor, based on plutonium-uranium carbide fuel

and sodium cooling, had begun, and it was scheduled to become critical in October 1985. That was an achievement for a developing country like India, especially since the fuel and many of the important components had been manufactured domestically. It was similar in design to the Rhapsodie in France, which had greatly promoted the development of fast breeder technology. With the commissioning of the test reactor India was moving into the latest technology in nuclear power and looking well ahead into the future. National teams had also made progress in the design of a 500 MW(e) fast breeder power reactor.

25. The development of atomic energy in India, from the very start, had been a springboard for modern technology, especially in the field of materials development. The country had thus been able to manufacture its own carbide fuel for the fast breeder test reactor and to build the PURNIMA-II. The latter, which used a uranium-233 solution, had been built mainly for the purpose of understanding the neutron and chemical behaviour of ^{233}U systems.

26. Isotope applications had reached higher levels of utilization in India, and the new Dhruva reactor was expected to meet the country's needs in the future. The use of isotope sources for irradiation of medical products as well as in industry and agriculture was already taken for granted in India, and their utilization would soon be extended to cover sewage treatment. The Indian Government was shortly expected to authorize irradiation for the preservation of certain foodstuffs. Lastly, the importance of helping the universities with new facilities had not been disregarded: a 120 MeV alpha particle variable-energy cyclotron which had been built in co-operation with Indian industry and had been operating continuously for some years was being employed mainly by universities for basic studies in nuclear physics and chemistry; it was also being utilized for the production of short-lived isotopes for diagnosis and treatment. A Centre for Advanced Technologies (CAT) was being established at Indore in order to help the universities in their research programmes and to train the young talent needed for more ambitious programmes in the future. It would be operational by the end of 1985 and would specialize in work on lasers and high-energy accelerators.

27. As in the past, India had been co-operating with the Agency in the implementation of safeguards at those facilities where it had voluntarily placed nuclear material under safeguards, and the relevant agreements were being smoothly implemented. The safeguards inspectors had carried out their duties in a satisfactory manner, and the Indian scientists and engineers had achieved improved efficiency in the operation of the reprocessing facility during safeguarded campaigns.

28. One of the activities of the Agency to which India continued to accord particular importance was the Regional Co-operative Agreement for Research, Development and Training related to Nuclear Science and Technology (RCA). While RCA programmes had begun in fields such as the use of isotopes in agriculture and medicine, there was no doubt that its greatest importance in the future would lie in the co-operation between neighbouring countries in the development of nuclear power. It was difficult to understand why some countries considered that such co-operation was not feasible. In Europe, countries traded with each other in electricity and drew on each other's manpower and experience in a normal, routine manner. Third World countries should do the same. That was why RCA was essential and the Agency should not regard RCA activities as peripheral. One purpose of the RCA had been to help in manpower development in the region. Personnel from developing countries in Asia had been trained and should now increasingly be used for manning the various posts under the programme rather than the nationals from a handful of "donor" countries.

29. Non-proliferation was one of the more controversial issues faced by the Agency. At various sessions of the General Conference statements had been made to the effect that since the Non-Proliferation Treaty (NPT) had been signed by a majority of countries in the world, all others should follow suit. He was unable to understand that interpretation of democratic principles. Indeed, only 32% of power reactors in the world were now covered by NPT-type safeguards. That figure did not include the many reactors producing bombs in nuclear-weapon States of which one might never even have heard. The logical deduction seemed to be that certain countries which were nuclear-weapon States could engage in the unrestrained proliferation of nuclear weapons, while others were lectured on their commitments to democracy

and were asked to compromise their sovereignty. India did not accept so-called non-proliferation measures which actually legitimized the possession of nuclear weapons by some States. It was regrettable that the terms "nuclear-weapon States" and "non-nuclear-weapon States", and a distinction between the two, had entered into the Director General's statement since such caste distinction should not be brought into an agency where all Member States were equal. Moreover, India could not subscribe to the idea that some countries or peoples were either more responsible or morally superior to others; those doctrines were as repulsive as apartheid. If NPT was to be effective, it had to apply equally to all countries. It was rather sad to see that even agreement on a Comprehensive Test Ban Treaty was not forthcoming among the developed countries. Those were among the reasons why his country had not taken part in the recent Review Conference of the Parties to NPT and did not consider itself, or the IAEA, bound by decisions taken at that Conference.

30. In that context, one disturbing development was the continued increase in the restraints and conditions imposed by suppliers on transfers of nuclear material, equipment and technology, which could only negatively affect the fundamental promotional purpose of the Agency. Efforts such as those in the Committee on Assurances of Supply (CAS) had little or no point if unilateral changes in existing agreements continued to be practised by suppliers in the name of non-proliferation. The primary need was surely to create trust; only then could the necessary details be worked out in a meaningful way.

31. His country was deeply worried by the possibility of a nuclear war, a nuclear winter and "star wars". It was certainly high time for the countries of the world to get together and work out a programme which would make the world a safer place to live in.

32. The effort expended on making weapons could be and should be diverted to the production of power in developing countries, which suffered greatly from a lack of electricity. He was glad to note that the Agency had recently held a series of meetings on small and medium power reactors, although 1985 seemed rather late for that undertaking. One should make up for lost time and

embark upon a programme for the introduction of nuclear power reactors in developing countries and assistance with their operation and maintenance. A number of developing countries would be facing a severe energy crisis in view of their increasing populations and hopes of improving their standards of living. Any delay in introducing nuclear power would only prolong the present unsatisfactory conditions. In recognition of that situation, India would be willing to share its experience with other developing countries. The Agency should now seriously consider how international funding could be secured for power reactors in developing countries and arrange for assistance in respect of the relevant infrastructure and technologies.

33. India would pay its full share of voluntary contributions to the Agency's Technical Assistance and Co-operation Fund in 1985. In addition, as in the past, it would provide twelve Type II fellowships for the Agency. As a token of the importance which it attached to the RCA, his country would also be hosting some RCA meetings and training courses and pledged US \$50 000 for the implementation of RCA activities.

34. In conclusion, he observed that he had spoken frankly as someone who had attended many sessions of the General Conference, almost since the Agency's inception. The promise of nuclear energy remained valid; it was greater than before and had been proved by practice. It was now for the Agency and its Member States to see the promise fulfilled.

35. Mr. PETROSYANTS (Union of Soviet Socialist Republics) said that the IAEA General Conference was being held immediately after the conclusion of the Third Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). The participants in that Review Conference had unanimously adopted the Final Declaration, in which they underlined the importance of the Treaty for world peace and security and restated their firm adherence to it and their determination to strengthen its authority.

36. Those attending the Review Conference had shown a high sense of responsibility for the world's future by approving an important international document whose purpose was to help strengthen the international nuclear

non-proliferation regime. In the present complicated and tense, if not explosive, world situation that Conference had adopted decisions by consensus on issues which were directly related to preserving peace, reducing the threat of a nuclear war and curbing the arms race.

37. The Final Declaration affirmed the determination of States to strengthen further the barriers against the proliferation of nuclear weapons and other nuclear explosive devices. It noted that proliferation of nuclear weapons would add immeasurably to tension and suspicion among States at both the regional and the international level, enhance the risk of a nuclear war and lessen the security of all States. The participants of that Conference had declared that the Treaty and the non-proliferation regime played a central role in promoting regional and international peace and security.

38. As Mr. M.S. Gorbachev, General Secretary of the Central Committee of the Soviet Communist Party, had pointed out in a message sent to that Conference, the Non-Proliferation Treaty had demonstrated in practice its viability and effectiveness. During the 15 years of the Treaty's implementation, not a single new nuclear-weapon State had emerged. The view that the Treaty equally satisfied the basic interests of States both large and small, nuclear and non-nuclear, developed and developing, was now firmly established.

39. The Review Conference had noted with satisfaction that the overwhelming majority of States in the world had joined the Treaty, which now had more than 130 signatories. It was, in terms of the number of parties to it, the broadest international agreement in the area of arms race limitation. At the same time, the Conference had expressed its profound concern at the fact that some States, developed in the nuclear field, were still refusing to join the Treaty, and it had mentioned some of them by name, in particular Israel and South Africa, which did not in fact conceal their nuclear ambitions.

40. The Review Conference had centred its attention on the most vital issues of the present time, which were concerned with the cessation of the nuclear arms race. It had welcomed the important unilateral action of the Soviet Government in announcing a moratorium on nuclear explosions of all

kinds for the period from 6 August 1985 to 1 January 1986, to be extended further if the United States, for its part, responded to that positive initiative and refrained from conducting nuclear tests. An important result of that Conference was the urgent appeal to the Soviet Union, the United States and the United Kingdom to resume trilateral negotiations on a comprehensive test-ban treaty in the current year as well as an appeal to all nuclear-weapon States to take part in the negotiations on that problem at the Geneva Conference on Disarmament as a matter of the highest priority. Only two States had not joined in that appeal - the United States and the United Kingdom. The Soviet Union hoped that their decision was not final.

41. All real efforts to limit nuclear weapons had begun with the banning, under the 1963 Moscow Treaty, of nuclear-weapon tests in the atmosphere, in outer space and under water. As Mr. Gorbachev had pointed out in replying to questions put by "Time" magazine, a complete end to nuclear tests would eliminate the most dangerous aspect - the qualitative aspect - of the nuclear arms race. Also, it would help appreciably to uphold and strengthen the nuclear non-proliferation regime.

42. As was noted in the Final Declaration, the Conference had expressed its concern at developments with far-reaching implications and the possibility of a new environment - space - being drawn into the arms race. In fact, the problem of curbing the nuclear arms race in the nuclear and space era was inseparable from the task of preventing the militarization of outer space. If the latter was placed at the service of war, the nuclear threat would escalate. But if outer space was kept peaceful and out of the sphere of military rivalry, progress could be made towards the solution of the problems of limiting and reducing nuclear arsenals. That would at the same time open up vast possibilities for all-round international co-operation in various fields of human activity both on the earth and in space. Such was the purpose of the Soviet Union's concrete proposals submitted at the fortieth session of the United Nations General Assembly, concerning international co-operation in the peaceful utilization of outer space under non-militarized conditions.

43. Reviewing the Agency's activities on the occasion of its annual General Conference, he observed that his country continued to accord great importance to one of the main aspects of its functions under the Statute - monitoring of

the peaceful uses of atomic energy and constant improvement of the IAEA safeguards system. The Third Review Conference of the Parties to NPT had highly appreciated the Agency's activities in the field of safeguards and had noted that the Agency had not detected any diversion of a significant amount of safeguarded material to the production of nuclear weapons or other nuclear explosive devices or to purposes unknown. The Final Declaration of that Conference contained a number of important practical recommendations on further improving the safeguards system. The Soviet Union, together with other States, would assist in every way with the implementation of those recommendations in the interest of further increasing the effectiveness of Agency safeguards.

44. Consolidation of the non-proliferation regime depended directly on the functioning of the Agency's safeguards system. The Agency's efforts should therefore be geared to the complete coverage by safeguards of the nuclear material and facilities which were located in all non-nuclear-weapon States and were hazardous from the standpoint of production of nuclear explosive devices. In view of the Agency's limited resources, the Soviet delegation was in favour of increasing the effectiveness of safeguards in "near-nuclear-weapon States", especially those which were not party to NPT. Safeguards activities should be focused on the "sensitive" stages of the nuclear fuel cycle; the effectiveness of safeguards should be increased by applying new and more sophisticated methods, procedures and technical equipment and by optimizing the use of the inspectorate staff.

45. Much depended in that respect on the support given to the Agency by its Member States. The Soviet Union, for its part, had always held that the application of safeguards was the most important part of the Agency's activities, and it actively participated in scientific and technical safeguards programmes. A safeguards support programme was being carried out successfully in the Soviet Union. At present the programme activities for 1983-1985, for which 2 million roubles had been allocated, were coming to an end and the work plan for 1986-1988 had been prepared. Under the latter there was to be a substantial expansion in the work done for the Agency by Soviet

institutions and the resources allocated for the 1986-1988 programme amounted to 5 million roubles, apart from the special contribution of 330 000 roubles for financing other activities (inspector training, etc.).

46. The agreement between the USSR and the IAEA on the application of safeguards in the Soviet Union had come into force in the current year and the first inspections had taken place in August. In that connection, he wished to mention the high level of co-operation between the Soviet Union and the Agency's Secretariat, which had substantially reduced the time usually needed for drafting an agreement and for its implementation. The USSR had endeavoured to bear in mind the difficulties which the Agency had to face in carrying out its verification functions, and had, in particular, shown the maximum flexibility in matters such as the designation of inspectors and determination of the inspection effort required. The Agency was being afforded an opportunity to develop new methods and procedures in the process of implementation of safeguards in the Soviet Union. He hoped that the conduct of those operations in the USSR would enable the Agency to acquire new experience in the practical implementation of safeguards and would help to improve their effectiveness.

47. The Third Review Conference of the Parties to NPT had confirmed that the non-proliferation and safeguards commitments contained in the Treaty were essential for peaceful nuclear commerce and co-operation and that the Treaty fostered the worldwide peaceful uses of nuclear energy. The Soviet Union supported the Agency's activities on expanding international co-operation in those uses.

48. His delegation especially endorsed the establishment of an international system of assured nuclear supplies, which was currently being developed in the Committee on Assurances of Supply. A system of that kind should be based on the principles of nuclear non-proliferation, which were the essential prerequisites for international co-operation in the field of the peaceful uses of nuclear energy in general, and for any system for the preferential supply of nuclear materials, equipment and services, in particular.

49. Recognizing the great importance of Agency activities in the development of scientific and technical co-operation among Member States, his country actively supported the principal areas of the Agency's activities in the field of the peaceful uses of atomic energy and especially those programmes which were of interest to all countries. Mention should be made, first and foremost, of nuclear power, which was a reliable and economical source of energy and the share of which in the energy balances of States would be steadily growing.

50. The USSR also supported the operation of the International Nuclear Information System (INIS) and co-operation in the field of nuclear data. Those areas were very important for the development not only of nuclear power but also of other peaceful uses of atomic energy in all Member States. As in the past, he was in favour of the Agency's work on controlled thermonuclear fusion, in which field his country had initiated the development of the INTOR facility on an international basis. It also endorsed the nuclear safety and environmental protection programme, the Incident Reporting System and other activities.

51. The Soviet Union regarded as important the Agency's activities in the field of technical assistance. The Agency devoted a substantial and ever-increasing part of its budget to providing technical assistance for developing Member States, which was an obvious and measurable success on the part of the Agency. The practice followed in determining the level of the Technical Assistance and Co-operation Fund ensured considerable growth of the resources on a predictable basis. Having regard to the importance of that activity of the Agency for developing Member States, the Soviet Union wished to confirm its support for a target of US \$30 million for the Technical Assistance and Co-operation Fund in 1986, it being understood that the principles governing the establishment of the Fund - voluntary contributions in national currency - would remain unchanged. Soviet policy regarding co-operation with developing countries was reflected in the steady increase of its voluntary contributions to that Fund.

52. In 1986 the Soviet contribution would amount to 2 680 000 roubles and was intended for the supply of Soviet equipment, instruments and facilities to developing Member States and for training courses and other activities in the Soviet Union.

53. His country would also make available 2 million roubles during 1986-1988 in the form of additional assistance to States party to NPT for the financing of footnote a/ projects. In addition, resources would be allocated to cover the expenses of individual training of specialists from developing countries. In order to improve co-operation in the peaceful uses of atomic energy, the Soviet Union was willing to share its experience and technical potential with countries using the atom for peace. There was very extensive and fruitful co-operation between the USSR and the socialist Member States of the Council for Mutual Economic Assistance (CMEA). It was multilateral in character and was carried out through the CMEA Standing Commission responsible for co-operation in the peaceful utilization of atomic energy, which was celebrating its twenty-fifth anniversary in the current year. There had been a considerable growth in joint projects in the field of nuclear science and technology on the basis of co-ordination and co-operation, agreements and contracts. A large-scale programme for nuclear power plant construction was in process of being implemented.

54. By the end of 1984, the total capacity of the operating nuclear power plants in Bulgaria, Hungary, the German Democratic Republic, the USSR and Czechoslovakia had amounted to more than 30 GW and, according to the energy development plans of CMEA Member States, would reach about 40 million kW in 1985. Their electricity production would exceed 230 000 million kWh. It was expected that in the following decade the nuclear power plants in those States would have a total capacity of 100 million kW, and their share in the production of electricity would be 20-30%, or even over 40%.

55. In the CMEA Member States the problems of supply of fresh fuel to nuclear power plants and its subsequent reprocessing were settled by agreement between the parties. Thus, the Soviet Union carried out isotopic enrichment of uranium, fabricated and delivered fuel assemblies to the CMEA Member States

concerned and received spent fuel for reprocessing. That arrangement was economically advantageous for all the participating countries and ensured the storage of high-level wastes in a limited number of locations, although it involved additional problems related to the safe transport of spent fuel over long distances.

56. In conclusion, the Soviet Union was confident that the Agency would remain a reliable instrument for the development of international co-operation in the peaceful uses of atomic energy, within the context of the non-proliferation of nuclear weapons.

57. Mr. SITZLACK (German Democratic Republic) noted that, as in the preceding years, international co-operation on the basis of the Agency's programme had again made appreciable progress in 1984. That was the most important and welcome conclusion to be drawn from the Director General's highly informative address and from the documents submitted to the General Conference.

58. The Secretariat's reports on technical co-operation showed that considerable progress had been made in that important area of its work. Obviously, that was the result of the new technical co-operation policies implemented recently and of the system of financing through voluntary contributions in national currency on the basis of indicative planning figures, which was now well established. Although in 1984 there had been only a slight overall increase in the implementation rate, substantial improvements had been achieved in certain areas, especially in the implementation of interregional projects and in the provision of experts.

59. Endorsing the Agency's technical co-operation activities, his country contributed its share of the target for voluntary contributions to the Technical Assistance and Co-operation Fund and, in addition to the supply of equipment and material, endeavoured to provide training for scientists from developing countries in the form of courses, study tours and fellowships and by making experts available. In the preceding year, it had again held one training course, taken part in arrangements for two study tours and received nine fellows from six countries.

60. In considering technical co-operation one should not forget the numerous activities of the Agency's "technical" Departments; although not directly related to the technical co-operation programme, those activities were highly relevant to the interests of developing countries. Apart from such traditional fields as health, food and agriculture, such co-operation increasingly involved physics, nuclear power and safety, and scientific and technical information. In the case of the last mentioned, following the inclusion of project-related training, it would perhaps be useful to introduce project-related information on the basis of INIS.

61. As all were aware, international co-operation was a prerequisite for the world-wide use of sophisticated technologies related to the peaceful uses of nuclear energy, the dominant aspects of which were nuclear safety, radiation protection and nuclear safeguards. An instance of successful international co-operation in the nuclear field was the implementation of nuclear power programmes in the Member States of the Council for Mutual Economic Assistance (CMEA), where the present installed capacity of nuclear power stations would have grown six-fold by the year 2000. Mention should also be made of the trend towards the use of nuclear energy for district heating and of a co-ordinated research programme on nuclear fusion.

62. It was encouraging to see that the fourth Nuclear Safety Review had developed into a very informative document, which should also be made available outside the IAEA. Its most important conclusion was that nuclear-power-related activities had not led to accidents with consequences for public health and safety. However, the fact that there had been serious radiation incidents not related to nuclear power facilities gave rise to concern and underscored the need for stricter control of the use of ionizing radiation sources and radioactive material.

63. On the subject of regulatory activities, it should be mentioned that at the beginning of the current year new regulations governing atomic safety and radiation protection had entered into force in his country. The term "atomic safety" covered all aspects of nuclear safety, nuclear safeguards and physical protection. In drafting those regulations, due account had been taken of the German Democratic Republic's Atomic Energy Act of 1983, the recommendations contained in ICRP Publication 26 and the Agency's Basic Safety Standards.

64. A third component part of the peaceful use of nuclear energy was nuclear safeguards. Experience had shown that the application of Agency safeguards to all nuclear activities did not impede the use of nuclear energy for peaceful purposes. It could even be said that nuclear safeguards were a prerequisite for creating an atmosphere of world-wide mutual confidence and thereby generating favourable conditions for international co-operation.

65. His country therefore welcomed the successful outcome of the Third Review Conference of the Parties to NPT, which had convincingly reaffirmed the importance of the Non-Proliferation Treaty for international peace and security as well as the Agency's key role in ensuring the implementation of its basic provisions.

66. The Soviet Union's offer to accept Agency safeguards on several of its nuclear facilities would help to promote accession to NPT. His delegation therefore welcomed the conclusion of the safeguards agreement between the Soviet Union and the Agency.

67. It was particularly gratifying to note that in 1984 there had again been no indication of diversion. Considerable effort was still needed on the part of both the Agency and the Member States if the objectivity and reliability of the annual safeguards report was to continue to increase. For that reason, his delegation wished to encourage the Agency to persist in its endeavours with a view to more satisfactory goal attainment by further improving the planning and evaluation of inspections and to making the statements under paragraphs 90(a) and (b) of document INFCIRC/153 more useful to Member States, thereby enabling them to take timely corrective action.

68. His Government supported the Agency's attempts to improve the training of inspectors, and had therefore expressed its willingness to hold two training courses in 1985 for newly recruited inspectors and one course for safeguards trainees from developing countries.

69. Safeguards issues were also playing an essential role in the deliberations of the Committee on Assurances of Supply (CAS). The fact that recently there had been some progress was encouraging. The Committee should

continue its work in a constructive and co-operative spirit so that it would eventually be able to find satisfactory ways of assuring the supply of fuel and equipment and of applying safeguards.

70. A final problem related to nuclear safeguards was physical protection. The Convention on the Physical Protection of Nuclear Material could serve as an additional instrument in preventing the misuse of nuclear material and all States should therefore accede to it.

71. Further development of the uses of nuclear energy for the benefit of all peoples required, first and foremost, peace - and especially nuclear peace. Preservation of peace and security was one of the main objectives of the United Nations, which had been founded 40 years before following the victory over fascism.

72. The Agency, as an autonomous body within the United Nations family, was deeply involved in the endeavour to achieve that goal. It discharged its obligation to strengthen peace and security in the world in collaboration with its Member States by verifying that nuclear material and equipment intended for peaceful uses were not diverted for military purposes.

73. For further success in securing peace it was necessary not only that all States become party to NPT and that all non-nuclear-weapon States accept full-scope safeguards, but also - and primarily - that any misuse of nuclear energy for belligerent purposes should be prevented and outlawed forever. A great step in that direction would be taken if all nuclear-weapon States undertook to halt nuclear-weapons tests, to renounce the first use of nuclear weapons, to freeze nuclear arsenals, to reduce the number of nuclear weapons step by step and to prevent the militarization of outer space.

74. Time and again the Soviet Union had made highly constructive proposals concerning the attainment of those goals - goals which were in the vital interest of mankind. The Government and the people of the German Democratic Republic strongly supported such far-reaching proposals and initiatives for world-wide security.

75. Under the terms of the Charter of the United Nations all Member States undertook further "to employ international machinery for the promotion of the economic and social advancement of all peoples". In the nuclear field, those undertakings had become the Agency's objectives, which were to "seek to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world." It was because of its endeavours to meet the requirements resulting from those ambitious objectives that the Agency was held in high esteem. To fulfil its mission, however, the Agency needed the active co-operation of all its Member States. His country, for its part, would continue assuredly to support the Agency to the best of its ability.

76. Mr. LINDBLOM (Finland) first recalled with pleasure the Director General's recent visit to Finland, which had been a success and had reinforced the sound basis, already existant, for continued co-operation between his country and the Agency.

77. The applications of nuclear energy, whether for power production or not, had become a vital part of present-day life. Nuclear energy was already one of the most important sources of electricity production in the world and its use would continue to grow. That trend was reflected in the Agency's Annual Report for 1984 and had been stressed by the Director General in his opening address. Nuclear power had proved to be both economically competitive and environmentally safe.

78. Nevertheless, one should not lose sight of the ominous link between the peaceful nuclear fuel cycle and the production of the most destructive weapons known to mankind. The dreadful consequences of the use of nuclear weapons 40 years before had recently been brought back to mind. Efforts should be made to ensure that such weapons were never used again.

79. At the Third Review Conference of the Parties to NPT, which had ended the previous week, the overwhelming majority of Member States of the Agency had reiterated their determination to work together to rid the world of nuclear weapons. Those countries had in that manner reaffirmed their conviction that NPT was the most important instrument serving the fundamental interests of the international community in terms of security; they had also

made it clear once again that broad accession to the Treaty was by far the best guarantee against the proliferation of nuclear weapons and an essential factor in promoting the peaceful uses of nuclear energy.

80. The two statutory objectives of the Agency should therefore be given equal emphasis: to promote the use of nuclear energy for peace, health and prosperity throughout the world, and to ensure that the assistance provided by the Agency was not used to further any military purposes. During the 30 years of its existence, the Agency had discharged both those functions admirably within the limits of its competence and the Annual Report showed that it was continuing to do so. The Agency's main programmes and its central role in the international non-proliferation regime had helped to build up the confidence between States that was a prerequisite for the continuing peaceful use of nuclear energy and for strengthening international security. The international network of nuclear trade and co-operation would be inconceivable without the guidance, standards and guarantees provided by the Agency. If the Agency was to play that vital role successfully, its structure and activities had to observe the principle of universality without any discrimination.

81. Nuclear energy had often been perceived as a symbol of "hard" technology by the sector of the population worried about possible changes that nature might undergo and about potential ecological disasters. Another concern was that nuclear energy and, perhaps, a number of other new technologies were creating a society in which the majority would feel too dependent on a small group of experts taking decisions. Carried further, there were also fears that such decision-making could be abused. Mutual confidence among all sectors of society had to be strengthened in order to solve that problem. The democratic aspects of decision-making procedures should also be emphasized.

82. His Government had submitted for parliamentary approval a new nuclear energy bill which was based on those considerations and which aimed at modernizing the nuclear energy legislation enacted in the 1950s. Under the new law, major nuclear facilities such as power plants and waste storage repositories would require parliamentary approval in principle. However, parliament would not be expected to decide what kind or what make of nuclear

power plant should be chosen, but rather, in each case, whether nuclear power was an acceptable and viable solution. The democratic nature of that decision process was further enhanced by the stipulation that municipal councils could veto the project if it did not meet with their approval.

83. The Finnish authorities believed that responsibility for the safety of nuclear power should be borne by the electricity utilities throughout the whole fuel cycle until such time as the nuclear facilities were decommissioned and the nuclear wastes were finally disposed of or exported. The State would assume responsibility for safe final disposal only after the safety authorities had certified that the wastes had been duly stored and that all safety precautions had been taken.

84. Several decades would be needed before the actual waste disposal operations could begin. To ensure that waste management costs were incorporated into the energy prices at the time the energy was produced, the electricity utilities should make advance contributions to a State-operated waste management fund to cover the future waste management and decommissioning costs. The fund would pay a fixed interest at a rate higher than the rate of inflation. Under the new proposal, the electricity utilities would be able to borrow back up to 75% of what they had paid into the fund. The remaining 25% could then be borrowed by the State at the above rate of interest. To estimate the sums to be funded, future waste management costs would not be discounted in the same way as in many other countries, but would be estimated on the basis of current prices and technology. The sums required for the fund would be adjusted annually to take into account existing price levels and technological innovations. At present, waste management costs could be estimated at about 10% of the cost of producing nuclear electricity. That cost included the decommissioning of facilities and direct final disposal of spent fuel without reprocessing.

85. In 1984, nuclear energy accounted for about 40% of the electricity production in Finland - one of the highest rates in the world. All four nuclear units had availability factors close to 90%. The safety record had been more than satisfactory - there had been no incidents of a serious nature

and very few malfunctions. Nuclear energy was at present by far the most economical source of electrical power.

86. In view of that satisfactory operating experience, there was no doubt that the new nuclear legislation in Finland would prove viable and no drastic decision to curtail nuclear power would be taken in his country. The enactment of the new laws would also make it possible to ratify the Convention on the Physical Protection of Nuclear Material.

87. Finland did not have the necessary resources to set up the entire infrastructure required to construct nuclear power plants or to supply them with nuclear fuel. It therefore depended in many respects on material and services supplied by other countries.

88. The nuclear power plants in his country had been built in the late 1970s and most of the equipment and components required had been imported and adapted to meet his country's requirements and to accommodate safety-related concepts and standards. His country's experience was based on the bilateral and multilateral co-operation agreements signed with both the East and the West. With regard to the study on small and medium power reactors which the Agency was making and in which Finnish industry was also taking part, his country was ready to share its experience with other States, especially with those which were party to NPT.

89. Finland was willing to assist the Agency in its work on reactor safety. It would therefore invite an Operational Safety Review Team (OSART) to Finland and share Finnish experience with it. He welcomed the recommendations and codes of practice drawn up by the Agency, and was sure that they had been and would be of great value to many countries and would help the development of international trade.

90. Waste management was one of the key issues of public concern. For a small country, waste management involved specific problems. There were not yet any international waste repositories in existence and few countries seemed willing to offer final disposal facilities for nuclear waste stemming from other countries. That meant that the cost of waste disposal per unit of generated electricity was high in countries with only a few power plants.

From the standpoint of nuclear safety a large number of final repositories was not the best internationally acceptable solution. His country looked forward to more international co-operation in that area in the future. It also expected more technical demonstrations of waste management from countries with greater experience and more nuclear power plants.

91. It was gratifying to note that the Agency, in carrying out its safeguards obligations, had not detected any diversion of a significant amount of safeguarded nuclear material for the manufacture of any nuclear weapon, or for any other military purpose, or for the manufacture of any other nuclear explosive device. At the same time, his country continued to be concerned at the fact that in six non-nuclear-weapon States unsafeguarded facilities of significance were in operation or under construction.

92. In spite of the success of the Agency's safeguards system, there was no cause for complacency. The system was constantly facing new challenges. There was a steady growth in the number of nuclear facilities other than reactors, and that placed increasingly heavy demands on the Agency's inspectors in both qualitative and quantitative terms. To mention but one example, new enrichment technologies were continually being developed and they would inevitably require the development of more sophisticated methods of inspection. It might also be necessary to envisage entirely new technical and institutional arrangements.

93. It was therefore essential to provide the Agency with the necessary resources to maintain the high level of confidence in its safeguards system which was vital for all countries, regardless of their options in the field of power production or their military doctrines. The Agency's safeguards system was also a necessary condition for international trade in nuclear materials and co-operation on a predictable, equitable and mutually beneficial basis. It was to be hoped that all States would do their best to assist the Agency in operating and improving the safeguards system. Experience gained by both the Finnish authorities and Finland's electricity utilities confirmed that safeguards implementation did not in any way hamper economic or technological development.

94. Although the ultimate goal was, in his opinion, that all countries should accede to NPT, certain intermediate steps could obviously be taken; thus, all non-nuclear-weapon States should make a legally binding commitment to non-proliferation and place all their nuclear activities, both present and future, under full-scope safeguards so that that commitment could be verified. His country also urged all supplier States to keep that goal in mind when deciding on their nuclear export policies. There was no way of arriving at internationally acceptable norms for assurances of supply without effective assurances of non-proliferation. Finland continued to support the efforts made by the Committee on Assurances of Supply (CAS) in its search for such norms and noted with satisfaction that the differences of opinion within the Committee had been narrowed down.

95. His Government had noted with particular satisfaction that four of the five nuclear-weapon States had voluntarily placed some of their facilities under Agency safeguards. In that connection, all nuclear-weapon States should take steps to separate their civilian and military nuclear activities and undertake not to divert nuclear materials in peaceful uses to the manufacture of nuclear weapons or to other military uses.

The meeting rose at 5 p.m.