



International Atomic Energy Agency

# GENERAL CONFERENCE

GC(XXVII)/OR.247

January 1984\*

GENERAL Distr.

ENGLISH

TWENTY-SEVENTH REGULAR SESSION: 10-14 OCTOBER 1983

RECORD OF THE TWO HUNDRED AND FORTY-SEVENTH PLENARY MEETING

Held at the Neue Hofburg, Vienna  
on Monday, 10 October 1983, at 10.15 a.m.

Temporary President: Mr. SIAZON (Philippines)  
President: Mr. KEBLÚSEK (Czechoslovakia)

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\*/ A provisional version of this document was issued on 12 October 1983.

\*\*/ GC(XXVII)/683.

The composition of delegations attending the session is given in document GC(XXVII)/INF/215/Rev.4.

OPENING OF THE SESSION

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

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

All present rose and stood in silence for one minute.

3. The TEMPORARY PRESIDENT welcomed the delegates, observers, representatives of the United Nations and its specialized agencies and representatives of other intergovernmental organizations. He thanked the Austrian authorities for once again making the Hofburg Palace available for the General Conference of the Agency.

4. Every session of the General Conference was a special event, but the present session represented a turning-point in the life of the International Atomic Energy Agency.

5. The large number of delegations participating in the present session of the General Conference demonstrated that the binding energy represented by Member States' common interests in the Agency was far stronger than the divisive forces due to different perceptions of the same issues, which were a natural consequence of the varied political and economic systems and distinct cultural values of Member States. An essential aspect of the democratic process of decision-making embodied in the Agency's Statute was occasional opposition to the status quo, and a commitment on the part of all Member States to seek solutions for the common good was equally essential.

6. The present session of the Conference was taking place under very difficult international circumstances, characterized by the escalating nuclear arms race, a pervasive economic downturn, fear of nuclear war and anxiety about job security. Obviously the Conference could offer no immediate remedy to those problems, but delegates no doubt realized that attainment of the Agency's statutory objectives might help to improve the situation.

7. The General Conference was about to consider the application of a State to become the 112th Member of the Agency. That membership would mean that, for the first time, all the nuclear-weapon States were Members of the Agency, and would thus mark a large step forward towards greater universality.

8. Membership in the Agency of all the nuclear-weapon States, and their acceptance of the Agency's safeguards system for some of their peaceful nuclear facilities, was bound to improve the prospects of formulating nuclear disarmament agreements verifiable by international mechanisms similar to the Agency's safeguards system. In order to prepare itself for that (possibly remote) eventuality, the Agency should improve the international credibility of its safeguards system, making it politically more acceptable and providing more stable financing arrangements.

9. As in the past, the General Conference could be expected to focus attention on the Agency's safeguards system, but also on the need for more generous technical assistance and other difficult issues, technical and political.

10. In conclusion, he felt that he could not do better than to borrow the words of the Prime Minister of India, Mrs. Indira Gandhi, who had called upon the whole world to unite to fight global inequality and save peace, with the admonition that no section could hope to gain by trying to defeat another.

#### ELECTION OF THE PRESIDENT

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

12. Mr. PETROSYANTS (Union of Soviet Socialist Republics), speaking on behalf of the Eastern Europe regional group, said that he had great pleasure in proposing Mr. Keblůšek, delegate of Czechoslovakia, as President of the General Conference at its twenty-seventh regular session.

Mr. Keblůšek had for the past year served as Chairman of the Board of Governors of the Agency and had wide experience of the problems facing the Agency. He had every confidence that under his expert guidance the Conference would successfully complete its work.

13. Mr. SULLIVAN (Canada), speaking on behalf of the North America regional group, seconded the nomination of Mr. Keblůšek.

14. Mr. MIYAZAWA (Japan), on behalf of the Far East regional group, Mr. HAUNSCHILD (Federal Republic of Germany), on behalf of the Western Europe regional group, Mr. MANOUAN (Ivory Coast), on behalf of the Africa regional group, Mr. BELTRAMINO (Argentina), on behalf of the Latin America regional group,

Mr. SINGH (India), on behalf of the Middle East and South Asia regional group, and Mr. BRENNAN (Australia), on behalf of the South East Asia and the Pacific regional group, supported the nomination.

15. Mr. Keblůšek (Czechoslovakia) was elected President of the General Conference for its twenty-seventh regular session by acclamation.

16. The TEMPORARY PRESIDENT congratulated Mr. Keblůšek on his election.  
Mr. Keblůšek (Czechoslovakia) took the Chair.

17. The PRESIDENT thanked the representative of the Eastern Europe regional group for nominating him and expressed his gratitude to all delegates for the confidence they had shown in him and his country by electing him as President of the General Conference.

18. The Agency occupied a unique position in international affairs, dealing with a wide range of problems which lay outside the competence of any other body. Its most urgent task was to promote the peaceful uses of nuclear energy throughout the world, and its success in performing that task was dependent on securing consistent assurance that there would be no proliferation of nuclear weapons.

19. The General Conference faced great problems at its present session. In order to meet the challenge of resolving those problems and to create the conditions in which the Agency might continue its work, a calm and business-like atmosphere was essential. While a whole series of political problems were likely to arise during the Conference - that could not be avoided - he hoped that all delegates would co-operate with him and bear in mind the Conference's responsibility for working out a clear programme for the future development of the Agency. He would turn to delegates for advice whenever necessary and would propose forms of consultation, as he had done during his term as Chairman of the Board of Governors.

20. The Board of Governors had already done much to prepare for the Conference, and the problems facing the latter were by no means new. Different countries and regional groups had different interests and would accordingly take different stands on a variety of issues. The assistance of the General Conference in plenary and of the Committee of the Whole would therefore be essential if the endeavour to find solutions reflecting the views and interests

of a majority of Member States and of the Agency as a whole - solutions in conformity with the Statute - was to be crowned with success.

21. In conclusion, he appealed to the delegates to work in a spirit of co-operation and wished the Conference every success.

#### OPENING STATEMENTS

22. The PRESIDENT proposed that, in view of the fact that consultations were still being held on the composition of the General Committee, the Conference should agree to waive Rule 42(a) of the Rules of Procedure and proceed immediately to items 2, 3 and 6 of the provisional agenda.

23. It was so decided.

#### MESSAGE FROM THE SECRETARY-GENERAL OF THE UNITED NATIONS

24. Mr. ALLAF, the representative of the Secretary-General of the United Nations, said that the General Conference of the International Atomic Energy Agency was meeting at a time when serious international problems were sharply accentuated. Concern over nuclear proliferation was growing as a result of the limited success of attempts to improve the international non-proliferation regime. The Treaty on the Non-Proliferation of Nuclear Weapons (NPT), whose implementation was soon to be reviewed for the third time, had been criticized, mainly because of the lack of progress in negotiations between the two major nuclear Powers on effective measures to stop the nuclear arms race and to carry out nuclear disarmament. Initiatives to establish nuclear-weapon-free zones in different areas remained unfulfilled. Even the Tlatelolco Treaty - at present in its seventeenth year - had not obtained the adherence of all States in the region to which it related. Furthermore, there was the danger that areas at present free from nuclear weapons, such as outer space, would become the arena for a new dimension to the arms race.

25. New problems had also arisen for the peaceful applications of nuclear energy. The economic recession had reduced the demand for nuclear energy; there was public resistance in industrialized countries to its use for the generation of electricity; developing countries had difficulties in raising the capital required to make nuclear power practical as an additional energy source; and the question of what to do with spent fuel remained unresolved.

26. None of those problems resulted from any want of effort or failure on the part of the Agency. The Agency had done valuable work on nuclear safety and on waste disposal, and in that connection it deserved gratitude for its co-operation with the Secretariat of the United Nations Conference for the Promotion of International Co-operation in the Peaceful Uses of Nuclear Energy (UNCPICPUNE).

27. The Agency's safeguards activities gave it a unique position among international organizations. As an international verification system with on-site inspection, the Agency's safeguards represented an important element in international relations. It was, therefore, the more noteworthy that some recent problems in their application had been solved through consultations between the Agency and the Governments concerned.

28. The Agency could not avoid involvement in the political problems that increasingly beset the United Nations system. However, by its perseverance, the Agency was setting an example for valuable work that could be done by a member of the United Nations system - work which unfortunately was too little known and understood by those who criticized the safeguards system for presumed ineffectiveness.

29. The Agency played a significant role in international economic development and in maintaining peace and security. He wished it success in its endeavours and personally congratulated Mr. Koblížek on his election to the post of President of the General Conference.

#### STATEMENT BY THE DIRECTOR GENERAL

30. The DIRECTOR GENERAL said that much had happened since the last session of the General Conference had closed in acrimony and confusion. Confrontation had gradually given way to a calmer climate, which he hoped could be preserved, so that all attention might be concentrated on the promotion of the peaceful uses of nuclear energy and the prevention of further proliferation.

31. The most recent important event was the decision of the People's Republic of China to seek membership of the IAEA, a decision which would take the Agency further towards the goal of universality. At a time when misgivings existed about nuclear power in some of the industrially most advanced States, it was

encouraging that China, after long and careful consideration, should have concluded that nuclear power must in time become one of its chief sources of energy. He was confident that China would both benefit from and contribute to global co-operation within the Agency.

32. In May 1983, an international conference on radioactive waste management had been organized in Seattle by the Agency in co-operation with the United States Department of Energy. The conference had showed no uncertainty in concluding that the technology was now available for the siting, design, construction and operation of waste management systems. Evidently, considerable efforts would need to be made to convey that message to the public in many Member States.

33. In the past year the Board of Governors, under the skilful and energetic chairmanship of Ambassador Keblůšek, who had just been elected President of the General Conference, had undertaken several important policy reviews. Safeguards had been the object of searching discussion during the Board's February session and new policy guidelines for technical co-operation had been laid down during the June session. The Administrative and Budgetary Committee had conducted important discussions on the allocation of resources to the Agency's various activities; from those discussions there had emerged a greater awareness that the budget was one of the most important policy documents of the Agency and that active participation of all Member States in its development was needed. It was important for the interests of different States and groups of States to be satisfied in a balanced way. At the same time, the facile conclusion should be avoided that, for instance, technical assistance was mainly of interest to developing countries or that safeguards were mainly of importance to industrialized States. In a broad sense all the activities of the Agency were promotional. Regulations for the safe operation of reactors or the safe disposal of waste were indispensable for the acceptance of nuclear power. Without safeguards, nuclear trade would be crippled and the stigma attaching to nuclear weapons would be transferred even more indiscriminately to peaceful nuclear power.

34. As a result of the discussion of the budget, the Secretariat was examining whether, in its preparation of the budget, it could better identify the specific needs to be satisfied in Member States through the various programmes

of the Agency. Particularly during a period when Members wished the organization to maintain zero growth or near-zero growth, it was vital that a continuous critical examination should take place to determine which programmes were most important to Members. To be successful in that regard, and to ensure that the resources made available were used for needs which had high priority, continuous dialogue and guidance were necessary.

35. Despite budgetary stringencies, the Agency's resources were gradually increasing to meet the growing need for international co-operation perceived by its Members. The technical co-operation programme had been expanding considerably, and safeguards operations were also becoming more extensive in order to keep pace with the expansion of the nuclear industry as well as being improved so as to achieve their purpose more thoroughly and credibly. Thanks to the Italian Government, the premises of the International Centre for Theoretical Physics were expanding, to the benefit of visiting scientists and with advantages in terms of easier administration. The Monegasque Government had provided additional premises for the International Laboratory of Marine Radioactivity, with the result that more laboratory space was now available and more fellows could be received for training.

36. The staff of the Agency, its most valuable - and most costly - asset, was not increasing rapidly, but there had been some expansion. Indeed, if Governments wished more international collaboration in such fields as nuclear safety and waste disposal, if they wished to improve further the credibility of safeguards and to expand the volume and quality of technical assistance, there must be some continued increase in staff.

37. Also, a gradual adjustment in the composition of the Secretariat was taking place: more posts were now held by staff from developing countries, especially at the higher levels, in accordance with requests made at earlier sessions of the General Conference. Out of 12 appointments which he had made at the level of Division Director or above, six had been of persons from developing countries. In addition, the training programme for young graduates and professionals from developing countries, which had just commenced, should facilitate recruitment from those countries.

38. The presence of staff of many nationalities was not only a matter of equity; it also helped in identifying and understanding the needs of Member States. It was important to stress, however, that the Members of the Agency would be best served if professional competence was accepted as the foremost criterion for staff selection in accordance with the Statute. The high degree of efficiency which Governments rightly demanded was possible only if that criterion was respected. But competence was not the only precondition for efficiency: an international civil service could not rely on long-standing national administrative traditions and loyalties, it must seek its own way. To manage and motivate it was a matter of human and, it was not inappropriate to add, humane relations.

39. To work for the common good of the international community was a great privilege and a source of motivation in itself. But it did not obviate the need for good administration. The rotation of personnel to bring in fresh experience and new ideas was useful, especially in fields where scientific knowledge developed rapidly and government policies were continuously evolving. However, attention must also be paid to legitimate aspirations for advancement within the Secretariat, especially in the case of staff who remained with the Agency and contributed to its stability by their long and loyal service to it.

40. Nuclear power had made slow but steady progress in the past year, and nuclear applications in other areas, such as food, medicine and industry, had continued to expand all over the world. In 1982, 21 power reactors had been newly connected to the grid, bringing the total number of operating units in the world to 297 at the end of the year. They accounted for a significant fraction - about 10% - of world electricity production, and that fraction might be expected to grow to at least 20% over the next decade and a half.

41. On the other hand, a trend had continued in some countries towards reducing the number of nuclear reactors planned or delaying their construction, or even cancelling some units already under construction. A very important factor giving rise to cancellations had been the depressed state of the world economy and the consequent reduction in demand for electric power; interest rates and long lead times had also played a role. When the general economic situation in the world improved, however, the demand for electricity could be expected to increase again. Machines would continue to be substituted for

manual labour, because – given the choice – people everywhere would want to make use of the power of physics rather than be made use of as physical power.

42. Conservation and coal would undoubtedly be of great importance in the future, but far more nuclear power would be needed as well. The facts were on the side of nuclear power: its economic record, its safety record and, not least, its environmental record. The oceans were being harmed by oil pollution, lakes and forests were dying because of acid rain, and concern was spreading at the possibility of a greenhouse effect resulting from increased carbon dioxide in the atmosphere. Some of those ills, which were primarily due to the use of fossil fuels, must be reduced by technical means, but the simple fact remained that nuclear power was free from those adverse effects.

43. One of the obstacles to increasing the use of nuclear power in developing countries had been that only large nuclear reactors were commercially available at present, although in many cases the existing electricity grids were not able to accept generation capacity increments of 600 MW(e) or more. Hence there might be a fairly large market for small and medium power reactors. Some interest in such reactors had been voiced during the last session of the General Conference, and since then the Secretariat had taken steps, in co-operation with interested Member States, to initiate the first phase of a study of the general case for small and medium-size reactors. At a recent meeting on that subject, it had been pointed out that such reactors might also find a market in industrialized countries where load growth was slow or where there were isolated grids, or where better economic risk management was desired in expanding electric power systems.

44. Turning to the important field of nuclear safety, he said that by the end of 1982 a total of more than 2800 reactor years of operating experience had been accumulated by nearly 300 reactors in 25 countries. During 1982 alone some 280 reactor years had been added to the existing experience base. Safety-related operational events due to equipment failure or human error had continued to occur, but in all instances the safety systems had been able to cope with them. There had not been any incidents in nuclear power plants that significantly affected the neighbouring population or the environment and there had not been any substantial releases of radioactive materials traceable to accidents in 1982.

45. Furthermore, the total radiological impact from the nuclear industry was tending toward a steady decrease in terms of collective doses per unit of energy generated. That was a record which the nuclear community could be justly proud of. At the same time it should not be a source of complacency. The Agency's second Annual Report on Nuclear Safety described a variety of international measures taken under Agency auspices to help improve safety even more.

46. One was the world-wide Incident Reporting System, which the Agency was seeking to establish and which would enable States to draw lessons from each other's experience. The responses received so far indicated that there would be broad participation in the system, including the participation of developing countries and of Member States of the Nuclear Energy Agency (NEA) and the Council for Mutual Economic Assistance (CMEA). Guidelines for national incident reporting systems had been prepared. Furthermore, reviews were foreseen for those reported events that were of joint interest to Member States. But the information channelled into the system had to be judiciously handled to avoid being misused. Another important aspect was that the exchange should be truly multilateral so that all participants could derive real benefits from it.

47. The suggestion he had made at the General Conference's 1982 session with regard to nuclear safety missions had met with a favourable response, and "operational safety review teams" available to Member States on request could now be set up. Such teams, consisting of about ten experts, both in-house staff and external consultants, dealt with general safety requirements as well as issues specific to the type of reactor visited. Their task was to assist national regulatory bodies in ensuring that safety was maintained at the required level during all phases of the operation of a nuclear power plant. The first such mission had been to the KNU-1 Power Plant in the Republic of Korea this summer.

48. The Nuclear Safety Standards (NUSS) programme, under which a comprehensive set of codes of practice and guides for the safety of nuclear power plants was being developed, had reached an advanced stage. The enterprise appeared to be very helpful. Considerable effort was now being devoted to disseminating information on NUSS and to assisting Member States in using the codes and guides through seminars, training courses and missions.

49. The revised edition of the Basic Safety Standards for Radiation Protection, issued immediately after the Conference's previous session, was an important milestone in establishing international standards. It incorporated the new system of dose limitation recommended by the International Commission on Radiological Protection (ICRP).

50. While preventing the occurrence of nuclear accidents was the fundamental task in nuclear safety, there also had to be a readiness to mitigate the consequences of a serious nuclear accident, should one occur.

51. To assist in planning and preparedness for radiation emergencies, training programmes had been arranged and special assistance missions were being sent to Member States on request. They had proved to be an effective combination for developing, improving and testing emergency plans. A comprehensive exercise carried out in 1982 by a Member State had successfully demonstrated the excellent results that could be achieved in improving a country's capability to handle a nuclear accident. In a related area, a document had been prepared which could serve as a model for the negotiation of bilateral or regional agreements between Member States for mutual assistance in connection with nuclear accidents.

52. At the Conference's previous session he had brought up the question whether there would be advantage in adopting universally applicable standards to strengthen nuclear safety, to increase public confidence and to facilitate trade. Comments indicated that, while some rapprochement in nuclear safety philosophies was regarded by many as desirable, aiming for binding international standards was too ambitious.

53. During the past year a somewhat more modest idea had been discussed, both in the IAEA Secretariat and within the International Nuclear Societies Group. It was a commonly held view that an international mechanism might be of help in achieving a greater measure of concordance between the nuclear safety philosophies and the basic safety criteria on which States based their nuclear safety regulations. While work on specific regulations would remain outside such an international mechanism, the discussions might, in due course, have the effect of reducing some of the differences now existing in regulatory approaches.

54. To some extent, the International Commission on Radiological Protection (ICRP) had inspired those ideas. However, while ICRP had great authority and influence, safety in nuclear power was also related to so many institutional, economic and political factors that another high-level commission of world-wide composition ought perhaps to be established through the IAEA. Scientific societies could be helpful in identifying and nominating candidates of high calibre to serve on such a commission; they might also offer scientific comments on the commission's reports. The independence of the commission vis-à-vis Governments and industry - important for its credibility and authority - could be partly assured by rules specifying that members would serve in their personal capacity and that the commission had complete authority over the contents of its own reports.

55. There was no need at the present juncture to discuss the size, the nomination procedures required to ensure competence and a balanced geographical composition, the duration of the mandate, or the Secretariat arrangements. If the basic idea met with interest, all aspects would be examined and the result submitted to the Agency's Scientific Advisory Committee for comment before further steps were taken through the Agency's normal budgetary processes.

56. When devoting so much attention to the safe operation of peaceful nuclear power facilities, it would be paradoxical not to show concern as well about the possibility of belligerent attacks against nuclear facilities. Enough calculations had been made of the possible effects of such attacks to show that concern was justified. It was, furthermore, a matter that had relevance for the public acceptance of nuclear power. The question of prohibiting attacks against nuclear installations was attracting attention in the Committee on Disarmament in Geneva. One proposal had been to devise an international legal instrument that would afford protection for all nuclear facilities to which IAEA safeguards were being applied.

57. It should not be forgotten, however, that Additional Protocol I to the Geneva Convention of 1949 - an agreement that had been signed by 62 States, including the Soviet Union and the United States - already contained an article (Article 56) prohibiting attacks on peaceful nuclear electricity generating stations. Although there might be different views on how satisfactory the scope of such a provision might be, it had the great merit not

only of existing but also of having been adopted by consensus. Early ratification of the protocol would go at least some way towards achieving the protection needed in that field.

58. Another important legal instrument was the Convention on the Physical Protection of Nuclear Material. So far 36 States had signed and 8 States had ratified it. Since 21 ratifications were required for its entry into force, all Member States were urged to speed up the process of ratifying that important convention.

59. On the subject of spent fuel management and the safe disposal of radioactive waste, the conference on radioactive waste management held in Seattle in May had been attended by more than 500 participants from 29 Member States and eight international organizations. A report on that conference and on the Agency's work in the waste management field had been circulated to the General Conference (document GC(XXVII)/INF/214).

60. It had been recognized at the conference that, while further research and site-specific activities were still necessary, there was no need for any technological breakthrough. Also, it had been shown that, contrary to popular belief, several countries had already moved from the technology development stage to the stage of large-scale industrial projects for waste management systems. In the case of high-level waste, fully feasible concepts had been developed. It was clear, however, that internationally accepted generic criteria for the safe disposal of wastes would be most useful. The Secretariat had held consultations with experts and regulatory organizations in a number of countries with advanced programmes for nuclear waste management and had found broad support for work on such criteria.

61. An area of more immediate concern was that of spent fuel storage, already a problem for some power plants which were running out of storage capacity for spent fuel. That situation would be further aggravated during the next decade owing to inadequate reprocessing capacity, the high costs of reprocessing and the lack of a market for plutonium. For the intermediate term, several countries were now planning central storage facilities designed for 30 to 50 years of storage. In that area intergovernmental co-operation could be most useful in giving plant operators in smaller countries where domestic back-end services were not economically justifiable assurances that the needs of their nuclear power programmes could be met.

62. The report of the Expert Group on International Spent Fuel Management had been well received by the Board of Governors. The next step would be to put into effect some of the practical suggestions in that report. For its part, the Agency would soon be publishing a technical guidebook on spent fuel storage. Governments should now consider what co-operative action would be appropriate on their part.

63. The dumping of radioactive material in the sea was a controversial subject much in the news during the past year. At the Seventh Consultative Meeting of the Contracting Parties to the London Dumping Convention, held in February 1983, a number of decisions had been taken that required the IAEA to review its activities with respect to the Convention. Proposals had been made to prohibit the dumping of radioactive wastes into the sea. Many States had called for the suspension of all sea dumping of radioactive wastes pending a report on the matter by experts. The IAEA, with other interested international organizations, would assemble relevant information for the experts. In conformity with its responsibilities under the London Dumping Convention, the Agency was also reviewing the definition of "high-level wastes unsuitable for dumping at sea" and recommendations related to other radioactive wastes.

64. There was one final point relating to international co-operation in the handling of high-level waste that should be mentioned. There might well be countries without any geologically acceptable sites for the final disposal of high-level waste or which had too small a nuclear power programme to justify construction of a large terminal disposal repository. The question was, should they refrain from using nuclear power or could there be international co-operation to solve the problem? It was time to consider possible international co-operation in the ultimate disposal of high-level waste. It would be useful to work towards regional and international solutions affording an opportunity of limiting the total number of disposal sites, thereby also achieving economies of scale. Such an undertaking could obviously encounter political difficulties in some countries today, but that only confirmed the need for careful study of the potential problems and solutions.

65. Trade and technology transfer in the nuclear field had always been subject to intergovernmental co-operation agreements, safeguards, physical protection requirements, and other special arrangements. Suppliers' policies had at times

given rise to friction and frustration. The need for a general consensus on what might reasonably be required from recipients in return for long-term supply assurances had led to the creation of the Committee on Assurances of Supply (CAS) in 1980.

66. The most prominent item on CAS's agenda dealt with the principles of international co-operation in the field of nuclear energy, but progress had been only modest. On more specific items, however, such as revision mechanisms and emergency and back-up mechanisms, there had been some headway. Discussions on the Agency's role in emergency back-up mechanisms suggested that it could serve as a clearing house for information on where substitute supplies could be obtained. CAS had adopted the structure for such a scheme and the recent progress made in CAS, which provided a forum where both suppliers and recipients could bring forward their concerns and work together on what could eventually be a mutually acceptable code of conduct, was encouraging.

67. Another potential forum for discussing issues of international co-operation was the United Nations Conference for the Promotion of International Co-operation in the Peaceful Uses of Nuclear Energy (UNCPICPUNE). The Preparatory Committee for the Conference had held its fourth session in April but had not been able to agree on an agenda or on the timing of the Conference. The IAEA Secretariat would continue to provide relevant material in close co-operation with the Secretary-General of the Conference and would be prepared to make substantial contributions specific to the final agenda items.

68. One important application of nuclear technology for Member States of the Agency, which were mainly developing countries, was the preservation of food by irradiation. While that technique had been proven to be generally safe and effective, it had not yet been widely applied. Important new perspectives would open up if full-scale industrial application proved feasible and economic.

69. There had recently been authoritative international action which might help to create public confidence and interest in the technique: in July 1983, the Codex Alimentarius Commission had adopted a revised International General Standard for Irradiated Foods and an International Code of Practice for the Operation of Radiation Facilities for the Treatment of Food. That development, one of the most important in the field of food irradiation in the past decade, stemmed from the work of a Joint FAO/IAEA/WHO Expert Committee on the

Wholesomeness of Irradiated Food, which had recommended the acceptability of food irradiated up to a specific average dose. The revised Standard provided countries with the means necessary for formulating national legislation on the radiation processing of food and its control, and it should facilitate international trade in irradiated food.

70. That was the background against which the Agency maintained an active programme in the field of food irradiation. The World Health Organization (WHO) had decided earlier that year to co-operate with the Agency on a food irradiation project aimed at improving the health and nutrition of populations in developing countries. There was also a food irradiation project within the framework of the Regional Co-operative Agreement for Asia and the Pacific.

71. Nineteen eighty-two had seen the start of a large-scale project for the eradication of the Mediterranean fruit fly in Egypt. The ultimate purpose of the project, which would involve the expenditure of more than US \$20 million over four years, was to eliminate the significant losses occurring each year in the production of fruit and vegetables in Egypt. Personnel from the very successful medfly eradication project conducted by the Mexican Ministry of Agriculture in collaboration with the Agency were being enlisted for it. The training of Egyptian personnel had started at the Agency's Laboratory in Seibersdorf and would shortly start in Mexico as well.

72. Another project worth mentioning, in the area of life sciences and human health, was a project on cervical cancer radiotherapy recently launched in co-operation with WHO.

73. In 1982, technical assistance to the Agency's developing Member States had continued the steady growth it had shown over the last 14 years. The Agency had handled some 500 technical co-operation projects involving expert services, equipment and manpower training worth close to US \$40 million. Technical co-operation through the Agency had become a major vehicle for technology transfer to developing countries at all stages of their development, and its growth had taken place despite a general shrinkage of funds for multilateral assistance programmes.

74. More than 90% of the 1982 target of US \$16 million for voluntary contributions to the Technical Assistance and Co-operation Fund had been met. Pledges received for the current year amounted at present to about 84% of the

US \$19 million target, representing slightly more in absolute terms than what had been pledged by that time last year. At the present relatively late juncture, more than 30 Member States had still made no pledge at all against the 1983 target. For the target system to be fully effective, it was essential for all Members to contribute their share. But late pledges led to late payments, and by the end of July less than 60% of the pledges made had actually been fulfilled, the amount paid representing only about 45% of the 1983 target.

75. At the previous Conference session the Agency had appealed to developing countries to pay outstanding assessed programme costs. Unfortunately the arrears, which the previous year had reached the US \$1 million mark, had increased to US \$1.7 million by July 1983.

76. On a more positive note, it was heartening that the Government of the United States of America had just announced that it would continue its traditional support of footnote a/ projects. For footnote a/ projects in the 1983 programme, the United States had pledged a total amount of US \$1.8 million. That generous contribution had raised the funding level for 1983 footnote a/ projects to about two-thirds of the total requirements. The Secretariat had also just been informed that the Soviet Union, in addition to its voluntary contribution of 1 900 000 roubles for 1984 to the Technical Assistance and Co-operation Fund, would make a contribution for the period 1984-85 of 1 million roubles for the financing of footnote a/ projects. Six countries had now made contributions for footnote a/ projects since the beginning of 1983, as compared to ten countries in 1982. Efforts were being made to bring in more donors, and it was hoped that more of the 1983 footnote a/ projects would be financed between now and the meeting of the Technical Assistance and Co-operation Committee in December.

77. The Board of Governors had concluded a review of the policies guiding the Agency's technical co-operation programme. The new policies should enable the Agency to respond more quickly to the changing needs and priorities of developing Member States:

Consideration would accordingly be given to the planning of projects extending for several years ahead when needs that could not be met through short-term projects had been identified;

Countries with limited experience in nuclear energy matters, and which therefore were especially in need of the Agency's assistance, would be eligible for special assistance in project identification and project planning;

There would be more projects in which all available inputs were fully integrated into a package of measures designed to solve a particular problem;

Increased consideration would be given to the possibility of including regional and interregional projects in the annual programme; and, finally,

Through the introduction of dynamic programming, the Agency would be in a position to use its technical co-operation resources more effectively and to adapt the assistance rendered more closely to the changing needs of developing countries.

78. In the past year the Technical Co-operation Evaluation Unit had started its work and had already developed a basic methodology that was ready to be tested out in initial evaluation exercises to be carried out in partnership with recipient countries.

79. The Regional Co-operative Agreement for Asia and the Pacific (RCA) had now entered its second decade and continued to provide an excellent vehicle for technical co-operation, the promotion of applied research and technology transfer. Useful results which could lead to large-scale practical applications had been achieved in the areas of radiation processing, food preservation and animal husbandry. The large RCA-UNDP project on industrial applications, started in 1982, was now beginning to yield tangible results. New activities relating to biomedical applications of nuclear techniques had been initiated. Furthermore, India had now joined Australia and Japan as an RCA donor country.

80. There had also been further discussion concerning the development of a similar arrangement in Latin America, and five countries of the Andean group had informed the Agency of their desire to undertake several projects involving Agency assistance on a joint basis.

81. The activity of the Agency which attracted most public and political attention was the operation of the safeguards system. During the past year there had been a great deal of discussion about it both inside and outside the Agency. To some, safeguards operations appeared too costly - absorbing money that might be used for other Agency programmes; to others, safeguards even seemed to be an invention of the nuclear "haves" for making sure that no more countries joined "the club". To yet others, safeguards were not sufficiently thorough and extensive. In the last analysis, however, most States conceded the value of safeguards in creating a climate of international confidence.

82. It might be appropriate to reflect on why the unique system of Agency safeguards had emerged. There were several reasons. Although nuclear supplier States were willing to sell nuclear installations and material to other States, they had come to the conclusion that they would do so only if they felt assured that they would not thereby contribute to a nuclear weapons capability in the recipient State. For the recipient State which had no intention of acquiring nuclear weapons, it was not a very onerous obligation to undertake to accept safeguards. While trade in conventional weapons had escaped all forms of international restriction, the nature of nuclear weapons had made suppliers of nuclear material, equipment and technology - whether or not nuclear-weapon States themselves - wary of exporting without some assurance that the use of what they were exporting would be exclusively peaceful. Indeed, even in nuclear trade between nuclear-weapon States such assurances were sometimes sought. Agency safeguards could not provide an absolute guarantee that the exported items would not, one day, be used for non-peaceful purposes; but they did constitute an alarm system and helped to create confidence sufficient to permit the export of nuclear material, equipment and technology. It is doubtful whether, without safeguards, there would be any significant international nuclear trade today.

83. But that was looking at safeguards from the view point of the supplier, whether or not a nuclear-weapon State. If one viewed them from the stand-point of the non-nuclear-weapon State embarking on a nuclear power programme,

either by importing material, equipment and technology or through indigenous means, one saw that such States often found that by inviting safeguards they could create, among neighbours and in the world at large, the desired confidence that their programmes were serving solely peaceful purposes. By acceding to the Non-Proliferation Treaty, by becoming part of a nuclear-weapon-free zone such as the one in Latin America created by the Tlatelolco Treaty, or by otherwise entering into full-scope safeguards agreements with the Agency, States formally committed themselves not to acquire nuclear weapons. To invite safeguards increased the credibility of the commitment, created confidence in their intentions and facilitated the nuclear trade in which they might wish to engage.

84. The Agency had been entrusted with the important task of administering the safeguards system. That was a unique international responsibility. The first requirement was that the Agency's safeguards should be credible. Their sole purpose was to create confidence, and to do so they had to be thorough. If they did not create confidence, they were a waste of resources or worse.

85. The rapid development of the Agency's safeguards operations over the past ten years had been an achievement in which the Agency could take some pride. In a best-selling book that had appeared a few years before, a minister was quoted as saying that Agency inspectors were not able to distinguish a screwdriver from a monkey wrench. Agency inspectors rarely used either of those tools, but he was confident that in the Safeguards Department there was a highly qualified group of people who had been appropriately trained for the work they were going. IAEA safeguards were not an amateur operation. A highly professional job was being done and, with the development of new techniques, with the latest equipment and with further training of the staff, the Agency would be able to do that job even better.

86. During the year that had passed, the safeguards system had helped to increase confidence with regard to the material and installations safeguarded by it. Some difficulties faced in the operation of it had been overcome

with the co-operation of the States concerned. In the past year there had also been a searching debate in the Board of Governors, in the Secretariat and in the Standing Advisory Group on Safeguards Implementation (SAGSI) on the goals and objectives of safeguards, on the resources needed in order to implement them and on their transparency. Such discussions were essential from time to time.

87. Safeguards operations had to be organized and directed in such a way that they aroused confidence, but had also to be carried out in an efficient and economic manner. Thirty million United States dollars, which was the present Agency expenditure for one year of safeguards operations throughout the world, was only about one per cent of the cost of a single modern 1000 megawatt (electric) nuclear power plant, and should be thought of as part of the normal costs of nuclear power. Just as insurance against accidents entailed a certain cost, so did assurances of exclusively peaceful use. It was the Agency's obligation to seek the most economical way of administering safeguards consistent with the goal of creating confidence. Advice as to how such could be done was valuable, but before any advice was acted on, one had to be completely sure that any modification would not impair confidence. Improved economy at the expense of impaired confidence was no real gain.

88. New safeguards equipment, developed in co-operation with Member States, was being put into use on an ever increasing scale. Greater use was also being made of permanently installed equipment, including that required for the safeguarding of on-line refuelled reactors.

89. During the past year, there had been considerable progress in defining and developing safeguards approaches for a number of facilities which were about to or had recently come under safeguards. Especially noteworthy was the development and acceptance of a safeguards approach for gas centrifuge enrichment plants, based on limited-frequency, unannounced access by inspectors to the cascade halls.

90. Lastly, it was gratifying to be able to report to the General Conference that the Agency had entered into negotiations with authorities of the Soviet Union on the implementation of their voluntary offer to place some of their civilian nuclear facilities under safeguards; two meetings had already been held. The acceptance of IAEA safeguards by four nuclear-weapon States was significant both in itself and also within the context of wider acceptance of the Non-Proliferation Treaty.

91. Looking to the future, one saw that the Third NPT Review Conference was to take place in 1985. The IAEA Secretariat would be beginning next year to prepare its contributions. Those would be contributions in relation to several of the Articles of NPT. First, under Article III of the Treaty, the Agency was carrying out safeguards and had a duty to report on its experience in their implementation. Second, with Article IV providing for the fullest possible transfer of technology for the peaceful uses of nuclear energy, the Agency should report on contributions made through it to that end.

92. In relation to the commitment in Article VI to pursue negotiations for nuclear disarmament measures, the Agency could contribute some thoughts on the possible lessons that the safeguards system could offer in a broader disarmament perspective. For instance, could the verification of an agreement to halt the production of fissionable material that was going into ever greater stocks of warheads be achieved by safeguards or similar techniques? That was a question which Governments would be examining. The experience gained by the Agency in operating the safeguards systems should be at their disposal. One thing was clear - namely that, if Agency safeguards were to be of use in the field of nuclear disarmament, whether directly or as a model for verification measures, they must be organized, developed, managed, financed and supported by Member States in such a way that the world was sure they could be relied upon. To ensure that was a vital task for everyone.

93. It was perhaps inevitable that some international political problems of an overriding character and which to some extent bore on the Agency's mandate spilt over into its work, although the major international action on them had to be elsewhere. Issues relating to the Middle East and to South Africa were of that kind.

94. Since the last session, the General Assembly of the United Nations had expressed concern about South Africa's nuclear programme and about its participation in certain Agency activities. Some of those activities were now coming to an end and more were due to finish shortly. The politically and practically more important question of South Africa's attitude to full-scope safeguards remained, however, and constituted a key to the question of a nuclear-weapon-free Africa.

95. In conclusion he hoped that in addressing those difficult issues, it would be possible to avoid placing the Agency's valuable international co-operation in jeopardy and to promote and protect the peaceful development of nuclear power and to help prevent the proliferation of nuclear weapons.

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96. Mr. HODEL (United States of America) read out the following message to the Conference from President Reagan:

"Mr. President, Mr. Director General and delegates, I am delighted to join Secretary Hodel in greeting you once again as you attend the twenty-seventh General Conference of the IAEA.

"The United States has always taken the position that the Agency has a singularly important role to play in fostering the peaceful utilization of nuclear energy. Most importantly, we are encouraged that most nations agree that the Agency should be able to function in a businesslike manner, that its predominantly technical and scientific orientation should be preserved, and that it be insulated, to the extent practicable, from divisive political debates or regional conflicts.

"Similarly, we are very pleased that most IAEA members share our view both that the Agency is essential to the preservation of peace and stability in the world through its non-proliferation safeguards programme, and that nuclear energy is making a continued and increasing contribution to economic and social progress throughout the world.

"The technical co-operation programme of the Agency is crucial to this continued progress and we ask others to join us in a rededication to the principles that have made the IAEA one of the most effective international bodies.

"It is vital that we continue our efforts to ensure that nuclear energy fulfils its promise to ease the burdens on mankind while continuing to protect the technologies involved against misuse.

"We look forward to a new era of closer collaboration within the Agency and I send you my sincere best wishes and hopes for a successful meeting.

Sincerely yours,

Ronald Reagan"

97. At a time when the Agency was completing the first year of its second quarter-century of service to the world, he believed that Member States should take the opportunity of renewing their dedication to its principles, and of demonstrating again their willingness to work together to achieve its goals.

98. If the promise of nuclear energy was to be realized, nations had to resolve that the potential benefits would not be lost to them as a result of efforts to misuse scientific and technical developments. That meant that support had to be given to institutions that provided for effective international

safeguards and gave meaning to the IAEA - namely, the Non-Proliferation Treaty (NPT) and regional treaties such as the Tlatelolco Treaty. It also meant that nations had individually and collectively to accept responsibility both for reaffirming and strengthening their commitment to the peaceful use of nuclear energy and for guarding against its misuse.

99. For those reasons, President Reagan had committed the United States, and sought the commitment of others, to worldwide safeguards administered by the IAEA.

100. Since the founding of the IAEA, most of its Member States had proved that they were able to work together to develop an unprecedented international safeguards and inspection system. That system served as a foundation for the global non-proliferation regime, and provided a basis for civil nuclear co-operation throughout the world.

101. Together, the Agency's Members had launched numerous scientific meetings, conferences, symposia, and information and training programmes designed to enhance the peaceful uses and transfer of nuclear technology. They had established guidelines and developed codes of practice to assist peaceful nuclear programmes throughout the world. They had conducted technical assistance programmes that had been the key factors in ensuring that the benefits of nuclear energy in the fields of power, agriculture, health and medicine served the developing nations in their striving for social and economic betterment.

102. Those had been impressive achievements, which had not happened by accident, but rather were a reflection of the statesmanship and spirit of co-operation that had long distinguished the activities of Member States and the Secretariat.

103. Common to most - if not all - IAEA Member States, regardless of their political persuasion, was the recognition that nuclear energy simply had to be treated differently from other technologies, and that man's basic survival as well as his ability to profit from the atom depended on an effective non-proliferation regime coupled with an imaginative approach towards international co-operation.

104. In the past, Governments had been guided by the common ideal of sharing the atom's potential bounty, together with a basic understanding that everything to do with the atom was a serious matter. Indeed, they had known then as they did now that the world's security depended on developing ways of securing the benefits of nuclear energy while protecting humanity against its destructive potential. While there had been political differences, in general they had been kept within bounds and had been subordinated to the need to do substantive work.

105. The United States was attending the Conference because the effective functioning of the Agency was of crucial importance to the entire world, and because it wanted to help it maintain the dedication and sense of purpose that was, and would continue to be, its greatest strength.

106. The Agency was also needed as a strong and vital organization because the world still had chronic and potentially devastating energy problems. It had had a respite from the shortages and price escalations of a few years earlier, but it had to be recognized that that was only a respite, and not a sign that the problems had disappeared. Everyone recognized the fragility of the world's energy supply systems and knew that in order for countries to maintain and accelerate their progress towards increased social and economic health, a reasonably priced, adequate and reliable supply of energy was essential.

107. Along with minimization of government interference in the market place, development of such a supply system was one of the key goals of United States energy policy, and he wished to mention one or two aspects of that policy of relevance to the work of the Agency.

108. An essential element of United States plans to develop an adequate and reliable energy supply was its efforts to diversify the sources of energy and to reduce dependence on unreliable sources. In that process, it would of necessity reduce its consumption of oil, thereby making supplies available to nations that were heavily dependent on imported petroleum and reducing the pressures on world prices brought about by demand.

109. Although it considered that only a balanced approach to the problem of meeting energy needs would be successful, the United States believed that electricity was a particularly versatile and valuable form of energy and that, if the necessary energy supplies were to be available to the world, there had to be a steady growth in electricity generation. It was convinced that nuclear power was an essential part of energy supply. The United States had the world's largest nuclear power programme and, by 1990, the contribution of that programme would reach some 20 per cent of the country's installed electrical capacity. However, it also intended that fossil fuels, the various renewable energy sources, promising advanced technologies, and improvements in efficiency and conservation should play their roles in its energy supply scheme.

110. The United States Government knew that nuclear power would continue to play an important part in the world's energy supply system, one that was even more important than at present, when nuclear power supplied almost 200 000 MW(e), with nearly another 200 000 MW(e) of capacity under construction. His Government wanted to continue to play a substantial part in making sure that that rate of progress was maintained through its co-operation with and assistance to others.

111. It believed that the benefits of nuclear energy, for power and other peaceful purposes, had to be fully and fairly available to any country that had both the need and the capacity to utilize it and had demonstrated its understanding of the obligations that nuclear energy entailed.

112. That sharing of knowledge and experience was one of the key reasons for the existence of the IAEA. However, in order for such a sharing to take place, it was necessary to retain the co-operative spirit that was so important to the work of the organization.

113. During the past two years, major efforts had been made by the United States and others to restore the confidence and trust between suppliers and consumers that had so long distinguished international nuclear commerce.

114. It should be clear to all that the Reagan Administration had little enthusiasm for making unilateral changes in the conditions of export supply, and his Government was continuing to search for new ways to improve relations between it and its partners in co-operation, between the various parties to NPT, and between parties to NPT and those that were not party to the Treaty. He emphasized, however, that the United States viewed NPT and an effective international safeguards regime as being essential to the continued contribution of nuclear energy to the entire world.

115. It also recognized the nature of the original bargain that was the basis for NPT and considered, therefore, that so long as such co-operation was consistent with the spirit and intent of the Treaty and so long as it fostered the goals of arms reduction, the nuclear-weapon States party to the Treaty had an obligation to co-operate with others to ensure that the benefits of nuclear energy would be made widely available.

116. It viewed the 1985 NPT Review Conference as an event of fundamental importance and looked forward to co-operating actively with other nations to make it a success. The common desire of every State for improvements in the non-proliferation regime, and for more effective technical assistance programmes, made that Conference important to all.

117. His Government wanted to ensure that the peaceful uses of nuclear energy were further developed and it looked forward to the day when the atom was utilized solely for peaceful purposes.

118. In his statement, the Director General had discussed the possibility of increased international co-operation with regard to nuclear safety. The United States' Government welcomed that initiative and wished to encourage him to proceed with a further examination of his proposal. There were many questions that needed to be considered, and a careful examination of the proposal would make that possible.

119. Every State had an interest in nuclear safety throughout the world. That interest had been most recently examined by the International Nuclear Societies Group at a meeting in Vancouver, Canada. Their report had encouraged a consistent approach to nuclear safety so that nations pursuing peaceful nuclear activities could rely, if they so desired, on internationally developed recommendations concerning nuclear safety matters.
120. He hoped that the Director General would consider that matter further and develop a programme for a review by the Secretariat in conjunction with nuclear societies that could be considered by the IAEA's Scientific Advisory Committee and the Board of Governors.
121. The United States, for its part, was prepared to work diligently with nations in the developing world, both bilaterally and through the IAEA, to ensure that they could benefit from its experience in reactor development, operation and safety.
122. He wished to add that the United States Nuclear Regulatory Commission had been especially active in co-operating with others in training, in providing technical advice, and in sharing in other ways the results of United States safety studies and his country's extensive experience in building and operating light-water reactors.
123. There was likely to be continued strong interest among nations in collaborating in the field of nuclear waste management. In the past year, the United States Congress had passed the Nuclear Waste Policy Act of 1982, which President Reagan had signed on 7 January, 1983. That important piece of legislation established a demanding schedule and a procedure for the financing, siting, licensing, and operation of geological repositories for the permanent disposal of high-level radioactive waste. During the past nine months, the United States had made significant progress in working with the relevant State authorities, Federal agencies, utilities and other interested parties in implementing the Act.
124. In 1982, his Government had also hosted the IAEA Conference on Radioactive Waste Management in Seattle, Washington. The United States intended, furthermore, to introduce a resolution at the present session of the General Conference on the subject of waste management, which he hoped would help to strengthen the Agency's work in that field.

125. He also noted that the Nuclear Waste Policy Act explicitly instructed both the United States Department of Energy and the Nuclear Regulatory Commission to co-operate with non-nuclear-weapon States for technical assistance in the areas of spent fuel storage and disposal. Expressions of interest in such co-operative activities were being received.

126. Turning to some of the Agency's main programme areas and their importance to Member States, he said that it was unproductive to try to impose an artificial equality on resources provided for the IAEA safeguards system and those for Agency activities related to technical assistance. Similarly, it would be unrewarding for Member States to divide themselves into two factions, with one being interested mainly only in technical assistance and the other in safeguards. The fact was that both areas of endeavour were important to the national interests of all countries and, although each must be viewed and judged on its own merits, both warranted the strong and balanced support of all. The Agency must be supported as a whole, not only in a particular aspect of its work.

127. It was hard to imagine what would become of the civilian nuclear world in the absence of IAEA safeguards. He suspected that, without them, international nuclear co-operation would be severely curtailed and that there would be a myriad of overlapping, competitive and confusing bilateral control arrangements. More broadly, the world would lose a vitally important international mechanism which, however imperfect, was crucial in helping to assure nations that their neighbours were acting responsibly and were not attempting to acquire the capacity to manufacture nuclear explosive devices. If there was a nuclear war on earth, no-one would be immune, regardless of where he lived or of the size or innocence of his country.

128. Thus, all shared a common self-interest in strengthening the global non-proliferation regime and in preserving the crucial role that IAEA safeguards played in that framework, and safeguards must be of concern to everyone. The whole world was a nuclear world, and it was vital that all Member States should unite their efforts to ensure that the IAEA safeguards system remained credible, that it was continuously subject to rigorous examination, and that the system maintained its technical credibility and kept pace with advances in nuclear technology.

129. In his message, President Reagan had mentioned the importance that the United States attached to insulating the Agency, to the extent practicable, from divisive political debates so that it could focus on the substantive issues so vital to the orderly, safe and productive use of nuclear energy. As he had stated, the United States had been encouraged by the fact that many other nations shared the same view. It was his profound hope that a new consensus might be evolving on that matter. Nations had come to realize how much was really at stake in endeavours to preserve a healthy and effective IAEA. All Members suffered when its operations were disrupted.

130. In the area of technical assistance, the IAEA had played a crucial role in assisting the developing nations. It was necessary to work harder to reduce the gap between needs and resources and, where applicable, to co-ordinate the Agency's activities with programmes of bilateral aid that might be carried out with either governmental or private resources.

131. As evidence of the continued importance that the United States attached to that activity, he announced that his Government had pledged \$2 150 000 for fellowships and \$1 800 000 for so-called "footnote a/" projects in 1983, in addition to other in-kind and extrabudgetary assistance to the IAEA. That served once again to emphasize the United States' commitment to the Agency's technical assistance and co-operation programme, to NPT and to the special needs of the developing countries.

132. When considering what was at stake at the Conference, it should be recognized that many of the programmes now funded under the Regular Budget of the IAEA were of considerable relevance to the developing countries. The nuclear power, fuel cycle and safety programmes were fundamental to the role the IAEA played in helping to introduce and to expand nuclear power in an orderly and safe manner. In his view, the Nuclear Safety Standards (NUSS) programme had been particularly effective and well received. It was obvious that a serious nuclear accident could have very far-reaching effects on the continued use of nuclear energy. Thus, the IAEA was playing a vital role when it assisted nations to acquire the capacity to deal with reactor safety issues in an effective manner.

133. Because of the urgency of the need for nuclear power in some nations, the important role that was already being played by other applications of nuclear energy in fields such as agriculture and the life sciences was often overlooked. Those were contributions of unquestionable benefit and importance to many countries. Radiation techniques were being used, or were being developed with IAEA support, to increase soil fertility and the efficiency of water use, to improve crop production through induced mutations, and to help control chronic pests such as the screw worm and the tsetse and the Mediterranean fruit flies.

134. In medicine and biology, radiation had long made invaluable contributions in both diagnosis and therapy, and wider applications of such techniques as the sterilization of pharmaceuticals would make their mark in improving the world's health.

135. Thus, nuclear energy was providing new approaches to the problem of feeding the world. Advances in nuclear medicine were producing new and highly effective weapons in the common fight against disease. In those vitally important areas, the benefits of the atom were rapidly, although frequently without loud publicity, being spread throughout the world. Information on such IAEA programmes should be the subject of more vigorous dissemination work all over the world.

136. His delegation believed that the achievement of a truly effective international non-proliferation regime would very much depend on the active participation of all members of the international nuclear community. It particularly welcomed the announcement by the People's Republic of China that it intended to join the IAEA. That decision by the world's most populous country, a nation with a growing nuclear programme, was of great significance. The United States' Government looked forward to the time when the People's Republic of China joined the Agency, and to working with it in a co-operative and constructive manner.

137. In conclusion, the United States was optimistic about the future of the Agency and believed that Member States would be able to meet the challenges that lay ahead if they all worked together. It was to be expected that the vast majority of Members would fully respect the conventions that had enabled the Agency to achieve so much over the years.

138. Unfortunately, some non-nuclear-weapon States still stood apart from the majority and had either not foresworn nuclear explosives or had not submitted all of their civil nuclear programmes to IAEA safeguards. One of the main challenges over the next decade would be to deal effectively with the sense of insecurity and other factors that induced such nations to go their separate ways. That would be achieved only if all nations believed that they would be treated fairly and objectively in the conduct of IAEA matters and that their national self-interest would be satisfied rather than the reverse through full participation in the Agency. The United States would do what it could to make that possible.

139. Examination of the accomplishments of the past showed that there were ample grounds for optimism about the future. He had already commented upon the IAEA's achievements regarding nuclear energy and other beneficial uses of nuclear technology. It was also worth remembering that only two decades earlier people had been becoming more and more fatalistic about the prospect of further proliferation with many nations possessing nuclear weapons.

140. He believed that it was now clear that the vast majority of nations emphatically rejected the acquisition of nuclear explosives and were willing to co-operate constructively in reducing incentives to proliferation. His Government was, therefore, enthusiastic about the opportunities for peaceful uses of the atom and about the future of the Agency, and it viewed the challenges the Agency faced as presenting exciting opportunities, as long as all were prepared to work together.

141. Mr. YASUTA (Japan) said that his country, as an Asian Member State, welcomed the application of the People's Republic of China to join the Agency. He firmly believed that China's participation in the Agency's activities would enhance the latter's universality and importance, thus enabling it to carry out its mission more effectively.

142. In order to sustain world economic growth it was necessary to assure the supply of energy at an appropriate price and to maintain, in formulating energy policies, a balance between ensuring a long-term stable supply of energy and introducing economy measures. Despite the temporary decrease in the supply of and demand for crude oil, it was essential to develop alternative energy sources in general and nuclear energy in particular in order to keep pace with long-term increases in energy requirements.

143. Japan, which had insufficient indigenous energy resources to meet its own economic needs, was working ceaselessly to promote the peaceful uses of nuclear energy.

144. The development of nuclear energy in Japan had begun at almost the same time as the Agency's foundation. It now had 24 commercial nuclear power plants in operation with a total generating capacity of approximately 17.18 million kW of electricity. Nuclear plants therefore accounted for approximately 12% of its total electricity generating capacity and about 20% of its total electricity supply. In addition to those reactors, 13 nuclear power reactors, with a total capacity of 12.9 million kW, were under construction and eight additional nuclear power reactors with a total capacity of 6.33 million kW were planned.

145. If nuclear power was to play a major role as an energy source, the potential energy of uranium had to be exploited to the greatest possible extent. In order to pave the way for the use of plutonium, efforts had been made in Japan to develop the advanced thermal reactor and the fast breeder reactor, and to develop the recycling of plutonium in light-water nuclear reactors.

146. Another important element in the effective use of uranium resources was the establishment of a nuclear fuel cycle. The pilot plant at Ningyo-Toge had been producing enriched uranium since 1982, thus preparing the ground for

the enrichment of uranium on a commercial scale. Progress had also been made towards the construction of a prototype enrichment plant.

147. With respect to spent-fuel reprocessing, a reprocessing plant had been built at Tokai-Mura and preparations were under way for a larger reprocessing plant to meet Japan's future domestic needs.

148. In promoting the peaceful uses of nuclear energy and thus contributing to the development of mankind, it was necessary to prevent its diversion for military purposes. Here, international co-operation directed towards ensuring the non-proliferation of nuclear weapons was essential.

149. The Non-Proliferation Treaty was an extremely important international legal framework for promoting the peaceful uses of nuclear energy while preventing nuclear proliferation. It was pleasing to note that Papua New Guinea, Nauru, Viet Nam and Uganda had become parties to the Treaty in 1982. In 1983, however, no new countries had joined. He appealed to all countries that had not yet joined NPT to do so as soon as possible.

150. The NPT could not be truly effective until the inequality between nuclear-weapon States and non-nuclear-weapon States had been corrected. Japan had strongly urged all nuclear-weapon States to promote nuclear disarmament and to conclude voluntary submission agreements covering their nuclear facilities used for peaceful purposes. He sincerely hoped that nuclear-weapon States other than the United Kingdom, the United States of America and France would conclude agreements as soon as possible.

151. The Agency's safeguards played a key role in ensuring nuclear non-proliferation, while at the same time promoting the peaceful uses of nuclear energy. Constant improvements should be made in the safeguards system to enable it to keep pace with the latest technological developments. It was a source of great satisfaction that the Board of Governors had been discussing the question of the effectiveness of the Agency's safeguards at a fundamental level ever since that question had first arisen.

152. The Standing Advisory Group on Safeguards Implementation (SAGSI) was conducting a study aimed at establishing more effective safeguards systems, taking fully into account the nuclear fuel cycle of each country. He hoped

that in 1984 the Board of Governors would give further consideration to that matter in the light of the recommendations from SAGSI and the reports of various relevant expert groups.

153. Japan would continue to co-operate with the Agency through the Japan-IAEA Joint Committee on Safeguards and various other exchanges, with a view to the effective and efficient operation of the safeguards system.

154. Through its Support Programme for Agency Safeguards (JASPAS) Japan was in close co-operation with the Agency in the field of research and development, in particular with regard to important facilities such as reprocessing and enrichment plants. In that field, too, Japan was determined to intensify its co-operation with the Agency.

155. With the experience and expertise gained by Japan in developing its safeguards system, features of which were used by the Agency in applying its own safeguards in Japan, it hoped to strengthen its co-operative relationships internationally. Japan had recently entered into negotiations with the Agency regarding the Facility Attachment for the Ningyo-Toge Uranium Enrichment Pilot Plant following the conclusion of the Hexapartite Safeguards Project (HSP) on commercial gas uranium enrichment plants.

156. In order to utilize the Agency's safeguards inspectors effectively and efficiently, Japan had agreed to their staying for longer periods of time and to a system of rotation among Operations Sections. In that connection, it was planned to open an Agency Safeguards Field Office in Tokyo.

157. While non-proliferation measures played an essential role in the promotion of the peaceful uses of nuclear energy, they should not be unnecessarily restrictive. Japan, for example, had recently concluded with uranium supplier countries nuclear co-operation agreements establishing the predictable and comprehensive exercise of the right of prior consent.

158. Regarding the compatibility of the peaceful uses of nuclear energy and nuclear non-proliferation, it was to be hoped that the Board's Committee on Assurances of Supply (CAS) would be able in the months to come to continue its most constructive and substantive discussions.

159. Another matter of importance in nuclear energy development was that of nuclear safety. Ever since the first commercial nuclear power plant in Japan had started operation, in 1968, Japan attached the greatest importance to that issue. Since that time, thanks to the authorities' belief that safety was a basic prerequisite for the development of nuclear energy, there had not been a single accident which had jeopardized the safety of workers or the neighbouring public through radiation. His country was determined that nuclear power facilities should be made even safer and that operation control and supervision be further strengthened.

160. At the same time, Japan was firmly committed to promoting nuclear safety through international co-operation: it participated in the work of the Agency and other international organizations on establishing safety standards, and was involved in exchanging information with other countries.

161. The Agency was also playing an important role in nuclear safety by establishing radiation safety standards for nuclear facilities and for the transport of nuclear material. Moreover, it had taken a useful initiative by setting up arrangements for the dispatch of operation review teams to requesting Member States.

162. The publication of the second IAEA Nuclear Safety Review was highly commendable since it helped to improve public understanding of the Agency's activities and to promote public acceptance in Member States.

163. Noting with satisfaction the Agency's work on standards for the ocean dumping of radioactive waste and in organizing the International Conference on Radioactive Waste Management held in Seattle, he expressed the hope that the activities on radioactive waste disposal, especially scientific studies on the safety of ocean dumping, would be further developed.

164. As regards technical co-operation with developing countries, he considered that the benefits of the development of the peaceful uses of nuclear energy should be available equally to all countries in accordance with their science and technology policies and energy requirements. In that context, the technical assistance provided by the Agency to developing countries was of great significance.

165. Japan would welcome an expansion, on an appropriate scale, in the Agency's technical co-operation programme in response to such an appeal by developing countries. He wished to express his appreciation to the Board and to the Technical Assistance and Co-operation Committee for the technical co-operation policy review which they had conducted.

166. Recognizing the importance of the Agency's activities in that field, Japan had always paid its full share of the voluntary contributions to the Technical Assistance and Co-operation Fund and would try to do so in future in spite of the stringent fiscal situation faced by it. As in the past, it would be willing to provide experts, donate equipment and award fellowships, and hoped that the potential of those activities would be fully utilized.

167. Referring to the Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology (RCA), he noted with satisfaction that the RCA projects were being implemented with the active participation and co-operation of the RCA member countries.

168. His country had co-operated in the Food Irradiation Project and the UNDP Project on Industrial Applications of Isotopes and Radiation because it wanted to help in solving the most important and urgent problems facing the participating countries in such fields as food and industry. Japan had acted as the host for the regional office of the UNDP Project on Industrial Applications until June 1983. Moreover, it had started co-operating in the project on the medical and biological applications of nuclear techniques.

169. He hoped that the RCA activities would be further diversified and strengthened. While Japan would continue to support those activities, having regard to the financial aspects it attached great importance to the selection of viable projects which responded to the needs of recipient countries and in which those countries were prepared to co-operate.

170. Co-operation in the development of human resources was one of the basic approaches to assisting developing countries, which principle should be borne in mind in promoting further co-operation with those countries.

171. He felt that establishment of other regional co-operation groups would be useful in satisfying the needs of developing countries.

172. Referring to the Agency's budget he pointed out that Japan, like many other countries, was facing a very serious financial situation and that for several years his Government's general administrative expenditures had been declining in real terms. As the difficult financial circumstances in Member States limited the human and financial resources available to the Agency, he urged both the Secretariat and Member States to continue their efforts to restrain budgetary increases, to achieve a balance in allocations and to make effective use of the financial resources available. In doing so, it was necessary to remember that the main activities - namely, technical co-operation, safeguards and safety - should have priority in the allocation of funds and that the basic research activities, insofar as they supported those main activities, were also important.

173. In conclusion he observed that in the Agency differences or conflicts of interest among Members had never reached the stage of confrontation and that, in solving problems, the spirit of co-operation had always prevailed. At a time when the Agency was facing so many diverse problems on an unprecedented scale, that valuable tradition was its greatest asset.

174. If the Member States, aware of the fact that the Agency's purpose as an international organization was to foster the prosperity and welfare of mankind, made a united effort, he had every confidence that the difficulties confronting the organization could be overcome and the Agency would serve as a truly useful and indispensable instrument for the progress of mankind.

The meeting rose at 12.30 p.m.