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GENERAL DEBATE AND ANNUAL REPORT FOR 1988 (GC(XXXIII)/873) (continued)

1. Mr. HU (China) said that since the thirty-second session of the General Conference, the Agency had made gratifying progress in promoting the peaceful uses of nuclear energy throughout the world. It had done a great deal of useful work to help the Member States develop nuclear power and promote nuclear applications. Its activities aimed at encouraging international co-operation in the sphere of nuclear safety, facilitating research on radioactive waste disposal and management and strengthening radiation protection guidance and its promulgation of the revised safety codes for nuclear power plants were generally welcomed by Member States. The Agency should be given full credit for the series of measures it had taken to raise the implementation rate of its technical co-operation projects, make effective use of the financial resources allocated for such projects and evaluate their effect. Thanks to the concerted efforts of the Member States and the Secretariat, the Agency had also played a positive role in the implementation of safeguards. China viewed with satisfaction the continual expansion of areas of co-operation covered by the Regional Co-operative Agreement (RCA) for Asia and the Pacific and the positive results achieved in that connection.
2. While the Agency's achievements deserved recognition, the difficulties facing it should not, of course, be forgotten. As a Member of the Agency and the Board of Governors, China considered itself duty-bound to support the Agency in discharging its important responsibilities regarding the peaceful uses of nuclear energy. Activities in the field of nuclear applications and the development and utilization of nuclear power, conducted by the Agency as part of its "promotional" work were of great importance for most of the developing countries. The Agency should take account of the needs of the developing countries and earmark a reasonable share of its programme and budget for projects relating to nuclear applications and the development and utilization of nuclear power. It would thus be able to maintain an appropriate balance between the promotional and regulatory sides of its work.
3. There was an ever increasing awareness of the potential climatic and ecological impact of using fossil fuels. Nuclear energy could play an important role in reducing environmental pollution and the greenhouse effect. The Agency should endeavour to achieve even greater public understanding of

the merits of nuclear energy in that regard and to continue its comparative studies on the effects and risks of using nuclear energy and energy from other sources, respectively, in order to win greater public acceptance of nuclear energy on the basis of sound scientific evidence.

4. The Agency should continue to regard its work to improve nuclear safety and promote greater international co-operation in that area as an important component part of its activities. Since Chernobyl it had achieved a great deal in that regard. However, in the light of the Agency's foreseeable financial resources in the coming years, he hoped that its nuclear safety programme would place greater emphasis on operational safety and accident prevention. With respect to radiation protection, special attention should be given to providing developing countries with guidance on the management and safe use of radiation sources.

5. Over the past few years the developing countries Members of the Agency had made encouraging progress in the development of nuclear power. However, that development had been rather uneven because of financial and technical constraints. China hoped that the Agency would play a greater role in assisting nuclear power planning, disseminating state-of-the-art nuclear power technologies, strengthening the infrastructure necessary for such countries for the development of their nuclear power programmes, and promoting corresponding training activities.

6. Over the past decade, the Agency had stepped up its programme in areas such as nuclear power, nuclear safety and safeguards, which had undoubtedly boosted the development of the peaceful uses of nuclear energy throughout the world. Regrettably, however, with the near-zero growth in real terms of the Agency's Regular Budgets during the 1980s, many projects which should otherwise have been included in the programme had been left out. Furthermore, the emphasis given to different parts of the programme within the overall structure was sometimes misplaced. It was his country's view that the Agency should adjust its budgetary policies and arrangements in accordance with the changing requirements of its Member States. Maintaining zero growth over long periods of time interfered with the Agency's ability to discharge its responsibilities under its Statute and was bound to undermine its viability as an organization and sap its vigour.

7. With regard to the financing of technical assistance, the Chinese delegation had noted that, owing to the current financial constraints, a number of technically valuable projects, whose implementation would have benefited developing countries both socially and economically, had not received the support they deserved. The approach based on the Indicative Planning Figures (IPF) adopted by the Agency since 1982 had undoubtedly been a good departure. However, that should not obscure the fact that the more valued and indispensable such an approach became, the less capable the Agency was of envisaging other ways and means of implementing its resolution GC(XXV)/RES/388. His delegation therefore considered that the Board of Governors should review the mechanisms used for applying the IPF in order to rectify the situation whereby, for several years running, the payments actually received had fallen short of the IPF. At the same time, the Board should renew its efforts to evolve other financing modalities.

8. The Chinese Government attached great importance to the Agency's work, supporting it fully and taking an active part in it. During the past year China had hosted in co-operation with the Agency a series of meetings such as the INIS Regional Training Seminar for Input Preparation and Output Utilization, the second FAO/IAEA Research Co-ordination Meeting on the Use of Isotopes in Studies of Pesticide Residues in Rice-Fish Ecosystems, the Technical Committee Meeting on Electron Cyclotron Emissions, the Regional Training Course on Radiation Sterilization Practices for Tissue Grafts in Clinical Use, the FAO/IAEA Research Co-ordination Meeting on Radiation-Induced F₁ Sterility in Lepidoptera for Area-Wide Control and the Third Regional Workshop on Energy, Electricity and Nuclear Power Planning. Within the framework of the RCA for Asia and the Pacific, China had funded the Agency's Regional Training Course on Formulation Technology for Radiation Cross-Linking Application, and planned to host the Regional Workshop on the Commercialization of Food Irradiation in Shanghai early in 1990. Moreover, China had sent experts to various developing countries in the region of Asia and the Pacific to provide technical services and had received technicians from developing countries for professional training. China would continue in the future to do everything within its power to co-operate with the Agency and contribute to its work.

9. It was well known that the previous year China had signed an agreement with the Agency placing some of its civilian nuclear facilities under Agency safeguards. He now had the pleasure of announcing to the General Conference that his country had recently completed the necessary domestic legal procedures relating to the agreement, which had now entered into force. The Chinese Government would comply strictly with the obligations set out in that agreement. In the meantime, on 10 January 1989, China had acceded to the Convention on the Physical Protection of Nuclear Material, a subject to which his Government attached great importance.

10. The past year had seen significant developments in China's nuclear power programme. Smooth progress was being made in the installation of major equipment for a 300 MW nuclear power plant designed and constructed domestically as part of the first phase of the Qinshan project. The civil engineering work for the imported nuclear power plant at Daya Bay in Guangdong province and the design, production and installation of equipment were all going ahead according to plan. The construction of a 1200 MW (600 MW x 2) nuclear power plant as part of the second phase of the Qinshan project had already been approved by the State Council as a separate project and had reached the stage of technical and commercial negotiations with foreign firms and the completion of the preparatory work.

11. In developing its nuclear power programme, it had always been China's policy to give absolute priority to quality and safety. In April 1989 it had invited a preliminary operational safety review team (OSART) mission to inspect the Qinshan project. While fully recognizing the quality of the civil engineering work and the equipment, that mission had suggested a number of improvements. Its visit had been very useful in the construction of the plant.

12. In the future, China would concentrate on developing pressurized water reactors for nuclear power. Its aim was to standardize and produce industrially the 600 MW pressurized water reactor and to perfect the design of its 300 MW pressurized water reactor, which had been both designed and built domestically, with a view to their early commercialization.

13. In developing its nuclear power programme, China would follow the principle of mainly relying on itself, while maintaining co-operation with other countries. By introducing foreign advance technology and strengthening

independent research and development activities, it planned to accelerate the domestic manufacture of nuclear power equipment, while at the same time actively promoting international co-operation in the sphere of nuclear safety.

14. As part of its national modernization plan, China would steadfastly implement a policy of openness towards the outside world and would firmly pursue an independent peace-based foreign policy. With regard to the peaceful uses of nuclear energy, it would continue to uphold the principles of respect for sovereignty, non-interference in internal affairs, equality and mutual benefit in developing co-operation with other countries or regions and with the international organizations. In particular, it would collaborate even more closely and more effectively with the Agency. China was convinced that, with policies guided by a spirit of reform and openness to the outside world, it would make greater advances in the peaceful uses of nuclear energy and in international co-operation.

15. Mr. ROUVILLOIS (France), speaking first of all on behalf of the member countries of the European Community, paid tribute to the work done by the Agency and the distinguished role played by the Director General, who had the full support of those countries for his new term of office.

16. The present joint statement by the Community demonstrated the interest which it took in the Agency's work and also reflected the importance of nuclear energy in the lives of a great many Europeans. Nuclear energy had been a feature of European planning from the very first, since the signing of the EURATOM Treaty in 1957. That instrument continued to provide the framework for present-day activities conducted by the Community in a wide variety of domains.

17. The development of the nuclear industry had given the Community greater self-sufficiency with regard to energy and had resulted in an increase of the share of nuclear energy in overall electricity production in Europe from 11.7% in 1980 to 33.9% in 1988.

18. The Community therefore had a particular responsibility with respect to nuclear energy. In the first place, each State should ensure a very high level of safety in all its installations, especially nuclear power plants.

The Community attached great importance to of research on the improvement of safety and environmental protection, and supported efforts to strengthen international co-operation in that area. It welcomed the initiatives undertaken in that regard by the Agency, which had, as part of its Nuclear Safety Standards (NUSS) programme, revised five Codes of Practice; extended the mandate of the International Nuclear Safety Advisory Group (INSAG) for a further three years; strengthened the safety evaluation and information exchange services for nuclear power plants and research reactors and, in particular, the OSART programme, three OSART missions having been received in recent months by Community countries; issued a new series of safety documents concerning radioactive waste; conducted safety studies on the design of new reactors; and, finally, undertaken the preparation of a Code of Practice for international transactions involving radioactive waste. The Community hoped that the work undertaken at the beginning of the year by the Working Group on Liability for Nuclear Damage might be completed as soon as possible.

19. On a more general level, the Community considered that studies and discussions concerning nuclear energy were inseparable from the wider issue of the relationship between energy policies and environmental protection for both present and future. That was particularly true in a world where energy consumption was set to grow considerably and where a great many countries did not have available the range of energy options enjoyed in Europe. The increased energy consumption expected should be prevented from resulting in increased pollution, especially by those gases contributing to the greenhouse effect in the atmosphere. Nor should it damage the environment in any other way. The Community was aware of nuclear power's potential role in that regard and, in the context of its environmental policies, welcomed the contribution recently made by the Agency to a debate of global scope.

20. The Community believed that the development of the peaceful uses of nuclear energy was inseparable from action aimed at eliminating the risks of arms proliferation. It attached the greatest importance to an effective international non-proliferation regime, as demonstrated by its declaration of a common policy adopted in 1984. In order to prevent the proliferation of nuclear weapons, it was absolutely essential to restrict the dissemination of equipment, material and technologies capable of being used in the manufacture

of a nuclear weapon. At the same time, however, countries should not be denied access to nuclear material or technologies necessary for their energy programmes and for other peaceful, non-explosive applications. The European Community welcomed the constraints which many countries, recipients as well as suppliers, imposed upon themselves in that domain by agreeing to the total or partial application of Agency safeguards, which represented the keystone of the peaceful uses of nuclear energy.

21. Continual efforts must be made to arrive at an international consensus on the balance between non-proliferation and the development of the peaceful uses of nuclear energy. The Community hoped that that vital balance would be maintained and strengthened as a result of the international discussions which would take place at the Fourth Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). The States members of the Community, whether parties to that Treaty or not, would not fail to make an active contribution to those discussions.

22. Finally, the Community attached particular importance to the Agency's programmes relating to scientific and technical co-operation. It made a very significant contribution to those programmes, which provided technical assistance to developing countries at their request in a wide range of fields relating to the application of isotopes and radiation.

23. The European Community was determined to make concerted efforts to find solutions to the complex problems facing the world. As far as energy was concerned, the growing demand, the difficulties of sharing resources, ecological necessities and the exigencies of non-proliferation were all such that lasting solutions were dependent on close international co-operation. The Agency, by virtue of the universality of its composition, had a vital role to play in that regard.

24. Speaking on behalf of France, he wished first of all to express his country's support for the re-election of Mr. Blix as the Agency's Director General for a third term of office. France greatly appreciated the determination with which he supported the development of the peaceful uses of atomic energy in a period as fraught with difficulty as the present one and would continue to lend him its active support.

25. The past year had been rich in lessons. It had confirmed in the first place the difficulties which the development of nuclear energy had to confront throughout the world. The development of nuclear power programmes remained slow, both in the industrialized countries, where hindrances were being placed in their way in the shape of continued or extended de facto moratoriums, the postponement of projects and sometimes the abrupt cessation of construction, and in the developing countries, where the nuclear option continued to be beset by numerous obstacles. Furthermore, public opinion was becoming increasingly sensitive in countries which, until only recently, had been sheltered from anti-nuclear movements.

26. The consequences of rejecting nuclear power, a decision made for a variety of reasons, were now making themselves particularly clearly felt in certain countries. The growing awareness of the damaging effects to be expected from a massive utilization of fossil fuels seemed to have stimulated a new attitude towards the possible relationship between nuclear power and the environment. The Agency's task and that of its Member States was to highlight the contribution which a cautious and expert utilization of nuclear energy could make and, in a world where the die had not yet been cast, to respond to the questions now most preoccupying public opinion.

27. Those questions concerned first and foremost safety, which was the cornerstone of confidence in the nuclear option. France had always advocated an exacting and rigorous safety policy, which was not only an obligation towards its own citizens but also a duty towards the international community. Regular exchanges of experiences in the safety field were particularly important, and France would accordingly continue to support that work, whether in connection with INSAG, the NUSS codes or the OSART missions, one of which had been made to the Saint-Alban nuclear power plant in the past year. France also welcomed the creation of the World Association of Nuclear Operators (WANO).

28. Nuclear waste storage was another controversial question, because opponents of the nuclear industry based their antagonism to it on the industry's alleged inability to solve the problem of final storage and because the interim storage of waste in developing countries had attracted public

attention internationally. In that connection, France welcomed the creation within the Agency of a working group with the task of elaborating a code of practice.

29. The future would likewise depend on the progress of technology, which should be continually improved with a view to the development of new generations of reactors and further progress in the fuel cycle industry. That would be one of the main avenues of international co-operation in the future. Finally, the place occupied by nuclear energy in the world of tomorrow would depend on the conclusions which governments drew from the analysis of environmental problems, in particular the greenhouse effect, in determining their energy policies.

30. Convincing scientific and technical arguments should be presented on all those points to the public in all the Agency's Member States. Significant progress had been made in that regard, as demonstrated by the establishment in France of a scale of seriousness for incidents. Other countries were studying similar arrangements and some form of harmonization would therefore be necessary. In order to make preparations for the future, international co-operation would have to be strengthened. France was co-operating with the United States and Japan, but primarily with other European countries. In the past year the European Community had made substantial progress in its analyses of the common energy market and had embarked on a pragmatic and progressive course. In the vital area of safety, the Council of Ministers had, on 21 June, taken note of the existing consensus between the safety authorities, technicians and industrialists concerning the objectives to be pursued and methods to be applied by member countries in the sphere of nuclear safety. The Community had also seen the emergence of an analytical approach to the common principles which should guide the external nuclear policies of member countries.

31. Regarding the nuclear industry, European co-operation in the development of breeder reactors had led to the signature in 1989 of agreements on research and development, industrial property and engineering, confirming the commitment of France, the Federal Republic of Germany and the United Kingdom to develop that kind of reactor. That series of agreements gave full

credit to the work carried out among European electricity producers in connection with the European Fast Reactor project for the joint conception of a new reactor.

32. On the bilateral plane, co-operation between France and the Federal Republic of Germany had received a new impetus with the common declaration signed in June 1989. France had also strengthened its nuclear relations with the countries of Central and Eastern Europe.

33. Another priority concern of his Government was the strengthening of co-operation with developing countries. One of the great challenges of the decade to come would undoubtedly be to enlarge the scope of the energy options available to those countries by making nuclear power accessible to them under conditions acceptable to all. It was one of the Agency's missions to contribute to that process within the framework of its technical co-operation policy. France, for its part, would henceforward participate in the direct voluntary financing of development projects.

34. A specific study should be undertaken of the role which nuclear energy could play in the developing countries, two major conditions being borne in mind: the satisfaction of safety requirements and the elimination of proliferation risks. The task was difficult, but it was impossible on the one hand to continue to affirm the right of developing countries to have nuclear power, while on the other hand denying them the wherewithal to exercise that right in practice. France and the European Community had always defended the necessity of assisting those countries which needed nuclear power to obtain it, while at the same time preventing the risks associated with the proliferation of weapons.

35. With all those considerations in mind, France was pursuing its nuclear power programme by developing new uranium enrichment processes, starting up the new installations at the La Hague reprocessing plant, designing reactors for the future and tackling the problems of radioactive waste disposal.

36. The way must be prepared for the future. The Agency had an important role to play in that regard, and could count on the support of France in its endeavours to accomplish that common task.

37. Mr. SRINIVASAN (India) said that his delegation much appreciated the Director General's role during the past eight years in advocating the cause of peaceful applications of nuclear energy. Under his leadership, the Agency had admirably adapted to the varied fluctuations experienced by the nuclear programmes in Member States. India therefore supported the Board's recommendation to extend his term of office.

38. The thirty-third regular session of the General Conference was significant in that it was being held shortly after the World Energy Conference in Montreal. At that conference, the consensus had been that conservation alone was not the answer to the global energy problem. Neither was nuclear energy alone the answer. What was required was a combination of conservation, increasing use of nuclear power and pollution-mitigating technologies for fossil fuels. A consensus had also emerged at the World Energy Conference that the time was not yet ripe for economic exploitation of solar and wind power, or biogas, except in special circumstances. The Director General had also pointed out in his opening statement that about 50% of the greenhouse effect was traceable to the increase in CO₂ levels resulting from the burning of fossil fuels and deforestation. He had also stated conclusively that energy conservation and the accelerated development of renewable energy sources, notably solar and wind, which were often claimed by some groups to be the panacea for all the ills arising from increased energy production, would provide only a minuscule fraction of the projected energy demand by the year 2010.

39. In only twenty years, the population of the world had doubled to more than 5 billion, and might double again by the middle of the next century. The population of the developed countries, which at present consumed more than 75% of the world's primary energy, would remain more or less stable. Consequently, the pressures of expanding population and deteriorating energy resources would in fact fall on the developing countries. Those countries should therefore consider it a major responsibility to contain population growth, as otherwise global resources would be insufficient. Furthermore, an equitable world could not be built up without attempting to rectify the existing imbalance in the pattern of energy consumption between the developed and developing countries. Energy had a central role in all development

related activities. At the same time, there was concern that a large part of the primary energy consumed was not renewable and was environmentally degrading.

40. In India, the population depended for 40-45% of its power on wood, cow dung and agricultural refuse. The dependence on wood as fuel to such a large extent was a cause for serious concern. Electricity accounted for about 19% of primary energy in India, and it was expected to increase to about 30% by the year 2000. More than 60% of electricity generation in India was based on coal and other fossil fuels. Ideally, for domestic purposes, wood should be replaced by coal, coke, kerosene and gas and a greater proportion of electricity generation should come from nuclear power. That energy scenario highlighted the relevance of nuclear power to meet energy demands in India. It was disconcerting that some of the industrially advanced countries, which had demonstrated their capability to operate nuclear power plants successfully, had announced plans to use natural gas increasingly in place of nuclear energy to produce electricity. The question might be asked whether such replacement on a global scale was feasible and indeed whether a shift to natural gas was even sustainable, except in the context of a nation with a low population.

41. Having been involved in the field of nuclear power for a very long time, he had witnessed the gradual expansion of the role of nuclear power in many countries. There had been two major accidents and other setbacks, but there had been quick recovery and the installed capacity of nuclear power in the world continued to expand. Indeed it was heartening to learn from the IAEA annual report for 1988 that 14 more nuclear power reactors had come on line during that year and that nuclear power now accounted for 17% of total power generation in the world.

42. Expansion in nuclear power generation was more vertical than horizontal. The Senior Expert Group on Mechanisms to Assist Developing Countries in the Promotion and Financing of Nuclear Power Programmes had recommended in its report, inter alia, that the Agency should promote closer co-operation with the World Bank in energy and power sector planning, undertake preparatory studies, continue its efforts to find partners to implement and finance a feasibility study for a small- and a medium-power

reactor, encourage involved Member States to review the Organisation for Economic Co-operation and Development (OECD) consensus on financing conditions, etc. There was a shortage of orders with the established nuclear power plant suppliers in the industrially advanced countries. At the same time, a number of developing countries which could accelerate their economic growth through augmentation of electricity supply by resorting to nuclear power were unable to do so for a variety of reasons, such as inadequate infrastructure, lack of acceptable financing arrangements, public attitude, etc. India had adopted a self-reliant approach to nuclear technology. That approach required arduous efforts and involved lengthy gestation periods before the benefits were derived. However, it provided a stable foundation for the further development of nuclear power in the country. As a supplement, India called on external assistance with some of its nuclear power reactors. That would help bridge the gap between power supply and demand.

43. After Chernobyl and Three Mile Island the world had learned at great cost that assurance of public and environmental safety should be the foundation of all nuclear energy programmes. The world nuclear community had since then taken decisive steps. One such step worthy of mentioning was the setting-up in May 1989 of WANO. That association reflected the determination of nuclear operators to globalize nuclear safety issues. Until the Three Mile Island accident in 1979, emphasis had been placed on design safety, and that accident had served to underline the significance of operational safety. Then the Chernobyl accident had occurred in 1986. All those incidents had galvanized the nuclear community into strengthening co-operative steps to enhance the safety of nuclear power plant operation. The contributions by the Agency in that area and in the field of radiation protection were commendable. The codes which had been adopted had been responsible for making nuclear safety, which had hitherto been merely a nebulous concept, into a highly accomplished science. The reaction of the international nuclear community to the basic safety principles document had been very positive. Those principles should be updated periodically. At the same time, however, the Agency, in its programmes, should not lose sight of safety in design and construction. Concepts such as inherent safety and passive safety should also be pursued actively.

44. In India, people had realized that without a strong public information effort, a negative image of nuclear energy might become ingrained in the public mind. That could become a stumbling block to the further growth of nuclear power. He was happy that the Agency had realized the importance of public awareness programmes.

45. In India, the commitment to harness nuclear energy for development was deeply rooted. Another milestone in the Indian nuclear power programme had been the attainment of criticality of the first unit of the Narora atomic power station in March 1989, and, in July 1989, its synchronization to the grid. That was the seventh nuclear power reactor in the country and the third 235 MW(e) PHWR to be nationally designed and built. The design and construction had posed many challenges to the Indian engineers and scientists, who had had to evolve innovative designs to suit the moderately seismic conditions and other characteristics of the location. The reactor employed a double containment feature to make it safe to the public and the environment under virtually all conditions. The two other nationally built power reactors at the Madras atomic power station had had some problems. In spite of their complexity and the location of the damage in a very high radiation zone, the Indian technicians had been able to bring the two reactors back into operation reasonably quickly, even though at reduced power levels. Action was now being taken to make other modifications so that the reactors could resume full-power operation. Other nuclear power stations based on pressurized water reactors of 235 MW and 500 MW were making steady progress. Nuclear technology was highly demanding but India was convinced that the rewards were high if the challenges were faced.

46. India continued to attach considerable importance to fast reactors. Design and development work on a 500 MW(e) prototype fast breeder reactor was progressing. The fast breeder reactors were an important energy option and, in the long term, India planned to build facilities of that type to make optimum use of nuclear fuel. It also attached considerable importance to the increasing use of radioisotopes in medicine, agriculture and industry.

47. Finally, he reiterated his country's commitment to the cause of disarmament. India regarded the action plan which it had submitted to the Special Session on Disarmament of the United Nations General Assembly as a

programme which should be taken up without delay. That plan called on the international community to negotiate within a fixed time period the complete phasing-out of nuclear weapons. The vast resources which were being poured into armaments should rather be channelled into economic development and social well-being. Moreover, non-proliferation could only succeed under a non-discriminatory regime. India reaffirmed its support for the Agency's activities. It sincerely hoped that the Agency would play a catalytic role in bringing the achievements of nuclear technology to the common benefit of all mankind.

48. Mr. ALVES (Brazil) said that his country had not deviated from its long-standing policy of firmly supporting the activities of the Agency, the guidelines for which were set forth in the Agency's Statute. In addition, the Brazilian Government renewed its full support for the safeguards system: it was an effective means for the control of the peaceful uses of nuclear energy, since it was the result of sovereign negotiations and was applied in strict accordance with the Agency's Statute, in other words in a non-discriminatory manner. Brazil stressed the great effort of the Agency's safeguards inspectors and expressed confidence in their work.

49. His Government attached special importance to the Agency's technical co-operation programme and followed its development closely. The fact that it continued to grow within an overall scenario of zero growth was an assurance, for the developing countries, that the Agency was fulfilling its mandate. It was important that such a trend should continue, especially during the present difficult period when so many developing Member States were experiencing a deterioration in their socio-economic situation. Brazil was aware that such constraints affected the timely implementation of technical co-operation projects.

50. However, improvements could be achieved in certain areas of the technical co-operation programme. Delays in the placement of fellows and visiting scientists undermined the Agency's efforts, and countries should therefore be urged to expedite the acceptance procedures. Furthermore, the implementation of footnote-a/ projects should follow the established plans, and the restrictions relating to experts and equipment should be reduced.

Similarly, increased participation of the developing Member States in the programme should be sought, through the provision of expert services and equipment.

51. The Agency's mandate to promote the exchange of scientific and technical information between Member States should not be forgotten. In that connection, he commended the excellent work of the International Nuclear Information System (INIS), which for almost twenty years had enabled vital knowledge to be disseminated to the Agency's Member States. The efficient use of such information, particularly in the developing countries, was essential to the development of their nuclear activities. His delegation was pleased to note that INIS was expanding its support, through regional agreements such as ARCAL, by helping countries in the initial stages of nuclear development to establish or improve their nuclear information infrastructure. Brazil strongly supported such initiatives by providing, through its Nuclear Information Centre, both services and expertise to the Latin American region.

52. The technical assistance provided by the Agency had contributed to Brazil's achievements, particularly in radiation protection, dosimetry and nuclear safety. The Amazon project had enabled the Brazilian Government to complete its studies by means of isotope techniques on the effects of land-use changes on the ecology and climate of the Brazilian Amazon.

53. Turning to the controversial question of environmental protection in Brazil, he recalled that much had been spoken about the "destruction" of the Amazon forest and that many romantic or biased opinions had been expressed. It was therefore time to correct at least some of those opinions: recent studies, universally accepted, demonstrated that 57% of the total greenhouse effect came from energy production, 17% from chlorofluorocarbons, 14% from agriculture, 9% from deforestation and 3% from industry. Important as they were, the consequences of deforestation came far behind those of energy production. It should be recalled that 75% of overall energy was produced and consumed in the developed countries. Account should also be taken of the concern expressed by the United Nations General Assembly that the largest part of the emissions into the environment, including toxic and hazardous waste, originated in the developed countries and that those countries therefore had the main responsibility for combating such pollution.

54. With regard to nuclear energy, the World Commission on Environment and Development had stated in its report that the nuclear-weapon States had not reached an agreement on complete disarmament and that NPT had proved to be an inadequate instrument for preventing the proliferation of nuclear weapons, which was a serious threat to world peace. Brazil had consistently defended non-discriminatory policies aimed at nuclear disarmament and non-proliferation. It had participated in the group of eighteen countries which had been given a mandate to draft an international treaty for those purposes. The negotiations held at that time had led to the adoption by the United Nations General Assembly in 1965 of resolution 2028, which contained a set of principles to which Brazil fully subscribed, as they respected the sovereign equality of States. At the United Nations and in other forums, Brazil had always supported the measures for global disarmament on a non-discriminatory basis. The fundamental principle which guided Brazil's nuclear activities was that they should exclusively serve peaceful purposes. As his delegation had stated the previous year, the new Brazilian Constitution, which had entered into force on 5 October 1988, provided that all nuclear activities on the national territory were permitted only for peaceful purposes and with the approval of the National Congress.

55. The Congress, which not only controlled all the country's nuclear activities but also approved the financing and established the priorities of Brazil's nuclear programme, in addition had to examine, revise or approve the measures proposed by the bodies created through the reorganization of the nuclear sector which had taken place in September 1988. In that connection, it had recently passed a law on the budgetary directives for 1990 which stated, with regard to production, that priority should be given to the completion of the two nuclear power plants under construction. In its chapter on science and technology, the same law gave special priority to the continuation of research on uranium enrichment, the fuel cycle and radioisotope production.

56. Two bills were currently before Congress, one dealing with the national policy on nuclear energy and the other on disposal sites for radioactive wastes. Both had been prepared after wide-scale consultation with the Brazilian people and with the approval of the Superior Council for Nuclear Policy, which consisted of ministers, government officials, distinguished

representatives of the scientific community and congressmen. The second bill had been put forward by the Advisory Committee on Radioactive Wastes, which consisted of five scientists. Another committee, on radiological protection and nuclear safety, was in the process of revising all Brazilian legislation on the subject.

57. As another consequence of the restructuring of Brazil's nuclear policy, the private sector was playing an increasing role in the nuclear programme. As well as there being two important plants to produce zirconium and beryllium about to come on line, a contract had recently been signed for uranium exploration at Lagoa Real, as part of the joint efforts of the National Nuclear Energy Commission, the Industrias Nucleares do Brasil S.A. and private Brazilian companies.

58. As could be seen, therefore, nuclear affairs concerned the Brazilian people as a whole. The Government continued to defend the principles of equality, non-intervention and the right to development of each country on a non-discriminatory basis. It fully rejected the fake division of the world into "responsible" and "irresponsible" countries, and the prejudices behind those concepts.

59. His delegation was satisfied with the Agency's activities under its nuclear safety programme, and continued to support them. The risks and benefits of nuclear power could not be considered in isolation, but had to be compared with other industrial activities and viable electricity production options. Such comparative assessment was also necessary in discussing the role of nuclear power in environmental protection, avoiding climatic changes, particularly those due to the use of fossil fuels, and in sustainable development.

60. Information therefore had to be compiled on the short-term and long-term impact of alternative methods of energy production. The local, regional and global effects should also be observed and modelling and assessment methods should be developed. It was of the utmost importance that the Agency should co-ordinate the preparation of authoritative technical reports so as to present the results in a consistent framework to assist decision-makers. Brazil therefore encouraged and strongly supported the

Agency's activities in comparative risk assessment of nuclear power generation and its alternatives; those activities should be kept under the nuclear safety programme, which had the expertise to carry them out with limited budgetary impact.

61. He emphasized Brazil's positive experience with the Secondary Standard Dosimetry Laboratory (SSDL), despite the difficulties which had been experienced in setting it up, as no similar programme had existed before. The SSDL carried out important work in the fields of maintenance of secondary standards, standardization of radiation measurements throughout the nation, connection of the national measuring system to the international system, technical expertise to the Government (National Laboratory), execution of legal radiation measurements (National Laboratory), provision of an experimental radiation measuring facility, teaching faculty, research in the field of radiation metrology, and assistance to the SSDL network. That example illustrated the support which should be given to the Agency's SSDL programme, which must be considered within the framework of the interdependence of the many technical assistance projects in each country.

62. Turning to the question of Brazil's bilateral relations in nuclear matters, he stressed the wide-ranging relations with Argentina, which had been reinforced by the joint declaration on nuclear matter signed by the Presidents of the two countries in Foz do Iguacu, in December 1985. Since then, there had been closer co-operation and significant exchange of experience and materials. The previous month, President Menem had held important talks with President Sarney on nuclear affairs. On that occasion, the Governments of the two countries had concluded a document to facilitate the exchange of goods to be used in the construction of nuclear power plants in both countries. In that way Brazil and Argentina were improving their co-operation in the area of the peaceful uses of nuclear energy and exploring new ways of contributing to the development of Latin America.

63. Mr. CHERIF (Algeria) began by stating that nuclear power, as long as it adhered to stringent safety standards and rules, was a reliable source of energy which presented no danger to the environment. Everyone was aware that the use of nuclear power could help reduce the concentrations of carbon

dioxide and sulphur dioxide in the atmosphere and prevent a worsening of the greenhouse effect which those gases caused. The noteworthy action taken by the Director General and the Secretariat on that matter was commendable.

64. Nevertheless, the desired objective - the large-scale introduction of nuclear energy throughout the world, including the developing countries - could not be achieved unless serious efforts were made to solve the many thorny problems concerning, in particular, international transfers of materials and technology, the financing of nuclear power, and international co-operation on safety-related matters, including exchanges of relevant information. His delegation therefore hoped that new initiatives would soon be taken on all those matters under the Agency's auspices.

65. Economic constraints had seriously affected the level of investments during the past few years. For a lack of adequate financial resources, the different enhancement programmes, particularly in developing countries, had been considerably reduced, and nuclear power was among the areas most affected by that continuing crisis. In spite of those unfavourable conditions, Algeria remained convinced that the peaceful uses of nuclear energy were an important factor not only for the future of its economy but also for the well-being of its population. On the basis of that conviction, during the past two years, it had increased its efforts to consolidate the scientific and technical basis and to continue, at an appropriate pace, the implementation of its programme for the development of nuclear applications. Achievements worth mentioning included the installation of the first training and research reactor, inaugurated in April 1989. That facility, to be used for education, basic research and nuclear applications in medicine, agriculture and industry, was the result of exemplary co-operation between two countries, Algeria and Argentina, which had, by their joint efforts, created the conditions and climate of confidence necessary for mutually advantageous exchanges and for the development of fruitful co-operation for the well-being of their peoples. Over a number of years, Algerian and Argentine scientists and technicians had had a most enriching exchange of experiences. The safeguards agreement applicable to the reactor had been signed with the Agency in February 1989, and safeguards were already being applied. Algeria proposed to explore the possibility of organizing research and training activities at that facility,

on terms still to be defined, for scientists and trainees from other countries, including African countries.

66. In addition, Algeria had made considerable progress in implementing projects on the applications of nuclear techniques in medicine, agriculture and industry. Thus, the construction of three new centres for radiotherapy and nuclear medicine had just been completed, and the equipment was being installed. Those centres, which would be operational by the end of 1989, were coming at the right time to strengthen the existing infrastructure and thus to respond to an increasing demand in that area. A fourth centre was under construction. Also, with the Agency's support, interesting work was being carried out in the radiopharmaceutical field. Those activities had opened up the way to starting the production of technetium-99 in the near future, and the experimental production of small quantities of radioisotopes using the reactor's irradiation capabilities was also foreseen.

67. Another project concerned the use of irradiation techniques. Thanks to those techniques, Algeria hoped to reduce the losses attributable to storage difficulties and to the country's climatic conditions. The pilot activities accomplished with the Agency's support had made it possible to optimize the irradiation doses and to carry out technical and economic studies for the planned construction of a semi-industrial irradiation facility which would be used both for foodstuffs and for sterilizing medical products. In view of its continuing interest in those techniques, his country would soon be hosting the FAO/IAEA Research Co-ordination Meeting on the Application of Irradiation Techniques for Food Processing in Africa.

68. A secondary standard laboratory with three calibration benches which had been set up with the Agency's assistance was now operational and could also serve other African countries that might wish to use it. Reliable and efficient radiation protection services had been established which could analyse imported food products as well. Research activities were also being undertaken. The human potential available was already such that Algeria could participate in assistance efforts under the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency.

69. His country's wish for more active participation in the Agency's training activities had led it to offer itself as host to regional and interregional courses. Thus, a first regional course on the maintenance of nuclear medicine instruments for the Africa region was to be held the following month in Algiers. In addition, Algeria had requested the Secretariat to hold regional and interregional courses on non-destructive testing and analytical techniques in Algiers. His country hoped to be able to contribute regularly to the Agency's training activities in the future.

70. With regard to regional co-operation, his delegation thanked the Secretariat, and in particular the Deputy Director General for Technical Co-operation and his staff, for the valuable assistance given to African States with a view to concluding a co-operation agreement similar to the existing agreements for Latin America and Asia. His delegation trusted that co-operation projects under that agreement would enjoy the scientific and material support of the Agency and of Member States.

71. The provision of technical assistance was one of the Agency's main functions, since, for a great many countries, that technical assistance greatly contributed to the promotion of nuclear techniques. His delegation therefore reiterated its support for the Agency's activities in that area and for the steps taken to improve the management of technical assistance, while also hoping that resources would increase at a faster rate and their availability be certain and foreseeable. In that context, he said that Algeria would soon be paying its voluntary contribution. The Department of Technical Co-operation was to be commended for the noteworthy volume and quality of the work which it had accomplished with limited means.

72. At a time when the entire international community was rallying to fend off the threats to the environment and was co-ordinating efforts to promote sustainable development, the Agency should accord high priority among its activities to the question of dumping of nuclear waste and other toxic wastes. The General Conference's resolution GC(XXXII)/RES/490 and the Director General's report to the current session were prerequisites for positive developments in that matter. His delegation hoped that the General Conference, during its current session, would further increase its efforts to lay a basis for the formulation of international regulations on that matter.

73. Algeria was very interested in the establishment of a comprehensive regime of international liability for nuclear damage. It welcomed the signing of the Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention, which represented a significant step in the development of international law in the area of civil liability, and it also welcomed the establishment, pursuant to General Conference resolution GC(XXXII)/RES/491, of a working group to study all aspects of that issue. His delegation congratulated the working group on the important tasks it had performed in the course of its first session.

74. Although it had been on the General Conference's agenda for 13 years, the question of the amendment of Article VI.A.2 of the Statute had still not been resolved. And yet, in 1978 the General Conference, in its resolution GC(XXII)/RES/361, had already pronounced itself in favour of a moderate increase in the number of Board members from the regions of Africa and the Middle East and South Asia, thus recognizing that those regions were underrepresented as well as the need to correct that imbalance. It was time to see that justice was done to those two regions by according them fair and equitable representation within the Board. That matter should be treated as a priority - without prejudice, however, to the need to take due account of the proposals for the revision of Article VI of the Statute as a whole at a later stage.

75. The State of Palestine had by now received wide international recognition, and its participation in the activities of the Agency as an observer was a wholly legitimate right which stemmed from the proclamation made by the Palestine National Council on 15 November 1988. By that act, the Palestinian people had again proved its desire to respect international legitimacy and its justified wish to take part in the various activities of the international community. By permitting the State of Palestine to attend, as an observer, the scientific and technical meetings organized by the Agency, the meetings of the Board of Governors and the sessions of the General Conference, the Agency - and thus the United Nations system as a whole - would only be doing it justice. The Agency was therefore duty bound to respond positively to Palestine's expectation. What was said, done and decided at those meetings concerned all the peoples of the world without exception, including the people of Palestine.

76. Israel's nuclear capabilities, through the threat and danger they posed to peace, security and stability in the particularly sensitive region of the Middle East as well as in the entire world, continued to arouse the just concerns to all who worked towards international détente. It could not be otherwise because, despite the many appeals to reason which had been addressed to it by the United Nations, the Agency and other international bodies, Israel persisted with its aggressive policy towards the countries of the region and beyond, by pursuing its tactics of oppression and terror against the Palestinian people and by occupying its territory and that of other Member States. In that context, the Agency, as part of the United Nations system, was duty-bound to help put an end to that threat by adopting appropriate measures in the light of the particular situation in the Middle East.

77. The technical study carried out by the Secretariat in response to operative paragraph 6 of General Conference resolution GC(XXXII)/RES/487 would have done well to bring out more clearly the requirements with regard to safeguards, so as to dispel all fear of seeing nuclear energy diverted from its peaceful applications and used for purposes of destruction with incalculable consequences. That fear was based on serious, reliable and objective information and studies on Israeli nuclear capabilities and threat, which the Agency had not, however, been able to present in a report which the General Conference had requested the previous year.

78. Another threat, that of South Africa's nuclear capabilities, continued to be of serious concern to all African countries in view of the persistent violation of international law and of the United Nations Charter by the South African régime and of the disregard with which it treated the Agency's resolutions. Evidently, the will of the South African régime to respond to incessant appeals by the Agency and by the United Nations was no longer credible. His delegation therefore considered it the duty of the General Conference to continue to put pressure on South Africa to make it adhere to its resolutions.

79. The Agency's accomplishments in promoting the peaceful uses of nuclear energy and public acceptance of nuclear energy were great. There was still much to be done in certain countries in the areas of radiation protection and nuclear safety. In particular, universally recognized principles and

technical criteria for the treatment and storage of radioactive wastes had yet to be formulated so as to ensure that that negative aspect of nuclear energy did not overshadow all the other positive aspects in the eyes of the public. Nuclear power currently accounted for a significant proportion of the world's electricity. In future, it could supply even more, given concerted international co-operation to that end. Nuclear energy could even be used to produce potable water to meet the needs of agriculture, industry and domestic consumption in countries having arid or semi-arid zones where water was in short supply, such as Algeria.

80. In view of all that had been done and all that remained to be done, the Agency's Member States should combine their efforts to arrive at the widespread safe and hazard-free use of nuclear energy. The Agency would then remain a bridge between all peoples - in particular between the developed and the developing countries - in the nuclear area from which all expected such enormous benefits. That expectation must not be betrayed.

81. Mr. PEREZ PITA (Spain) said that his delegation wished first to express its full support for the statement on behalf of the 12 countries of the European Community made earlier in the present meeting by the head of the delegation from France, the country which currently held the Presidency of the Community. The Spanish delegation was aware that such explicit support was unnecessary, as all who attended the General Conference knew perfectly well that a statement made by the Community Presidency on behalf of the Twelve would be fully supported by those 12 countries; however, like the Prince de Talleyrand, the French Minister who, also at Vienna, had played so important a role in such critical moments for his country and for Europe, his delegation felt that that which went without saying was even better said.

82. He wished to commend the Director General of the Agency in particular on the statement he had made under item 3 of the agenda. The Spanish delegation had found the content of that statement highly interesting, especially where it concerned the environmental problems associated with energy consumption and the role which nuclear energy currently played and could play in the long term with regard to those problems.

83. A country's development was dependent, among other factors, on a supply of energy which had to be planned taking into consideration everything that could affect both supply and demand. Reliability was necessarily one of the essential characteristics of supply, because without it serious economic and social damage might be done, although the latter type was difficult to evaluate.

84. The choice between various possibilities where the power generating structure was concerned was a decision of the greatest importance for the future of a nation's economy. Until relatively recently, the sole objective of any energy policy had been the achievement of economic development. Now that such development was proving, in certain cases, to cause serious damage to the environment, society was increasingly recognizing that the ability to exploit a natural environment without harming it was a rare commodity indeed.

85. Nevertheless, it was a fact that developed societies were opting for life styles which entailed increased energy consumption, and it was foreseeable that developing societies' energy needs would increase as well. In those conditions, world energy demand would continue to grow and electricity's share of that demand was expected to grow fastest. It was commonly agreed that energy should be produced in a way which was both economical and acceptable for the environment; however, there was no consensus on how to satisfy both of those conditions.

86. A good number of those who until recently had pointed fingers at nuclear energy for being one of the main causes of the environmental deterioration which was a consequence of economic development in the most industrialized societies were now seriously reviewing their allocations of praise and blame and coming to regard nuclear power as less aggressive, from the environmental point of view, than other energy sources whose use had never been questioned before.

87. The future role of nuclear fission in energy production would depend to a great extent on the confidence it would inspire in the world's populations, and that confidence could be based only on the answers to questions concerning operational safety, radioactive wastes and nuclear material proliferation.

88. Safety was the key to the further development of nuclear energy. Achieving a maximum degree of safety must not be merely the design objective for future reactors, but an axiom governing the operation of reactors currently in service. Experience had shown that the most serious accidents which had taken place in that type of facility had occurred when a set of circumstances not initially foreseen had appeared simultaneously. It was therefore important that safety research relating to the prediction, analysis and management of accidents should aim to consider the greatest possible number of circumstances and that the results of such research be applied to operating facilities. Moreover, as had unfortunately been demonstrated, the consequences of a nuclear accident could be felt beyond the borders of the country where the accident site was and thus be international in their impact. It was therefore necessary not only to conclude international co-operation agreements, but also for the Agency to continue to promote the establishment of standardized criteria to permit a similar level of nuclear safety to be achieved the world over.

89. His delegation had repeatedly emphasized the importance of the Agency's role as a focus for international co-operation in nuclear safety and radiation protection. The advantages of such co-operation were clear, not only for the countries which were at an initial stage of using nuclear techniques, but also for those which had already achieved a certain development in that respect. Indeed, the exchange of information and experience which such co-operation involved brought savings on resources as well as providing better assurances with regard to the prevention of accidents. The vital importance of those matters for the future of nuclear energy must be properly reflected in the distribution of the resources which Member States made available to the Agency.

90. The recent publication of the report by the International Nuclear Safety Advisory Group entitled "Basic Safety Principles for Nuclear Power Plants" was a significant step. That document had attracted particular interest in Spanish nuclear circles, and his country hoped that it would be widely circulated and used by Member States as a reference work for the design, construction and operation of nuclear power plants.

91. With regard to operational safety, his delegation welcomed the establishment of the World Association of Nuclear Operators and hoped that the Secretariat would maintain close contacts with it so as to achieve maximum mutual benefits while avoiding duplication of effort.

92. Another initiative which his delegation felt was of particular importance was the evaluation and consultative services which the Agency provided to countries requesting them by means of various mechanisms established for that purpose, such as OSART missions, safety advisory services and RAPATs. His country had been involved in those activities both as a provider of expert services and as a recipient. An OSART mission had recently been carried out at the Almaraz nuclear power plant and another was scheduled for early 1990 at the Cofrentes nuclear power plant.

93. Waste management activities deserved special mention because that was a topic to which public opinion was particularly sensitive; in many cases the public was not sufficiently informed on that subject to be able to make a reasonable and objective judgement, a situation which could mean an unjustified opposition to nuclear energy as a whole. His delegation therefore welcomed the start of the activities of the International Radioactive Waste Management Advisory Committee, and also the preparation of the document entitled "IAEA Safety Principles and Technical Criteria for the Underground Disposal of High-level Radioactive Wastes", which had been approved by the Board of Governors the previous week. That was an important first step in the project to publish a new series of documents setting out safety standards for radioactive wastes, which would undoubtedly contribute to the harmonization of national criteria and convince the public that the waste problem had perfectly valid solutions which, moreover, enjoyed international support.

94. Another important question was that of preparing a code of practice for international transactions involving nuclear wastes. In that connection, his delegation felt it was essential to remember that the measure was a preventive one, since, as the Director General had said, there had been no known case of dumping of radioactive wastes in third countries.

95. Without doubt, an effective safeguards system enjoying good credibility at the international level was indispensable for the Agency to be able to

attain its objectives. His delegation had already given its opinion on the Safeguards Implementation Report, the conclusions of which were fully satisfactory. Nevertheless, there was an urgent need to update the criteria for implementing and evaluating safeguards. On that point, Spain awaited with interest the results of the activities undertaken by an advisory group. His delegation hoped that by greater rationalization of the criteria and methods it would be possible to expand safeguards activities as envisaged with only minimal repercussions on the budget.

96. Spain, which had acceded to NPT in 1987, had acceded to the safeguards agreement between the International Atomic Energy Agency and EURATOM (INFCIRC/193) on 5 April 1989.

97. His delegation wished to emphasize its support for the Agency's technical co-operation activities, as it considered that they occupied an important place in the attainment of the Agency's objectives. He was satisfied to note that the increase in the volume of those activities was being maintained in spite of current budgetary restrictions, both in the Agency and in many countries, including Spain. That meant improved productivity in the Department of Technical Co-operation, which was very praiseworthy. Spain had assisted in various ways within its possibilities in the realization of the technical assistance programmes and it was progressively making a substantial increase in its voluntary contribution to the Technical Assistance and Co-operation Fund. Also, Spain had recently become involved in new co-operation schemes, for example the financing of footnote-a/ projects. Within the framework of those activities, Spain would again make available to the Agency, for the technical assistance programmes, the technological and scientific capability which it had acquired in the course of implementing its nuclear programme.

98. At the end of 1988, Spain's installed nuclear capacity had been 7855 MW, and the nuclear power output for that year had been 50 414 GW·h. That was an increase over 1987 by 22.2%, resulting both from the increased yield of the units in operation, which had achieved an overall load factor of 79.4%, and from the fact that the two most recently commissioned nuclear power plants had come into commercial operation. The share of nuclear power in the

total electricity generated had been 36.3%. Those results, which would be surpassed in 1989 because the nuclear plants would have attained their full capacity, were proof both of the high technological level which Spain had reached in the use of nuclear power, and of the high degree of diversity in meeting its energy needs which the country had been able to achieve thanks to nuclear power.

99. Spain considered that all activities aimed at promoting the peaceful uses of nuclear energy should seek to ensure that the attitudes of rejection towards that form of energy could never find a legitimate base in technical arguments. However, that was not enough. There was the danger that, in certain cases, research on reactors, the fuel cycle, waste management or the decommissioning of facilities would remain at the stage of meritorious scientific studies or particularly ingenious and promising plans. To avoid that possibility, it was necessary for the competent institutions, and in particular the Agency, to undertake a public information campaign capable of rebutting those arguments which, however scientifically unfounded, could none the less influence major political decisions. It must be acknowledged that nuclear power was for the moment condemned to pass through a crisis of confidence which would not be overcome until, in time, it would have demonstrated that it could discharge its function safely.

100. The Agency, in accordance with its statutory objective of promoting the peaceful use of nuclear energy, should conduct its activities in such a way that nuclear energy would come to enjoy a maximum level of confidence. At the international level, the Agency was, in fact, the main authority in that field.

101. Mr. HAVEL (Czechoslovakia) began by noting that the thirty-third session of the General Conference was taking place in a favourable international climate. His delegation was pleased to see that there was increasing co-operation between States in dealing with world and regional problems associated with the elimination of centres of tension. It was convinced that disarmament was the most reliable way of strengthening international peace and security. It therefore welcomed all steps, even partial, which moved in that direction. The Treaty Between the United States

of America and the Union of Soviet Socialist Republics on the Elimination of their Intermediate and Shorter-Range Missiles (INF), supported by Czechoslovakia, was being implemented. A total ban on the testing of nuclear weapons would complete the process.

102. Czechoslovakia continued to pay particular attention to the strengthening of the nuclear weapons non-proliferation regime, based on NPT, which had successfully fulfilled its mission. Czechoslovakia was ready to participate actively in the preparations for the Fourth NPT Review Conference, to be held the following year in Geneva. It strongly believed that the Agency's safeguards system should be further improved in order to meet growing needs. The efficiency of the inspectors' work and of the inspections themselves should be increased and efforts should be concentrated on the most important parts of the nuclear power plant fuel cycle. In that context, the formulation of new safeguards criteria should be considered for the years 1990-95. Czechoslovakian experts were ready to participate actively in the development of a new concept for safeguards activities based on the so-called selective safeguards approach.

103. Czechoslovakia welcomed the new safeguards agreements concluded between Member States and the Agency and very much hoped that South Africa and Israel would conclude similar agreements.

104. His delegation also appreciated the results of the Agency's activities during the past year and, in particular, the balanced implementation of the Agency's fundamental tasks relating to the peaceful and safe use of nuclear energy, with regard to both its regulatory and its promotional activities. The problem of ensuring the safe operation of nuclear facilities had become an international one in recent years, and the Agency played an essential role in that area. His country provided continuous support for Agency activities aimed at converting basic safety principles into codes, standards and recommendations to be applied in Member States.

105. His delegation welcomed the steps taken to improve the permanent communication network within the framework of the Conventions on Early Notification of a Nuclear Accident and on Assistance in the Case of a Nuclear Accident or Radiological Emergency. It urged those States which had not yet done so to accede to those Conventions.

106. His country also attached great importance to the exchange of information on nuclear power plant operation. The work carried out in Czechoslovakia, with the co-operation of the Agency, to establish a direct link with the Power Reactor Information System (PRIS) data base would soon be completed.

107. Confidence in nuclear power was being restored. It was a fact that nuclear power plants had been operated reliably and safely in a number of countries, including Czechoslovakia, and the clear advantages of nuclear power for solving urgent global environmental problems had been proven. In that connection, his country was making structural changes relating to the production and consumption of fuels and energy. The extraction of lignite and electricity production in traditional power plants had decreased, whereas natural gas supplies and particularly the production of nuclear power had increased. At present, nuclear power plants provided electricity to cover 28% of the country's consumption, thereby permitting a substantial reduction in the emissions of SO_2 , NO_x and CO_2 into the atmosphere and at the same time making it possible to fulfil international obligations in that area.

108. Czechoslovakia was therefore convinced that nuclear power was particularly important as a means of preventing damage to the environment and that, given effective international co-operation, its role would continue to increase with the social and economic development of modern societies. The Prime Minister of Czechoslovakia, Mr. Adamec, had taken the initiative of proposing that high-level government representatives of neighbouring countries should meet to discuss environmental issues.

109. His delegation considered that the draft budget for 1990 was well balanced between the energy and non-energy areas with regard to the implementation of the Agency's priority programmes.

110. His Government was particularly concerned to support the Agency's technical co-operation programme and had decided to pay the full amount of its share of the target for contributions to the Technical Assistance and Co-operation Fund for 1990. As in the past, Czechoslovakia was ready to organize individual and collective training for specialists from developing countries and to provide expert services, as well as equipment and materials.

On the other hand, it also welcomed the opportunity of benefiting from the Agency's technical assistance activities, particularly fellowships and courses, so as to improve the qualifications of its own experts.

111. In conclusion, he welcomed the positive results of the Agency's activities in 1988.

112. Mr. KANGAI (Zimbabwe) expressed his appreciation of the contribution made by the Agency to prevent the proliferation of nuclear weapons and to promote nuclear safety and the peaceful uses of radioisotopes. The Agency had been very successful in a number of areas and was paying increased attention to safety and to the needs of developing Member States.

113. His delegation was also pleased to note in the annual report for 1988 that the majority of disbursements for technical co-operation had been made in areas which provided tangible advantages to the Agency's developing Member States, particularly in the areas of food and agriculture, which accounted for 23% of disbursements, human health, radiation protection and the related area of radioactive waste management.

114. Zimbabwe benefited from expert services under the Waste Management Advisory Programme (WAMAP) and RAPAT missions, particularly with regard to the formulation of regulations to govern the handling, use and disposal of radioactive isotopes, which were employed mainly for medical purposes. Developing countries which had inadequate regulations, poor monitoring and enforcement infrastructures were undoubtedly at risk. That fact was often not appreciated, the commonest misconception being that risks of irradiation existed only in States with nuclear power reactors.

115. The establishment and publication of safety standards was another successful Agency activity. It was very encouraging to see that there was an international consensus on exemption criteria for radioactive sources and practices, in view of the difficulties encountered in reaching an international consensus on most subjects.

116. Zimbabwe hoped that a regional co-operation agreement similar to the RCA for Asia and the Pacific and the ARCAL arrangements in Latin America could be established in Africa. Such an agreement would undoubtedly help to ensure

that regional problems were handled more efficiently. It was encouraging to see that in ARCAL projects in Latin America, regional experts were gradually replacing experts outside the region. Regional self-sufficiency was the key to development and therefore developing countries were in great need of training programmes. Outside experts could not be expected to have a full understanding of cultural problems in regions which were not familiar to them. Zimbabwe had noted with satisfaction from the Director General's opening statement to the thirty-second regular session of the General Conference that, in 1987, 66% of courses had been held in developing countries, as compared with 17% in 1980.

117. With regard to the public acceptance of nuclear power, Zimbabwe believed that although some countries were abandoning the nuclear option, it would be short-sighted to do so without having a practical alternative. Thermal power stations were not without their disadvantages and contributed to atmospheric pollution and the greenhouse effect. In view of the justified public concern over nuclear accidents, efforts to improve the inherent safety of the present generation of reactors should be vigorously pursued. Safer, simpler reactors could also represent a long-term option for many developing countries which, without that possibility, would experience considerable difficulties when confronted with a shortage of fossil fuels.

118. With regard to South Africa's nuclear capability, Mr. P.W. Botha had made a statement, two years previously, hinting that his country would sign NPT at an early date. It was hardly surprising that it had not yet done so, even though South Africa had nuclear power facilities and the capacity to manufacture nuclear weapons, if it did not in fact already possess them. The General Conference should give a clear indication of its disapproval of South Africa and suspend it from the exercise of its rights of membership of the Agency until it conformed better with the norms of international behaviour. The Director General had announced that morning that South Africa had again sent a message to the General Conference. It was to be hoped that that message was not a hoax and that the Member States conducting negotiations with South Africa would take into account the concern felt by States in the region over the presence there of unsafeguarded nuclear material. All South African citizens were equal human beings and deserved to be treated as

such. The new South African Government would have to implement the necessary reforms in the country and eliminate all forms of apartheid in order to gain international credibility.

119. During the current month, the world had witnessed undemocratic elections in South Africa. Owing to the colour of their skin, 80% of the population of that country had been unable to participate in the election of their government. That situation was totally unacceptable and there should be strong condemnation of the police brutality which was so often inflicted on the oppressed people of that country, who were simply protesting against the denial of democratic rights which were taken for granted by many people. The international community should unite its efforts to put pressure on the apartheid régime so that peace could be restored in South Africa. Elections were planned in Namibia and negotiations to put an end to armed conflicts were continuing in Angola and Mozambique. That favourable trend towards dialogue gave grounds for considerable optimism in the region.

120. It was to be hoped that as a result of the reasonable and conciliatory attitude shown by the Palestinian people, it would be possible to provide a homeland for that grossly oppressed group and to establish a lasting peace in the Middle East.

121. In conclusion, his delegation drew the General Conference's attention to the problem of the dumping of toxic wastes, which had assumed alarming proportions during the past few years. It was a most objectionable practice, and mankind should, as a matter of urgency, attend to the environmental consequences of the industrial processes upon which it had become so dependent. To get rid of raw wastes by simply dumping them in other countries was a short-sighted and selfish approach which, in any case, did not solve the problem.

122. Mr. SITZLACK (German Democratic Republic) said that the Agency's crucial role in international co-operation in the nuclear field was becoming increasingly evident each year. One of the objectives of the Agency's activities, and particularly of the technical co-operation programme which had been growing continuously during the past ten years, was to support and guide developing countries which wished to benefit from the advantages of nuclear

technology. That had only been possible with a system of financing involving voluntary contributions in national currency based on indicative planning figures (IPFs). His delegation welcomed the agreement reached the previous year on the IPFs for the next few years, although it was concerned about the fact that there had again been a further reduction in the percentage of the target for voluntary contributions actually pledged.

123. Convinced of the importance of the Agency's technical co-operation programme, his Government duly contributed its share towards the target for contributions to the Technical Assistance and Co-operation Fund and appreciated the way in which that contribution was used.

124. While traditional energy sources would continue to play a dominant role in the future, there were doubts about their development prospects and a global reduction in their use seemed desirable. Nuclear energy was one of the alternatives. That was why his country, together with others, intended to continue its nuclear power programme in order to meet its energy requirements. In April 1989, Unit 5 of the Greifswald nuclear power plant had been connected to the grid, bringing the installed nuclear capacity to nearly 2300 MW.

125. His Government was convinced of the importance of international co-operation and appreciated and supported the Agency's activities, particularly those aimed at promoting and ensuring nuclear safety and radiation protection. For the same reason, it welcomed the Memorandum of Understanding signed in June by the Agency and WANO, since that agreement would complement the work of both organizations in the area of nuclear safety.

126. Many efforts had been made and were being made in order to ensure that nuclear power plants operated with adequate levels of safety. In that respect, the revision of the NUSS codes was very valuable. His Government considered that the revised codes were appropriate international standards, and therefore used them as a basis for regulating the safety of its reactors, taking national laws and regulations into account.

127. His country had increased its international co-operation in the field of nuclear safety and radiation protection by participating more in the safety-related activities of the Agency and the Council for Mutual Economic

Assistance (CMEA). The long tradition of contractual relations with the Soviet Union and other socialist countries had been confirmed by the recent entry into force of bilateral agreements with China and the Democratic People's Republic of Korea. Agreements, based on the Convention on Early Notification of a Nuclear Accident, had been concluded between his country and Denmark, Norway, the Federal Republic of Germany, Austria, Spain and Sweden. A trilateral agreement on nuclear safety had been concluded at the beginning of the year with the Soviet Union and the Federal Republic of Germany. Furthermore, visits to France and the United Kingdom had provided useful ideas about developments in the field of nuclear safety.

128. Just as nuclear safety and radiation protection formed an integral part of all nuclear activities, the safeguards system was inseparably associated with all uses of nuclear material. His delegation welcomed the fact that in 1988, as in previous years, the Secretariat had found it reasonable to conclude that all nuclear material under safeguards had remained in peaceful nuclear activities or had been otherwise adequately accounted for. All parties concerned should ensure that the Agency was able to make that statement with increasing objectivity and reliability, so as to make the safeguards system still more credible and at the same time to improve its effectiveness and efficiency.

129. Aware of the important role played by safeguards in the world-wide efforts to prevent the proliferation of nuclear weapons, his country intended to continue to help the Agency to fulfil its obligations in that area. In addition to other activities, his country's support programme for Agency safeguards had made it possible to organize three training courses in 1988, two for new inspectors and one for safeguards trainees from developing countries. His Government had accepted the change in policy regarding the designation of new inspectors.

130. The subject of physical protection was also related to the use of nuclear energy and closely associated with safeguards. The revised text of recommendations for the physical protection of nuclear material which had resulted from the meeting of the technical committee held on that subject earlier in 1989 was an important step forward towards a more comprehensive physical protection regime.

131. Since the industrialization of the atom, considerable progress had been made in using that powerful source of energy in the service of peace and prosperity. Nuclear power plants now provided about 17% of world electricity production. Another important result was the Agency's safeguards system, the first international verification system. However, much remained to be done to put an end to the arms race and to achieve the ultimate objective of complete nuclear disarmament. His Government fully supported efforts, such as the negotiations of treaties between the Soviet Union and the United States, on a 50 per cent reduction of their strategic weapons and on a universal nuclear weapons test ban. Any attempt to rid the world of the nuclear threat had, and would continue to have, his Government's full support.

132. The NPT and the Agency's safeguards system were also instrumental in achieving the objective of peace. It was therefore important to strengthen the safeguards system and all aspects of the Treaty in the long term, particularly through universal adherence to it. In that respect, the success of the Fourth NPT Review Conference was very important. His country also appreciated other Agency activities related to radiation protection, sustainable development, liability for nuclear damage and dissemination of information, in particular through INIS. His country regarded international co-operation through the Agency as a useful and effective mechanism for finding solutions to common problems and would therefore continue to support the Agency's activities to the best of its abilities.

133. Mr. CASTRO DIAZ-BALART (Cuba) noted that the General Conference's agenda included a number of important and difficult items, the satisfactory solution of which would call for a particular effort on the part of delegations. For its part, Cuba was resolutely continuing with the development of its programme for the peaceful use of nuclear energy. Despite some delay, the construction of the first Cuban nuclear power plant was continuing with strict monitoring of technical aspects so as to ensure reliable operation, including State monitoring of the construction and assembly work and the training of qualified personnel. At the same time, work on the construction of the nuclear research centre, a keystone in the Cuban programme for the peaceful use of nuclear energy, was continuing and work had begun on the the radioisotope centre workshop, which would be used mainly for

the production of radiopharmaceutical products and labelled compounds for various sectors of the national economy. At the same time, the applications of nuclear techniques were increasing, particularly in the areas of medicine, agriculture, the sugar industry and food.

134. Cuba played an important role in the Agency's activities in Latin America. It had hosted a course on medical scintiscanning and a regional course on printed circuits and was preparing to host a workshop on nuclear documentation before the end of the year. In addition, Cuba was participating increasingly actively in other activities of the ARCAL programme, providing experts and fellowships for training Latin American specialists in various institutes in Cuba.

135. The Agency's annual report for 1988 noted that the world-wide evolution of nuclear power had continued during 1988 without significant changes or spectacular events, maintaining in general the same trends which had prevailed in 1987, particularly in developing countries. The figures in the report showed that at the end of 1988 the installed nuclear capacity in developing countries with nuclear plants had represented 3.6% of the world total and provided only 3.3% of world-wide nuclear power production.

136. Many developing countries suffered from a lack of traditional energy resources, but various difficulties, such as technology transfer, lack of infrastructure and qualified personnel, prevented them from using nuclear energy to solve their problems in that area.

137. That situation was aggravated by the external debt burden, which had become so acute that even the main creditors were seriously considering accepting the idea of insolvency; in the absence of a new international economic order, that debt, which was eating away the scant resources of Third World countries, prevented them from investing in development and virtually condemned them to permanent underdevelopment. In fact, many of them could ensure their development through the use of nuclear energy.

138. It was all the more deplorable that at the same time certain views, casting doubts about the future of nuclear power reactors by emphasizing the risks to the environment, were gaining ground. As the Director General had

said in his opening statement, the general public had so far associated nuclear power and energy with environmental problems rather than with their alleviation.

139. Of course, the development of ecological awareness which had emerged during the past few years was very welcome. Poor countries, which supplied raw materials and, in many cases, received archaic and polluting industries, were extremely interested in environmental protection. However, it was obvious that industrial development was not the only threat to the biosphere. For different reasons underdevelopment could have just as disastrous ecological consequences: desertification, degradation of soils, destruction of forests and pollution of waters. The Earth had become a global village in which everyone was suffering from environmental damage, wherever it occurred, and all human beings were potential victims of the greenhouse effect or of the deterioration of the ozone layer. However, it would not be fair for developing countries to have to suffer the consequences of the opposition to nuclear power plants, which had emerged in another context and which was based on other considerations. Those countries should not deprive themselves of subsequent benefits by abandoning that source of energy in a suicidal gesture before they had even begun to exploit its possibilities. The ecological problem was an extremely difficult one and involved a number of elements. Nuclear energy was not only not the most alarming element, but it could, in fact, help to eliminate other much more dangerous aspects or reduce their importance.

140. The Agency's technical co-operation programme was one of the activities which developing countries considered to be very important. However, the increase in the targets was not sufficient to meet the growing needs of countries which received technical assistance, and many projects submitted and approved each year could not be implemented for lack of the necessary financial resources. Furthermore, for the last five years there had been zero real growth in the Regular Budget. Without disregarding the international economic situation, a modest annual increase would give the Agency much greater room for manoeuvre in carrying out all its programmes and maintaining an adequate balance between its promotional and regulatory activities.

141. The other important agenda items included the Israeli nuclear capabilities and threat, which was the subject of General Conference resolution GC(XXXII)/RES/487. With its experience and competence, the Agency could no doubt carry out a number of studies on the different modalities of application of safeguards in the Middle East. However, the root of the issue was not the application of safeguards, but the fact that Israel, the only country in the region which virtually possessed nuclear weapons, should accept the provisions and resolutions of the General Conference and other international organizations and submit all its nuclear facilities to Agency safeguards.

142. The General Conference should also consider suspending South Africa from the exercise of the privileges and rights of membership of the Agency. For ten years a series of sanctions had been imposed on that country by various international and governmental organizations, which had thereby expressed their disapproval of its detestable policy of racial segregation and aggression towards its neighbours. His delegation reaffirmed its support for all initiatives aimed at ensuring the safety of front-line States and all steps to reduce the threat represented by South Africa's nuclear capabilities.

143. Efforts to develop the peaceful applications of nuclear energy for the benefit of all should not obscure the fact that the world was in upheaval and facing all kinds of problems which were ever more inextricably linked, such as those caused by the recurrence of natural disasters, economic difficulties, environmental protection, the continuation of hunger in the world and the existence of many areas of tension, as well as the arms race, which was one of the most alarming problems of all. Despite the progress towards reducing the nuclear arsenal, one could not help worrying about the unceasing manufacture of new so-called traditional means of mass destruction and the improvement of existing ones. Such military activities accounted for more than one trillion[*] dollars per year, an astronomical amount, even a fraction of which could solve many existing economic and social problems.

[*] 1 trillion = 10^{12} .

144. Cuba had recently stated during the ninth summit meeting of the non-aligned countries that the world needed a peace which did not consist merely of eliminating nuclear arsenals, but also of guaranteeing respect for State sovereignty and the right of all countries to govern themselves in accordance with the wishes of their population and to establish an economic trade system which was just and equitable and made it possible to abolish the hunger, poverty and underdevelopment which afflicted three quarters of the world's population. Convinced that mankind would find the necessary solutions to those complex problems, he urged all delegations present to show patience and determination in solving those problems which came within their competence and to ensure once again the successful conclusion of the General Conference's work.

The meeting rose at 5.55 p.m.

