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TWENTY-NINTH REGULAR SESSION: 23-27 SEPTEMBER 1985

RECORD OF THE TWO HUNDRED AND SIXTY-NINTH PLENARY MEETING

Held at the Neue Hofburg, Vienna,
on Monday, 23 September 1985, at 10.20 a.m.

Temporary President: Mr. MORELLI PANDO (Peru)
President: Mr. MANOUAN (Côte d'Ivoire)

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OPENING OF THE SESSION

1. The TEMPORARY PRESIDENT declared the twenty-ninth 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 those of other intergovernmental organizations and, in particular, the considerable number of ministers who were representing their countries. Their presence underlined the importance attached by Member States to the work of the Agency. He thanked the Austrian authorities, who had once again made available the Hofburg Palace for the Agency's General Conference.

4. Since the preceding session of the Conference, held in September 1984, the Agency's Secretariat had, under the wise guidance of the Director General, pursued the programmes which the Conference had endorsed, and in the course of the week delegates would have the opportunity to examine what the Secretariat had achieved and consider a range of other important matters of interest to Member States.

5. He wished to express his country's gratitude to Member States for having elected its delegate President of the Conference for its twenty-eighth session.

6. Reiterating his faith in the high purposes of the Agency, he said that some of the mechanisms it had established, especially safeguards, were among the most valuable factors promoting confidence in the maintenance of world peace. But great stress also had to be laid on the Agency's responsibility for promoting development in all its Member nations, within the framework of a more just world order, as had often been pointed out at the preceding sessions of the Conference and elsewhere.

ELECTION OF THE PRESIDENT

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

8. Mr. UMAR (Nigeria), speaking on behalf of the Africa regional group, said that he had great pleasure in proposing Mr. Manouan, delegate of Côte d'Ivoire, as President of the General Conference at its twenty-ninth regular session. Mr. Manouan's long and distinguished record in his country's diplomatic service, his profound knowledge of international affairs and his experience as Governor from Côte d'Ivoire on the Agency's Board of Governors made him eminently suited to the post.

9. Mr. MORDEN (Canada), speaking on behalf of the North America regional group, seconded the nomination of Mr. Manouan.

10. Mr. ORTIZ NAVARRO (Chile), on behalf of the Latin America regional group, Mr. PATRICIO (Portugal), on behalf of the Western Europe regional group, Mr. HAVEL (Czechoslovakia), on behalf of the Eastern Europe regional group, Mr. HIREMATH (India), on behalf of the Middle East and South Asia regional group, Mr. SADLEIR (Australia), on behalf of the South East Asia and the Pacific regional group, and Mr. MURATA (Japan), on behalf of the Far East regional group, supported the nomination.

11. Mr. Manouan (Côte d'Ivoire) was elected President of the General Conference for its twenty-ninth regular session by acclamation.

12. The TEMPORARY PRESDIENT congratulated Mr. Manouan on his election.

Mr. Manouan (Côte d'Ivoire) took the Chair.

13. The PRESIDENT thanked the delegates for the honour they had accorded his country by electing him as President of the General Conference for its twenty-ninth regular session. He particularly wished to thank the representatives of the Africa regional group for nominating him. His unanimous election could be seen as a tribute to the positive view taken by the President of Côte d'Ivoire, who believed that progress, particularly in the nuclear field, should contribute to the peace and well-being of all peoples, rather than to the creation of instruments of destruction.

14. The advance of science and technology since the time of the Renaissance had led to tremendous developments in terms of production, but unfortunately had not entirely freed humanity from poverty, malnutrition and famine. They had, nevertheless, produced great hopes: man was now convinced that through them he was more a master of his destiny and in a position to rid humanity of the suffering, injustice and inequality with which it was stricken.

15. Unfortunately, the hopes born of progress had been joined by anxiety over its darker aspects. The emergence of atomic weapons had given man the power to bring about his own extinction. But life was a supreme value and the right to live governed all other human rights; hence it had ever to be at the forefront. It was mankind's bounden duty to abolish forever the horrific prospect of total annihilation and to respond positively to the hopes engendered by scientific and technological achievement.

16. The Agency, within the scope of its competence, was happily going ahead with this task. Its system of safeguards had, over the years, gained in effectiveness and credibility. Member States were now confident that nuclear activities under safeguards served only peaceful ends.

17. During the first ten years of the Agency's existence, 34 safeguards agreements had been concluded in connection with reactors in 27 States. By 31 December 1984 there had been 163 agreements with 95 States in force.

18. The Soviet Union's voluntary acceptance of safeguards was a perfect example of how the safeguards system could contribute to world confidence, upon which peaceful co-existence and a reduction of international tension were founded. It was the most advanced and reliable means of supervision in the nuclear field and could serve as a basis for the implementation of a treaty on nuclear disarmament.

19. The Agency had contributed to expanding worldwide electricity production by its work in the design, technology and operation of research reactors, nuclear power planning, infrastructure evaluation and development, geology, exploration and exploitation of resources, ore extraction and processing techniques, nuclear engineering and spent fuel management.

20. Electricity produced by nuclear energy, non-existent at the time of the Agency's creation, had represented 13% of world electricity production in 1984. Such growth would not have been possible without a concomitant extension of the Agency's activities in the fields of nuclear safety and the treatment and storage of nuclear wastes.

21. Of great importance for developing countries were the Agency's activities concerning the application of radioisotopes and radiation in the areas of food and agriculture and the biological and physical sciences.

22. In the realm of food and agriculture, those activities had led to the creation of some 200 new plant varieties, improved fertilizers, optimization of nutrition and subsequent growth in animal productivity, and food preservation, together with more effective pesticides for eradicating such insect pests as the medfly, the tsetse fly and various lepidoptera which destroyed crops.

23. In the biological sciences there had been, thanks to the Agency, a tremendous development in the use of radionuclides and radiation in clinical medicine and medical research. The Agency had conducted a programme on calibrating thyroid absorption measurements, had initiated and developed a programme to support medical radioisotope laboratories, and another on the sterilization by irradiation of pharmaceutical products; it had designed and carried out programmes which had led to improvements in cancer radiotherapy procedures and to the development of powerful vaccines for use in combating parasitic diseases which were widespread in developing countries.

24. For the laboratories of the radiotherapy centres in those countries the Agency had set up a postal intercomparison service in order to improve cobalt-60 dosimetric measurements. It had helped to establish 45 secondary standard calibration laboratories for dosimetry, 30 of which were in developing countries.

25. In the area of physical sciences the Agency had played a major role in the development and introduction of isotopic hydrology techniques in a large number of developing countries, under projects for studying groundwater, and had assisted in the establishment of more than 20 laboratories for isotopic studies of the environment.

26. Its efforts to promote the industrial use of radioisotopes and radiation in Member States had contributed to the adoption of nuclear control systems and of large radiation sources within industry, and to the use of nuclear analytical techniques in ore prospecting.

27. He expressed his appreciation to all those within the Agency's administration who had participated in its achievements, and expressed his hope that the decisions taken at the twenty-ninth regular session of the General Conference would open a new page in the Agency's activities and help to place the achievements of science and technology more and more at the service of mankind.

ELECTION OF OFFICERS AND APPOINTMENT OF THE GENERAL COMMITTEE

28. The PRESIDENT proposed that, in conformity with Rule 34 of the Rules of Procedure of the General Conference, the delegates of the following Member States be elected as Vice-Presidents of the General Conference: Belgium, Cuba, India, Japan, Morocco, New Zealand, the Union of Soviet Socialist Republics and the United States of America.

29. He proposed, pursuant to Rule 34 of the Rules of Procedure, Mr. Scheel, the delegate of the German Democratic Republic, as Chairman of the Committee of the Whole and, under Rule 40, the delegates of the following Member States as additional members of the General Committee: Canada, Denmark, Netherlands, Paraguay and the Syrian Arab Republic.

30. The General Conference accepted the President's proposals.

31. The General Committee was thus duly appointed.

PROCEDURAL REMARKS BY THE CHAIRMAN

32. The PRESIDENT suggested that, as in previous years, pending the report of the General Committee on the agenda, the Conference take up items°2, 3, 5, 6 and 7 of the provisional agenda. Those were formal items, or items such as confirmation of the appointment of the Director General and the general debate, which were specified in the Statute.

33. It was so agreed.

MESSAGE FROM THE SECRETARY-GENERAL OF THE UNITED NATIONS

34. Mr. ALLAF (Representative of the Secretary-General of the United Nations) said that only a short time after the signing of the United Nations Charter, forty years previously, one objective of which was "to save succeeding generations from the scourge of war", the world had first witnessed the horror of nuclear devastation. Since that time, it had existed in the shadow of a possible nuclear war. The United Nations, almost from the moment of its inception, had had to search for ways to make such a war less likely.

35. For much of that time, the international community had also sought to exploit the benefits offered by the atom. Thirty years previously, the International Conference on the Peaceful Uses of Atomic Energy had been held in Geneva under the auspices of the United Nations. In a real sense, that conference, with its thousands of governmental delegates and representatives of science, technology, and industry, and the hundreds of scientific papers presenting information never before published, had marked the beginning of international nuclear co-operation and exchange

36. That first International Conference on the Peaceful Uses of Atomic Energy had represented a high point in the expectations of the benefits nuclear energy would bring. After twenty years it had become clear that the initial expectations about the use of nuclear energy, especially in power production, had been unduly optimistic. Lower energy demands, declining oil prices, environmental concerns, and the growing cost, over the previous ten years, of nuclear installations as well as the capital needed for investment, had led to a drastic reversal of the upward trend of nuclear power production. Nevertheless, it was necessary to continue research and development on non-fossil sources of energy so that, when demand increased again and existing resources became scarcer, alternative sources would be available under favourable and safe conditions.

37. The work done by the International Atomic Energy Agency in helping, especially the developing countries, to prepare for that day by elaborating means of forecasting electricity demand, by rendering assistance in planning and by training personnel, was highly commendable. The Agency's work on

spent fuel management, and on waste management in general, was also of direct relevance to the application of nuclear energy for power production, in both developing and industrialized countries.

38. Among the many other beneficial uses of nuclear energy actively promoted by the Agency were various applications of radioisotopes in agriculture, the life sciences and the physical sciences. Particularly promising for the future was the work in insect and pest control, with its relevance to agricultural production in developing countries, and the use of isotopes in hydrology, which could have an important impact on the development of water resources in areas suffering from drought.

39. The Agency also had a major contribution to make to the preparations for the United Nations Conference for the Promotion of International Co-operation in the Peaceful Uses of Nuclear Energy (UNCPICPUNE). That conference could be expected to give fresh impetus to co-operation in the nuclear field.

40. The International Atomic Energy Agency carried out a unique task as an international organization developing and applying a system of verification to ensure that nuclear installations devoted to peaceful purposes served only those purposes. The importance of that task had been highlighted recently in Geneva at the Third Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons. That conference had again stressed the great concern felt by the international community at the spread of nuclear weapons and at the failure of the nuclear Powers to restrict and reduce their nuclear arsenals.

41. Although of great significance as a deterrent to the spread of nuclear weapons, the Non-Proliferation Treaty was only one of a variety of measures, including bilateral and multilateral arrangements, which together made up a world-wide non-proliferation regime that relied largely on the Agency's safeguards for its effective functioning. The experience gained in the application of the Agency's safeguards was also very important as a possible precedent for verifying compliance with the future disarmament measures that were so urgently needed.

42. The International Atomic Energy Agency had been created for functional and technical purposes. However, it could not be expected that the Agency, as a body with a world-wide membership in which the viewpoints of States of all political and geographic backgrounds were heard, would be entirely isolated from controversies that were of great concern within the international community. Nevertheless, such political controversies should not be allowed to hamper the execution of the organization's mandatory activities. It was very important that all concerned should collaborate to that end. Praiseworthy efforts had in fact been made to settle the issues that had been the subject of so much discussion in the Agency's governing bodies.

43. The Agency's functions were of direct importance both to the safer world that could be ensured by limiting the military applications of nuclear energy and to the more prosperous and healthy world that the peaceful utilization of the power of the atom could produce.

44. The Agency's responsibilities were certain to increase in range and gravity as the nuclear age developed still further. The International Atomic Energy Agency was able to contribute a great deal to ensuring that the nuclear age would be known as the time when humanity met successfully its greatest challenge by removing the terrible threat inherent in the existence of nuclear weapons.

45. He wished the General Conference every success and personally congratulated Mr. Manouan on his election to the post of President of the General Conference.

STATEMENT BY THE DIRECTOR GENERAL

46. The DIRECTOR GENERAL said that an important function of the General Conference was to serve as a meeting place where the governmental part of the world's nuclear community could discuss the status of peaceful nuclear technology and its international implications, and he hoped that the four booklets which had been issued in time for the Conference - on nuclear power, radioactive waste management, nuclear safety and secondary standard dosimetry laboratories - would constitute useful material for that discussion.

47. Constitutional tasks of the General Conference were to consider the annual report, which gave a systematic and comprehensive account of Agency activities, and to approve the Agency's budget. Although the budget was the result of a long process of contacts with Member Governments, its discussion and approval by the policy-making organ in which all Members could take part was important to ensure that the Agency's activities remained responsive to both continuing and new needs of the membership.

48. There was no doubt that the Agency's principal activities continued to relate to matters of special interest to Member Governments. The safeguards system helped to give assurance that nuclear programmes remained peaceful, and it provided valuable experience in the field of on-site inspection. Nuclear power, which the Agency sought to promote, remained one of the few realistic power options for the foreseeable future and one indeed which met some of the pressing environmental concerns of the day. Nuclear techniques were being used alongside conventional techniques to tackle urgent problems of crop production, soil, water and fertilizer use, and food preservation. Governments' consistent support for those broad fields of work did not, however, obviate the need for comments on the various activities within them, or the need to ask whether there were new activities which ought to be undertaken or old ones that could be phased out. For instance, should the Agency assume a role in the broader field of energy, as some national atomic energy commissions had done, and should the Agency be more active in the field of public information for promoting nuclear energy? However such questions were answered, the overriding criterion for the selection of tasks should be: was the activity a service which Members needed? As the many facets of the Agency's programme were examined, it was necessary to ask in all cases: were meetings on particular subjects needed; were publications of use; were missions of real benefit; and was assistance responding to the most urgent needs?

49. Turning first to the role of nuclear power and the Agency's activities for promoting it, he noted that a part of those activities consisted in the compilation and dissemination of data. The booklet "Nuclear Power, Status and

Trends" before the Conference was a product of that activity. Although the Agency was by no means alone in compiling and analysing nuclear power data, he considered it a natural and useful function for an institution in constant touch with Governments throughout the world. The data compiled also provided Governments and the Agency with a factual basis for discussing the role of nuclear power.

50. For various well-known reasons, energy production in general - and nuclear power in particular - had expanded less rapidly in the last decade than had earlier been foreseen. During 1984, however, despite the unfavourable situation prevailing, the total installed nuclear capacity in the world had increased by 17%, with 34 new nuclear power units being connected to the grids in thirteen countries. In both absolute and relative terms that was the largest annual increase since the beginning of the large-scale introduction of nuclear power in the early 1970s.

51. There was no reason to gloat over the fact that most of the so-called alternative sources of energy had not turned out to be the panaceas anticipated by the opponents of nuclear power. A wide variety of sources of energy was indeed desirable, and research and experimentation were important. The fact was, however, that while some of that work had yielded and continued to yield valuable results, it was still likely that, for the foreseeable future, only conservation, coal and nuclear power could have a substantial impact on the world's energy situation.

52. He pointed out, first, that although conservation was producing magnificent results and could continue to do so, the trend in electricity consumption was one of marked increase. Given the large differences between the levels of electricity use in different countries, that trend could be expected to continue. Secondly, the economic viability of nuclear power remained excellent and compared favourably with fossil-fuel plants in terms of reliability and generation costs. A study published by the Commission of the European Communities in November 1984 gave the additional cost of electricity produced from coal by comparison with the cost of electricity of nuclear origin as 51% for Belgium, 74% for the Federal Republic of Germany and 88% for France, to take only a few examples.

53. Secondly, some recent developments relating, for example, to new types of nuclear fuel and longer cycles of operation, had contributed to making the economic picture even more positive than it had been a few years earlier. Plant availability had improved remarkably, attaining the 70-80% range in several countries, and the world-wide average load factor, which for many years had stayed at around 64%, had increased to 69% in the last year. If the life expectancy of nuclear plants was pushed up to some 40 years - as was currently thought by many to be reasonable as a result of better "health care" for facilities - economic viability would also further improve.

54. Thirdly, the environmental advantages of nuclear power were significant, and were bound to become recognized more and more. When a new source of electricity had to be chosen to meet increasing needs - and that was a choice that in many countries tended to be delayed for financial or political reasons - the excellent environmental record of nuclear power could not be ignored.

55. Although, fortunately, modern technology made it possible to reduce the pollution from coal plants, even those reduced levels gave rise to concern, and the production of carbon dioxide, with its ominous greenhouse effect, could never be prevented when fossil fuels were used. Recent commitments to reduce levels of sulphur dioxide, made under the Convention on the Prevention of Long-Range Transboundary Air Pollution, highlighted the environmental problems of the fossil fuels, not least in the power generating industry. While nuclear power had long had to bear substantial costs to ensure that no environmentally dangerous radiation was released, fossil fuels were now facing that necessity, which would undoubtedly have an impact on their costs.

56. While increased attention to operation, maintenance and the training of personnel was currently yielding valuable dividends in terms of availability and economy, it would be wrong to ignore the longer-term question of what could be gained by the use of more advanced nuclear technologies than those represented in the common types of power reactor at present. It was evident that the glut in the market for uranium and enriched uranium had caused the interest in breeder technology to become less urgent. It should not, however, be forgotten that uranium resources, like oil, were finite, and he noted that

the world's experience of breeder technology - which could make uranium resources go a very long way - had been further expanding during the current year: Superphénix had gone critical and India was inaugurating a new test breeder reactor near Madras.

57. The past year had also seen some further developments in the discussion on small and medium power reactors (SMPRs) which would be suitable for developing countries with small electric power grids, and he pointed out that the Scientific Afternoon during the Conference would be devoted to that type of reactor. The first phase of the SMPR Project Initiation Study had been completed. Sixteen suppliers had provided information on some 23 plant designs in the SMPR range - plants with an electrical output below 600 MW(e) - several of which were technically mature enough to be offered for export within two to three years. The situation of ten years earlier, when interest from the supply side had been meagre, had thus changed dramatically.

58. Some seventeen responses had been received from potential buyers in the developing world. They had shown some hesitancy about introducing SMPRs without assurances about their economics. Such assurances, however, could be obtained only through further site-specific studies and, ultimately, through a comprehensive feasibility study which would require the active involvement of both potential buyers and suppliers. The Secretariat would be willing to co-ordinate such studies in the second phase of the SMPR project. A special meeting was being held in connection with the Scientific Afternoon to discuss specific plans and to identify the countries to which those studies were to relate.

59. It was clear that the whole question of financing nuclear power plants had become a major constraint, not only for developing countries but for some industrialized countries as well. The total capital cost, including interest incurred during construction, for a nuclear plant in the 600-900 MW(e) range would be of the order of $1.5 to $2 billion.

60. While the Agency was well equipped to calculate the relative economic and other advantages of different sources of energy, it had no influence - except for unbiased economic calculations of the type he had mentioned - over

financing institutions. Its relations with the World Bank, for instance, although excellent, were confined to co-operation on energy planning schemes in various countries. That did not mean, however, that the Agency was uninterested in the question of financing or could not devote more attention to it. He noted that a seminar on "Cost and Financing of Nuclear Power Programmes in Developing Countries" had very recently been arranged in Vienna. The Seminar had featured a report on a financing approach currently contemplated that consisted in the establishment of a joint enterprise between the exporting plant supplier and the local utility. In that way the plant would be paid for with income from electricity sales during the first fifteen years; at the same time, the supplier would remain involved in the management of the plant and would have a strong interest in its reliability and availability remaining high. The nuclear community would doubtless be intrigued to see whether the scheme became reality and, if so, how it worked out.

61. The Nuclear Safety Review for 1984 - the printed edition of which had been timed to come out for the Conference - gave a broad account of safety activities, including the Agency's. He wished, however, first to offer a few reflections on the subject and to highlight some services which had been introduced by the Agency in the past few years.

62. Not infrequently conversations with people from the nuclear community revealed both puzzlement and some bitterness that even small abnormal events relating to nuclear power evoked public concern and attracted the attention of the media, while large accidents in other industries might pass relatively unnoticed. Sometimes that was ascribed to a bias in the media. In any case, it was felt to be unfair that different standards were applied. Despite the very large numbers of casualties which had resulted from catastrophic accidents in aviation and in the chemical industry in recent times, no one had called for a halt in those industries, and a dam catastrophe in the previous summer had not caused any general questioning of whether dams for hydropower were sufficiently safe. A nuclear accident involving even a few casualties would certainly have led to world-wide questioning of the safety of nuclear

power. One might well ask why that was so, what could be done about it and how long the civilian nuclear industry, which had a better safety record than any other energy industry, would have to put up with such an attitude.

63. It seemed that, paradoxically, the very rareness of accidents in civilian nuclear plants was a reason for sensitivity about the industry. Fear was bred by the unknown, and people's imaginations were allowed full play. The film "The China Syndrome" was an example. Also, associations with nuclear bombs spilt over into some people's thoughts on civilian nuclear matters. What, then, was the solution?

64. Despite the fact that the Three Mile Island (TMI) accident had been providing the world with very important information, including a more realistic view of the possible course and consequences of a core melt, no more accidents like TMI were wanted, since that accident had been enormously costly both to the plant's owners and in the sense that it had decreased confidence in nuclear power. Instead, unknown factors must gradually be clarified through research, such as the international severe fuel damage research programme, and confidence in the reliability of nuclear power must be created through cautious and careful operation of nuclear plants around the world.

65. The years of successful operation that had now passed without any serious accident were without doubt gradually having a positive impact on the image of nuclear power. Increased attention to management, training and operation was paying off not only with better reliability and economy, but also with greater public confidence. Apart from the dissemination of objective information, no recipe could be offered other than continuously paying meticulous attention to the safe operation of nuclear plants. There were many ways in which that could be done, and the Agency continued to be engaged in several of them. Although they had not shown an interest in drawing up binding international rules on safety, Member States, building on their collective knowledge and experience, had worked out recommendations and guidelines under the Nuclear Safety Standards (NUSS) programme.

66. The Incident Reporting System (IRS) had now expanded to cover most Member States with nuclear power plants in operation, and he welcomed the fact that it had recently been joined by the United States. The system not only served Members by compiling and disseminating facts about incidents, but had also begun to share recommendations and lessons learnt from the incidents.

67. In order to advise operating organizations and regulatory authorities at their request on the safe operation of their nuclear facilities, the IAEA Operational Safety Review Team (OSART) service had been initiated in 1982. Its present objective was to facilitate the exchange of know-how among international experts and personnel at the site. So far five such missions had been undertaken. Moreover, guidelines were under development and should be ready during 1985; their aim was to provide uniform objectives and criteria for the reviews and to ensure comparable coverage of all major items relevant to operational safety.

68. Another activity that seemed to meet very clear needs in Member States was that of the Radiation Protection Advisory Teams (RAPATs), which the IAEA had launched in the previous year. The service had been set up in the knowledge that significant radiation incidents had occurred in non-power applications of nuclear energy. On request, the teams would review national radiation protection programmes covering all nuclear applications and would advise on the preparation of legislation on radiation protection, on measures needed, for example, for the safe transport of radioactive material or on the establishment and proper functioning of monitoring programmes. Four RAPAT missions had already taken place and another three were scheduled to take place before the end of the year.

69. The importance of the accurate measurement of ionizing radiation in all applications of radiation and for radiation protection purposes was growing as the number of sources increased. Through its network of secondary standard dosimetry laboratories (SSDLs), the Agency helped to ensure the quality of measurements in developing countries. The SSDL network was described in detail in a special booklet before delegations. However, neither OSARTs nor RAPATs could relieve a state of its full responsibility for nuclear safety in power plants or elswhere, and they remained advisory services.

70. A new development in the current year had been the establishment of the International Nuclear Safety Advisory Group (INSAG). Thirteen experts from nuclear safety licensing authorities, the nuclear industry and safety research and development bodies had convened; they had already selected three main issues for the exchange of views and recommendations: incident feedback, the human element and source terms. They had thus placed the emphasis on practical, operational problems. Given the calibre of that group and its approach, he was confident that it would be of great use. It was to hold its second meeting during the next month.

71. Before leaving the subject of nuclear safety, he wished to report that the Convention on the Physical Protection of Nuclear Material had been ratified by fourteen States, four more since he had reported in the previous year. Although he was aware that parliamentary procedures often took time, he appealed to Member States to speed up their adherence procedures so that the Convention could come into force; for that, 21 ratifications were needed.

72. With regard to the management of spent fuel and the ultimate disposal of radioactive waste, he said that responsibility for those activites, like responsibility for operational nuclear safety, naturally rested with the Governments permitting the activity which produced the waste. A valuable exchange of experience had, however, taken place through the IAEA, and guidelines and codes of practice building on the collective experience of the nuclear community had been elaborated. A status report on the management of radioactive waste, summarizing both the activities of the IAEA and those of its Member States in that area, had been issued by the IAEA before the Conference. The question which had so far remained largely unanswered, however, was whether it was feasible to extend international collaboration to the physical storage of spent fuel and waste disposal. The strong interest that had been demonstrated by supplier nations - for both commercial and non-proliferation reasons - in providing enrichment and reprocessing services was in stark contrast to the absence of almost any interest in the provision of long-term spent fuel storage and waste disposal services. The unease with which public opinion in many countries had considered the question of waste disposal was of course the reason why so many Governments had not been willing to contemplate the disposal of waste other than that generated by their own industry.

73. Although the IAEA study of a few years earlier on regional fuel cycle centres had not evoked any positive response, it might well be that practical co-operation of one sort or another would commend itself when conditions were favourable. A modest beginning might take the form of international co-operation in the management of spent fuel, as had been suggested by an IAEA expert working group in 1982. Although even that had not yet materialized, he submitted that certain factors were making co-operation on both spent fuel management and waste disposal more attractive.

74. There were - and it was clear that there would continue to be - countries with very small nuclear porgrammes and countries without geologically ideal disposal sites. Should such countries be deprived of nuclear power or be obliged to spend disproportionate sums on disposal sites which did not offer the advantages of large-scale operations? The host country of the IAEA, owning at present only one mothballed power reactor would need assistance from another country with waste disposal. It seemed that at least two countries would be prepared to offer such assistance. Obliging as such offers might seem, it would presumably present only limited practical problems to any country with extensive nuclear activities to accept the waste from a small number of foreign power plants.

75. The Agency's host country was not the only country which had expressed interest in an international waste repository. The report of the Commission of the European Communities to which he had referred earlier argued that a regional approach to the problem of waste disposal would prevent costly storage projects from being undertaken prematurely and on an individual basis and that such a solution would seem to be indispensable in the case of countries that had limited nuclear programmes.

76. Whereas only a few years earlier national planning of off-site spent fuel installations and waste disposal plants had not generally advanced very far, both concepts and techniques could now be much more clearly visualized. Indeed, in some cases off-site installations for the storage of spent fuel had already been set up. Earlier, an international dimension to such facilities was probably more than could be contemplated. It did not now seem

unreasonable to urge planners to consider what economic and other advantages might be derived from designing capacities which would allow for the storage of some foreign spent fuel or for the disposal of some foreign waste.

77. Another important factor might be the buyers' market that existed for nuclear power stations. The supplier who could make an offer for ultimate waste disposal to a country with a small number of reactors might well find that he had a selling point. The more confident he felt about waste disposal, and the more advanced the plans for his own system were, the less difficult it should be to make such an offer.

78. A further consideration of international relevance was that, the more the great environmental questions of the day were examined, the more it had to be admitted that international concern about them was justified. That was obviously true of releases by individual countries into the common atmosphere and into territorial waters which formed part of the hydrological cycle of the earth. Some international interest was also justified in the disposal by individual countries of highly radioactive waste. It was not a matter of indifference how individual countries approached the question, and large, well-organized, well-located and well-equipped sites would seem preferable to a host of smaller sites.

79. Pursuant to its responsibilities under the London Dumping Convention, the Secretariat had prepared a revision of the Agency's "definition" of high-level wastes unsuitable for sea disposal and "recommendations" for other radioactive wastes. Considerable effort had been devoted to that task, in which the Agency had worked in close co-operation with other United Nations agencies and intergovernmental organizations.

80. In response to proposals by some States Party to the London Dumping Convention, a group of experts nominated by the Agency and the International Council of Scientific Unions had reviewed the question of whether there was a scientific basis for amending the annexes to the London Convention relating to radioactive wastes. During the present week the Contracting Parties to the Convention would consider the report of that group which, while not conclusive, did not indicate a strong need to amend the annexes at present.

81. Technical co-operation and assistance might, of course, be seen as a service to Member countries with a view to facilitating the transfer of nuclear technology. But it did not take place exclusively in one direction: increasingly, experts and resources were also being provided by the developing countries. Total available resources for the technical assistance and co-operation programme had almost doubled between 1980 and 1984, to the amount of $36 million in 1984. Extrabudgetary sources had continued to provide some 25% of the total funds received. It was most encouraging that a consensus on a 12 per cent annual increase in the target for the contributions to the Technical Assistance and Co-operation Fund for the three-year period 1987-1989 had been reached during the previous week in the Board of Governors.

82. Following a Board review of technical co-operation policies, since 1983 the number of regional projects had doubled and the number of interregional projects had tripled. In addition, "pre-project assistance" had been introduced in order to publicize better the services and assistance of the Agency available for developing countries. That was particularly important for the least-developed countries. Another novelty was "dynamic programming", which had made it possible to release funds to carry out footnote a/ projects which would otherwise not be funded and to increase the funds available for general fellowships. More emphasis was being placed on technical co-operation among developing countries, for example, through regional co-operation agreements, such as the RCA and ARCAL programmes; the former had provided more than a dozen years of useful experience in Asia and the latter was being set up in Latin America.

83. So far, the Secretariat had been able to cope with the growth in the programme by means of reorganization, computerization and dedication on the part of staff. However, a point of diminishing returns was being reached, where present staff resources were becoming overburdened.

84. The Agency's technical co-operation activities in food and agriculture were placing emphasis on Africa, thereby contributing to the United Nations system's efforts to face the emergency in Africa and to link relief assistance to a process of sustainable development; in fact, more than 40% of the Agency's technical co-operation projects in food and agriculture were in

Africa. At the request of a number of States, a mission had recently visited Africa and had recommended regional assistance in the area of animal production and health, and a second mission was to study the potential for food irradiation there. A planned co-ordinated research programme would aim at improving basic African food crops such as yams and cassava. A large-scale demonstration project in Nigeria had successfully shown the feasibility of using the sterile-insect technique to control a species of tsetse and could serve as a model for other African countries.

85. Isotope techniques were being promoted in seven African countries as a tool in the assessment and development of water resources. Based mainly on groundwater, which was essentially the only source of water in arid regions, the data collected could be used to identify areas where replenishment was occurring. All of those efforts required closer co-operation with other agencies in the United Nations system to ensure that radioisotope and radiation techniques were being applied in projects that would have a real impact in the process of rehabilitation or development.

86. He was pleased to report that the new laboratory wing at Seibersdorf, which was being funded jointly by the Agency and FAO and which was to house the plant breeding and plant nutrition units, would be completed in the next year. Unfortunately, plans for a new building to allow an expansion in training at Seibersdorf had had to be put off for lack of funds.

87. In connection with the work of the Committee on the Assurances of Supply (CAS), he said that it was natural that countries deciding to rely upon nuclear power for part of their electricity supply would feel an urgent need for assurance that the import of fuel, spare parts and relevant technologies would continue undisturbed. It was equally understandable that suppliers who had been given non-proliferation undertakings would wish to remain convinced of the determination of importers not to make any military use of their programmes or of imported equipment or material. CAS had been the forum for discussions on those two sides of the nuclear trade issue since 1980.

88. Since CAS had begun its work, more suppliers had entered the nuclear market, giving a wider choice to importers. The buyers' market that had

evolved in the field of enrichment, the somewhat smaller interest in reprocessing and the growing awareness among suppliers of the need to maintain or restore a record of reliability had all tended to lessen the incentives for importing countries to seek expensive independence for their fuel cycle.

89. It was possible that that slight improvement in the atmosphere had brought some benefit. In any case, CAS had reached positive conclusions in its consideration of several practical measures to facilitate international co-operation. Among those he would include measures for alleviating technical and administrative problems in international shipments, emergency and back-up mechanisms, and mechanisms for the revision of intergovernmental co-operation agreements in the nuclear field. By means of intensive consultations conducted by the CAS Bureau, the differences in views on the general principles of international co-operation in the field of nuclear energy had been narrowed down, and a consolidated and simplified paper would be taken up by CAS during the next month.

90. The safeguards system operated by the Agency had been the subject of an unusual amount of comment during the present year, which had no doubt been stimulated by the Third NPT Review Conference. By the publication of several booklets and the production of a short film, the Agency itself was trying to promote a correct understanding of the system. Such an understanding must have regard to both the possibilities and the limitations of safeguards.

91. It needed to be understood, for instance, that although safeguards were of crucial significance, the most important barrier to the acquisition of nuclear weapons by further States was the conviction of those States that they did not need such weapons or that such weapons would detract from rather than contribute to their security. Since total confidence on the part of the rest of the world in the non-nuclear-weapon status of a country was of fundamental importance, however, the commitment to such a status through binding treaty obligations and also on-site verification by an impartial organization became important.

92. Essentially, safeguards were a service to States which sought to create the maximum confidence in the peaceful operation of their nuclear activities. Only an impartial international organization could offer such a

service. It was up to Member States to decide whether they wanted to avail themselves of the service and the advantages it might bring in the State's relations with the outside world. The service was not imposed on anybody. But, when it was rendered, it must be so thorough and so reliable that it created the confidence desired. It could not be a paper tiger, since it would then be worse than useless and might for a time give rise to false confidence.

93. The Agency therefore had the responsibility for operating the system in such a manner that it continued to deserve the confidence of the world. While the Secretariat would certainly avoid making excessive requests for the funding of safeguards, and would seek to improve efficiency to the utmost, it would be failing in its responsibility if it did not maintain and even seek to consolidate and improve the credibility of the system yet further. Zero growth could not be enforced like a strait-jacket in an area in which the Agency was bound by its Statute and by international agreements to carry out certain activities and in which the extent and scope of the activities must necessarily depend primarily on the growth of nuclear programmes around the world. Measured against what was at stake in safeguards operations, the sums involved by way of contributions from Member Governments were relatively small and should be shared in a generous spirit. Those operations were of value to all States in the world, including those which for various reasons did not accept safeguards on all their nuclear activities. The nuclear industry itself had also generally come to support safeguards fully. It recognized that the system provided useful checks on national accounting systems and that it gave the public of each country an assurance with international status that nuclear plants were of an exclusively peaceful nature.

94. Commenting upon some specific events relating to safeguards in the past year, he said that the agreement between the Soviet Union and the Agency for the application of safeguards in the Soviet Union had been approved by the Board of Governors in February and had entered into force on 10 June. Two facilities had subsequently been selected for safeguards implementation: one nuclear power station and one research reactor. The first inspections had been carried out in August.

95. The hexapartite agreement on the safeguarding of centrifuge enrichment plants had been concluded in February 1984, and several Facility Attachments had been agreed upon. Two of them, that for the Almelo plant in the Netherlands and that for the Ningyo enrichment plant in Japan, had entered into force.

96. The situation concerning safeguards in South Africa had been set out in detail in a separate report which was before the Conference. However, he wished to bring the Conference up to date in respect of safeguards for the semi-commercial enrichment plant in that country. The Agency and South Africa had held further discussions on the topic in 1985. A major part of the design information had been received in Vienna, and technical discussions had been held since then both in Vienna and in South Africa, when Agency representatives had visited the plant. The visit had taken place in August, and the Agency was preparing a safeguards approach for the plant. On the broader question of full-scope safeguards there was no progress to report.

97. The Third NPT Review Conference had just ended. While it was for individual Parties to the Treaty to assess the Review Conference as they thought fit, he believed the Conference would wish him to report on the salient features of the conclusions of the Review Conference specifically concerning the Agency, even though the time available for analysis since adoption of the Declaration of the Conference had been very short.

98. The main issue before the Conference had, understandably and properly, been nuclear disarmament and the achievement of measures leading towards it. That was not an area where the Agency had direct responsibilities, and he wished merely to state his own conviction of its crucial importance. In addition, however, the Review Conference, as reflected in its Final Declaration, had also laid emphasis on Article III of NPT, which dealt with safeguards, and Article IV, which dealt with the rights of all parties to the fullest exchange of material, equipment and technology. The Review Conference had made a number of specific comments about the Agency's responsibilities and achievements in relation to those two Articles, including recommendations for action.

99. As to Agency safeguards, the Review Conference had stated its view that, together with the non-proliferation commitments laid down in NPT, safeguards not only were central to international peace and security but were also essential for peaceful nuclear commerce and co-operation. The Review Conference had welcomed the voluntary safeguards agreements negotiated so far with four nuclear-weapon States. It had also recommended that further consideration should be given to the extension of safeguards to additional, and eventually all, peaceful nuclear facilities in the nuclear-weapon States as and when the Agency's resources permitted it. The fact that the Agency, in its safeguards activities, had not detected any diversion of safeguarded material for nuclear weapons or other nuclear explosive purposes had been noted with satisfaction, as had the fact that safeguards had not hampered the economic, scientific or technological development of Parties to the Treaty, or international peaceful nuclear co-operation. The Review Conference had urged that that situation be maintained.

100. The Review Conference had emphasized the importance of improving the efficiency and effectiveness of safeguards and had made certain specific recommendations in that regard. It had called upon Parties to the Treaty to continue their political, technical and financial support for safeguards, and had underlined the need for the Agency to be provided with the necessary resources to ensure the continued effective discharge of its safeguards responsibilities.

101. With regard to the peaceful uses of nuclear energy, the Review Conference had reaffirmed the inalienable right of all Parties to the Treaty to develop research into nuclear energy, and the production and use of nuclear energy for peaceful purposes, without discrimination. It had also reaffirmed the undertaking of all Parties to facilitate the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy. It had encouraged co-operation, bilateral and multilateral, to assist the further development of the application of nuclear energy for peaceful purposes, with due consideration for the developing areas of the world, and bearing in mind the needs of the least developed countries.

102. The recent progress in the Agency's Committee on Assurances of Supply (CAS) had been commended, and the Review Conference had called for the early completion of the work of CAS and implementation of its recommendations.

103. The importance of the Agency as the principal agent for technology transfer among the international organizations had been noted, and the Review Conference had recorded its appreciation of the wide range of the Agency's technical assistance and co-operation both in the power and non-power sectors, whereby considerable emphasis had been placed by some parties on power applications. Specific recommendations had been made for strengthening the Agency's activities aimed at assisting developing countries in such areas as nuclear development strategies, nuclear planning systems and siting and construction and operation of nuclear power projects, with the necessary resources being made available to the Agency for such activities.

104. The availability of finance for nuclear power projects had been identified as a major difficulty, and the Review Conference had requested the Agency to initiate an expert group study on mechanisms to assist developing countries in the promotion of their nuclear power programmes, including the establishment of a financial assistance fund. In that context, he mentioned that the Agency's recent seminar on the financing of nuclear power programmes in developing countries, to which he had referred earlier, had been attended by many Member States, both developing and industrialized, and by several financial institutions, including the World Bank.

105. The Review Conference had also expressed its satisfaction at the progress made in the preparations for the United Nations Conference for the Promotion of International Co-operation in the Peaceful Uses of Nuclear Energy (UNCPICPUNE) and its conviction that the Conference would fully realize its goals.

106. He was confident that the Conference would agree that the Secretariat should study the various specific recommendations of the Review Conference relating to the Agency's activities and to the improvement and strengthening of its capabilities and effectiveness in both safeguards and technical co-operation, and should in due course bring forward such proposals as might be appropriate to the Agency's policy-making organs.

107. The NPT Review Conference had also concerned itself with the question of how to protect nuclear installations devoted to peaceful purposes from armed attack and the threat of such attack. Regrettably, that was no academic subject, but one with which the IAEA had been concerned on several occasions, both as a general question and as a specific one.

108. In discussing the general question, the Review Conference had recognized that an armed attack on a safeguarded nuclear facility or the threat of an attack would create a situation in which the Security Council would have to act immediately. It had also considered that such attacks could involve grave dangers arising from the release of radioactivity and could jeopardize the development of peaceful nuclear energy. It had acknowledged that the matter had been under consideration by the Conference on Disarmament and had urged all States to co-operate with a view to its speedy resolution.

109. Furthermore, the Review Conference had encouraged Parties to the Treaty to be ready to provide immediate peaceful assistance to any Party to the Treaty, if it so requested, whose safeguarded nuclear facilities had been subject to armed attack.

110. The general question had been discussed by the General Conference both in 1983 and 1984, and resolution GC(XXVII)/RES/407, adopted in 1983, had declared that all armed attacks against nuclear installations devoted to peaceful purposes should be explicitly prohibited and had requested the Director General to keep the General Conference informed of developments in that area. He was able to report in that regard merely that the question continued to be discussed at the Disarmament Conference in Geneva and that the NPT Review Conference had considered it, with the conclusions that he had mentioned.

111. Some of those conclusions were similar to those advanced in his report to the General Conference of 30 August 1984 (document GC(XXVIII)/719), namely that "it is evident that an armed attack or the threat thereof on a peaceful nuclear installation could have serious consequences for the peaceful applications of atomic energy, for international nuclear collaboration and for Agency safeguards", and that "international action to ensure the security of peaceful nuclear installations would be of great value".

112. He hoped that there would be a growing commitment to the principle that nuclear facilities devoted to peaceful purposes, wherever located, must not be the subject of attack or the threat of attack and that it would be accepted that the safeguards regime of the Agency constituted evidence of the peaceful operation of a facility.

113. In 1984 the General Conference had adopted resolution GC(XXVIII)/RES/425 concerning the consequences of the Israeli military attack on the Iraqi nuclear research reactor. It had requested the Director General, inter alia, "to seek personally from the Government of Israel a commitment not to carry out any further attacks on nuclear facilities in Iraq or on similar facilities in other countries, devoted to peaceful purposes, in disregard of the Agency's safeguards system", and to report to the General Conference. The Conference had also called on all Member States to assist and support the Director General's efforts in that regard.

114. He wished to report to the Conference only that he had had numerous contacts with the Government of Israel in pursuance of the mandate given to him and that he had called on a number of Member States to assist and support him in his efforts in that regard. While those efforts had been inconclusive, he knew from the many discussions he had had that there was a widespread wish for the IAEA to put the matter behind it and to renew confidence in the fact that peaceful nuclear installations could be constructed and operated without fear of an armed attack - in Iraq and other countries in the Middle East or, indeed, anywhere else. He hoped that the efforts made in the past year would at least contribute to that, and he expressed his appreciation to all the Governments, Governors and Resident Representatives who had been so helpful with that difficult matter.

115. Turning to the programme budget and staffing, he said that, in applying safeguards, in promoting nuclear technology for peaceful purposes, in issuing international safety standards and sending advisory missions, the Agency essentially provided services to the Member States. To be of maximum use, areas of work should be selected for the Agency such that its Members stood to gain most by international co-operation. In preparing the programme and budget in the future, it would be necessary to have the advice and comments of

Member States attending the General Conference and the views of the many representatives and experts with whom the Secretariat was in touch in its daily work.

116. In order to make increases in the programme while maintaining zero real growth in the Regular Budget for 1986, which amounted to US $98.7 million, savings had had to be made. In particular, administrative costs had been reduced and the cost of the adoption of a new working language had been absorbed through economies realized elsewhere. At the same time, efforts had been made to improve internal management through closer monitoring of programme and budgetary performance.

117. In the new format of the programme budget, the accent was being placed on what was to be delivered and done rather than on the allocation of money to specific Secretariat units. The intention was to pursue and strengthen that delivery-oriented approach in the programme for 1987-88. A longer-term framework was also to be established for the actions planned for that period by the identification of longer-term objectives at the project level. A great effort would be made to identify carefully the problems which should be given high priority during the next few years in Member States. He expected that the Agency's Scientific Advisory Committee would play an important role in that connection. Lastly, a closer link should be established between the techical co-operation programmes and the other Agency programme activities. That should help technical divisions to give greater attention to all aspects of the planning and implementation of technical co-operation projects. It might also help to orient some of the content of the other technical programmes towards those subjects in which the needs of developing countries were greatest.

118. The Secretariat also intended to prepare budget estimates for both years of the 1987-88 biennium. It had had many years of experience in formulating the programme content in detail for a two-year period. That should enable it to prepare estimates of the budgetary resources required for both years with the same degree of detail and realism. The process of informal consultation could then cover both the two-year programme and the budgets for those two years. However, formal approval by the Board of

Governors and by the General Conference would, as at present, be limited to the annual budget and manning table for the one year ahead.

119. To take on a larger programme without corresponding staff increases was only possible with a dedicated, industrious and loyal staff. The IAEA was fortunate in having such a staff. In the recruitment of new staff, particular attention had been paid to General Conference resolutions which urged him to take steps to increase substantially the number of staff members drawn from developing areas, particularly at the senior and policy-making levels.

120. At the same time, in respect of each individual case of recruitment, he was aware that the interests of the membership were best served not by selection according to geography, but by selection of the most competent of the candidates who had presented themselves. At the levels singled out in the General Conference resolutions, i.e. the upper ones, a great deal had been done to implement the resolutions. Overall, progress had been modest, and an active recruitment policy, the continuation of the training course and the assistance and understanding of Member States would be needed.

121. In conclusion, he wished to revert to the main theme of his statement, that of the service that the organization was to render. International organizations had generally been the subject of a good deal of criticism from both Governments and the public in the past few years. Some of that was directed at debates that seemed never to lead to accommodation or a solution. Some of it was aimed at secretariats perceived to be large, well-remunerated and unproductive. Much of the criticism was based on misunderstandings, and information was required to dispel it. It would be a mistake on the part of both Governments and secretariats, however, to ignore the impatience that underlay the criticism. The United Nations and most of the organizations of the United Nations family had come into being in the wake of the Second World War; the public all over the world had supported them and had expected them to facilitate co-operation and prevent conflict. There was no doubt that they often did that and that such institutionalized co-operation contributed to the gradual weaving of an international social fabric. Their potential should be both well and fully used, however, lest the public lose hope and withdraw its support. It was the common task of Governments and secretariats to ensure that the organizations were constructively used.

122. The Statute of the IAEA had foreseen several far-reaching functions that had not yet become reality. The larger part of the Agency's work consisted in being an instrument for the exchange of experience, for the elaboration of common guidelines for the transfer of knowledge and technology and for the harmonization of action. Those were down-to-earth, practical activities. He believed that the general public would approve of them and would feel that taxes used for those purposes were being well used. He believed that it would also agree that the IAEA was needed as an international forum if the harmonization of divergent policy interests was to be achieved, although perhaps it would at times feel impatient at the slow pace of progress. Moreover, he believed that the public would feel, as he did, that safegaurds represented a spearhead into a world of increased mutual confidence, an instrument that Governments might use more extensively, for example for building confidence in the peaceful confinement and use of the growing quantities of plutonium.

123. All concerned had a duty to consider whether they were responding effectively to the trust and hope that the public had placed in them and whether even better use of the Agency could not be made in order to contribute to the peaceful use of the atom.

124. Finally, he expressed his gratitude to the Agency's host country, Austria, and to the City of Vienna, for the hospitality and support they had shown the organization.

VOLUNTARY CONTRIBUTIONS TO THE TECHNICAL ASSISTANCE AND CO-OPERATION FUND FOR 1986

125. The PRESIDENT said that in 1982 the Board of Governors had agreed to continue - for the years 1984, 1985 and 1986 - the practice of recommending indicative planning figures as an aid in fixing targets for voluntary contributions to the Fund. The figure for 1986 had been set at US $30 million, and in the draft resolution relating to the Technical Assistance and Co-operation Fund in Annex III to document GC(XXIX)/750 the Board of Governors now recommended that figure as the target for voluntary contributions to the Fund for the following year.

126. Since early pledging would considerably facilitate the work of the Secretariat in planning technical assistance programmes, he urged all delegations which were in a position to do so to notify the Secretariat during the current session of the voluntary contributions to be made by their Governments to the Fund in 1986. He hoped that by the end of the session he would be able to report that a large percentage of the target figure for 1986 had been pledged.

APPOINTMENT OF THE DIRECTOR GENERAL (GC(XXIX)/747)

127. The PRESIDENT pointed out that, as stated in document GC(XXIX)/747, the Board, acting in accordance with Article VII.A of the Statute, had appointed Mr. Hans Blix to serve as Director General of the Agency for a term of four years beginning 1 December 1985. Under the same Article, the Board requested the Conference to approve the appointment and accordingly recommended adoption of the draft resolution set out in document GC(XXIX)/747.

128. The draft resolution in document GC(XXIX)/747 was adopted by acclamation.

At the invitation of the President, Mr. Blix entered the meeting.

129. The PRESIDENT informed Mr. Blix that the Conference had approved his appointment to the post of Director General for a further term. He (the President) was pleased to be the first to congratulate Mr. Blix on his appointment and invited him to take the oath of office.

130. Mr. BLIX took the following oath:

> "I solemnly swear to exercise in all loyalty, discretion and conscience the functions entrusted to me as Director General of the International Atomic Energy Agency, to discharge these functions and to regulate my conduct with the interest of the Agency only in view, and not to seek or accept instructions in regard to the performance of my duties from any Government or other authority external to the Agency."

131. The DIRECTOR GENERAL, having taken the oath, thanked Member States for the confidence which they had shown in electing him for a second term. During the preceding four years the Agency had continued directly and effectively to serve the interests of its Member States. In those four years

nuclear power had again consolidated its position, thanks, to a large extent, to international co-operation in safety and waste management. There had been fast developments in vital programmes such as technical assistance and co-operation. The safeguards regime had grown and continued to serve Member States by verifying the peaceful nature of nuclear facilities and thereby creating confidence. Moreover, China's decision to join the Agency, together with the voluntary-offer safeguards agreement concluded between the Agency and the USSR, had emphasized the universality of the Agency and of its safeguards system. In conclusion, he pledged his wholehearted and loyal commitment, and also that of his staff, to further improving and expanding the Agency's service to Member States in the peaceful uses of nuclear energy and in preventing its military uses.

132. Mr. BOGGS (United States of America), speaking on behalf of the North America regional group, congratulated the Director General on his re-appointment. He looked forward to Mr. Blix's capable and dedicated leadership of the Agency for another four years. The organization was fortunate in having as its head a person of outstanding intellect and personal competence, coupled with concrete practical experience.

133. Mr. ORTIZ NAVARRO (Chile), on behalf of the Latin America regional group, Mr. AAMODT (Norway), on behalf of the Western Europe regional group, Mr. HAVEL (Czechoslovakia), on behalf of the Eastern Europe regional group, Mr. UMAR (Nigeria), on behalf of the Africa regional group, Mr. HIREMATH (India), on behalf of the Middle East and South Asia regional group, Mr. SADLEIR (Australia), on behalf of the South East Asia and the Pacific regional group, Mr. MURATA (Japan), on behalf of the Far East regional group, Mr. ZHOU (China), Mr. BELTRAMINO (Argentina), on behalf of the Group of 77, and Mr. MOLITOR (Luxembourg), on behalf of the European Economic Community and Spain and Portugal, joined in congratulating the Director General on his re-appointment.

GENERAL DEBATE AND ANNUAL REPORT FOR 1984

134. Mr. BOGGS (United States of America) read out the following message to the General Conference from President Reagan:

> "At a time when international discord has become all too familiar in our world, I wish to acknowledge, on behalf of the American people, the outstanding role of the men and women working in and with the IAEA in support of international co-operation and understanding. They serve the cause of international peace, and we are grateful for their dedication.
>
> "By its very nature, the IAEA provides a meeting place for people from all corners of the globe, from all backgrounds and cultures. The IAEA affords us the opportunity to seek to merge our diverse perspectives into solutions for our common problems so that we may deal effectively with the pressing need to ensure a healthy and productive life for all our people. IAEA programs such as those to promote international energy resources through peaceful nuclear development, to preserve food supplies through food irradiation and to promote medical applications of nuclear energy are central components of the efforts to improve the quality of human life everywhere.
>
> "The assurance that activities under IAEA safeguards are confined to peaceful non-explosive purposes is vital to international co-operation. The role of the IAEA in efforts to prevent the further spread of nuclear weapons is critical to the security of us all. The United States is proud to be a part of the work of the IAEA and we look forward to continued co-operation and progress with other IAEA Members in all of the Agency's important programs.
>
> "I extend to each of you my best wishes for a constructive and successful General Conference."

135. He congratulated the Director General on his re-election to another term as leader of the Agency and was sure that his next term of office would be as distinguished and productive as had been his first.

136. His delegation believed 1985 was a most significant year in the history of nuclear energy, and that the present General Conference was of great importance to the future of the Agency. Three important milestones in the development and use of nuclear energy had been reached in 1985. Three anniversaries were being observed which were reminders of the obligations of the General Conference and gave focus to its deliberations. The events which those anniversaries celebrated could help in answering the questions of how well all the noble promises made to the world when the Agnecy was formed had

been fulfilled. Those questions were: how had the Agency dealt with the power of the atom; how well had the Agency met its obligation to assure that the harnessed atom would be used for the benefit of mankind; and, most importantly, how well had the Agency fulfilled its even stronger obligation to assure that that power would never be misused?

137. The first anniversary observed in 1985 must never be forgotten. The world's first nuclear explosions had occurred 40 years before, and, as a result of them, the United States had solemnly pledged that it would do all in its power to work with other nations to assure that nuclear energy would never again be used for other than peaceful purposes. The primary goal of the United States at that time had been, and had remained, to assure that the world would never again witness the use of nuclear weapons.

138. It was his belief that those objectives were also central to the work of the Agency and that it was essential for all Member States to work together to prevent nuclear proliferation.

139. The second anniversary celebrated another, more benign aspect of nuclear energy, in which all could take pride and which demonstrated the effectiveness of the collective determination to make the benefits of nuclear energy widely available to the world. A series of United Nations Conferences on the Peaceful Uses of Nuclear Energy had begun 30 years previously in 1955, only two years after President Eisenhower had made his "Atoms for Peace" address to the United Nations.

140. Those conferences, which had resulted in the formulation of an ambitious goal to promote the widespread use of peaceful nuclear energy throughout the world, had been marked by an unprecedented and idealistic enthusiasm and willingness to share peaceful nuclear technology. The work of the Agency was the legacy of those initial conferences. The next United Nations Conference for the Promotion of International Co-operation in the Peaceful Uses of Nuclear Energy (UNCPICPUNE) would soon convene in continuation of this tradition of co-operative endeavour. That conference would show the same enthusiasm and willingness that had characterized the earlier meetings, and the participating countries would again exert their best efforts to promote peaceful uses of nuclear energy.

141. The third event that was to be noted in 1985 was the 15th anniversary of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). The Third NPT Review Conference had just concluded its work in Geneva. NPT was the most widely adhered to arms control treaty in history and was a clear demonstration of the strong determination by the overwhelming majority of nations to assure that the world would remain free from the threat of nuclear weapons, while at the same time providing the blessings of nuclear energy to all that had demonstrated their devotion to the principles of peaceful use. Each of those anniversaries was pertinent to the 1985 General Conference in that the Agency was an organization whose purposes and activities were premised on the need to protect the world from any misuse of the power of the atom as well as on the desire to make its benefits widely available.

142. Safe and effective use of nuclear energy was necessary for the strength, stability and security of the world's energy supply systems, and nuclear power must be allowed to play its essential role in helping to provide the energy needed to continue social and economic progress. In order to accomplish this, public acceptance of nuclear power, through a credible and effective safeguards programme that guarded against misuse, was necessary.

143. With reference to the vital role that nuclear power could and must play, the status of nuclear power in the United States was such that some observers were very pessimistic, arguing that the time of nuclear-fuelled power plants in the United States was past. The fact that there had been no nuclear power plants planned in recent years was quoted as evidence that nuclear power had failed in its promise and that the United States no longer had the will to continue developing and utilizing nuclear energy technology or to continue playing a major role in nuclear power construction.

144. It had to be admitted that planning for new nuclear plants in the United States, and in many other countries as well, had slowed dramatically in recent years. There had been no new United States nuclear plants licensed for construction since 1978, and over 100 had been cancelled since 1972. The United States, as the nation with the world's first and still the world's largest nuclear power programme, with over 92 nuclear power plants on line and almost one third of the installed nuclear generating capacity in the world, was obviously concerned about the lack of new orders for nuclear power plants.

145. Nevertheless, there were good reasons for being optimistic about the long-range future of nuclear electricity generation in the United States. Given the proper conditions, the nuclear industry would again resume its vigorous growth.

146. His country's optimism was reflected in its national energy policy, which was simple and straightforward. It was intended to provide an adequate supply of energy at reasonable cost, which meant that there must be sufficient energy to meet near- and long-term needs and to avoid undue dependence on any single source of supply.

147. An important element of the strategy by which the United States intended to attain that goal was to promote a balanced and mixed energy supply system. Since coal and uranium were the two principal indigenous energy resources, both would be needed to meet the growing demand for electricity. At the present time, nuclear power accounted for some 15 per cent of the United States total electricity and its contribution would grow.

148. Another reason for optimism lay in recognizing one of the major causes for the cancellation of existing orders for nuclear power plants and for the lack of new orders within the country. Overestimation of the rate of demand growth had made many proposed large base load plants uneconomical in the near term. That had affected all utility construction - although more than 100 nuclear plants had been cancelled since 1972, during the same period over 70 coal-fuelled power plants had also been cancelled.

149. As was the case in any economy, the appropriate response to a condition of oversupply was to reduce or eliminate expansion of supply that could not be justified on economic grounds. Such was the case with respect to electricity in the United States, which had planned for a growth in the electricity demand that had simply not occurred as rapidly as had been expected.

150. The United States economy had regained its strength and, as growth in electricity demand again justified the expenditure, new orders would be placed for large central generating units. He believed that a resumption of nuclear plant orders would be seen, and that nuclear power would maintain its role in the total energy supply system of the United States.

151. Another reason for the current lack of new orders for plants in his country was simply that the time required to build a nuclear power plant was far too long. Delays in construction had caused capital costs to rise far beyond those contempleted. There were many grounds for the lengthy construction times in the United States. For example, public concerns about safety and the environment had led to time-consuming and very expensive hearings, in spite of the demonstrated safety of nuclear power.

152. The United States was also overcoming a major problem in the construction of nuclear power plants there, namely the burdensome and over-long licensing procedure that a new nuclear power plant was required to undergo. It was encouraging that the United States Department of Energy had recently introduced legislation which would streamline the licensing process for new nuclear plants.

153. Other reasons for optimism about the long-range nuclear programme in the United States were that although no new plants had been ordered in recent years, the nuclear industry was not standing still. New and exciting developments were under way in both the private sector and in work by the United States Department of Energy, of which the following few would serve as examples.

154. The nuclear industry was working with the Department of Energy in the development of advanced light-water reactors that represented the accumulation of over 30 years' experience with this technology. Those advanced designs would be more economical, would provide greater tolerance to abnormal events, and would provide a firm base for the next generation of that proven nuclear reactor design.

155. His country, however, was not just working on improvements to light-water reactors; it was also engaged, often in co-operation with other countries, in research programmes to develop new nuclear designs that included advanced high-temperature gas reactors, liquid metal converters, and advanced breeder reactors. Smaller reactors which could be more easily and cheaply built and installed were being investigated. That was an area of great potential importance to the countries of the developing world.

156. Promising work was being done by the United States Department of Energy in the vital support services area and in improvements in aspects of the fuel cycle, which would result in lower-cost and more reliable nuclear supply. An important example of that type of effort was uranium enrichment. His country was gratified that so many of its nuclear trading partners had recently chosen to convert the uranium enrichment contracts with the Department of Energy to a new form designed to enable the future advances in technology that resulted in lowered costs and greater efficiency to be shared by all parties.

157. Current enrichment processes were being conducted in gaseous diffusion plants. The United States had recently completed its initial evaluation of two advanced enrichment processes that had significant advantages over the current technology. One was the gas centrifuge process and the other was the "Atomic Vapour Laser Isotope Separation" system, known as AVLIS. Based on the tests of both systems, and the long-term economics involved, the Department of Energy had selected the AVLIS system for further development, demonstration and deployment.

158. Yet another area in which the United States and other nations could benefit was the work being done to solve the problems of nuclear waste disposal. His country was devoting a great deal of attention to this subject and had worked with many Member States in a joint effort to solve the problems outstanding in waste management.

159. It was to be stated, in summary, that the picture he had drawn of the United States efforts was not one of a country that had lost confidence in nuclear power.

160. All such efforts, which were conducted by the United States Government, by private companies, and in co-operation with the United States overseas friends, would result in new technologies being developed and introduced, at lower cost and higher efficiency. They would benefit not only the United States but also other countries of the world needing nuclear energy.

161. The United States Administration under President Reagan was dedicated to the ideal that the United States would continue to be a reliable and cost-effective nuclear supplier to countries that shared its commitments to the peaceful uses of nuclear energy.

162. It would continue to be in the forefront of development and supply of nuclear power to meet the energy needs of the world.

163. The United States was also vitally concerned about the contributions that could be made by the many non-power uses of nuclear energy to help meet some of the world's most basic needs.

164. In that connection, the Agency's importance and the United States commitment to the Agency's vital programmes was to be noted. Over the five years up to 1985, the total United States voluntary contribution to the Agency had been in excess of US $43 million.

165. Between 1980 and 1984, the United States had funded over 111 projects involving over 300 man-months of effort by experts and more than US $4.5 million of equipment. It had also provided for the attendance of nuclear power courses run for the Agency by the Argonne National Laboratory by more than 700 foreign students from 55 different Member States. In addition, the United States had placed 283 fellows in various nuclear-related educational programmes within the country.

166. In order to solve some of the age-old problems of hunger and disease, it was necessary that the unique benefits of nuclear energy be made more widely available than they were at the present moment. Thus, the Agency had two objectives that had always to be kept in mind. The solutions to the world's problems that nuclear energy could provide must continue to be developed and applied, and, if those goals were to be reached, it must be demonstrated to the world that the atom could be controlled.

167. The International Atomic Energy Agency was, by its stated purpose and its structure, organized in such a way as to achieve those objectives, and had programmes and resources dedicated to those ends. It was designed to accomplish its objectives, which were to make sure that the many benefits from the peaceful use of nuclear energy were made widely available and that nuclear energy was used solely for peaceful purposes. Those two objectives were inextricably linked; without one, the other could not be achieved.

168. The situation, therefore, was that there was a demonstrated world-wide need for nuclear energy, and an organization capable of helping to meet that

need. If the benefits of nuclear energy were not made widely available, it would not be because there was no organization capable of doing the job, but rather because of a lack of will and responsibility on the part of all Member States.

169. If that tragedy was to be averted, Member States must work together in order to continue the success achieved to date and to eliminate the sometimes devisive arguments that diluted the progress that had been made. That was, again, a matter of deep concern.

170. Efforts to deny membership or limit the rights of participation were among the most divisive of those arguments. They could only serve to reduce the Agency's effectiveness. Another issue that had, at times, placed obstacles in the way of the Agency were efforts to enhance the resources available to one aspect of its work at the expense of another. That approach could only cast doubt on the Agency's ability to fulfil its dual purpose.

171. The 1985 General Conference should devote its collective wisdom and effort to improving its effectiveness in carrying out its work, rather than in discord and acrimony. The United States, for its part, would do everything in its power to that end and encouraged others to join it.

172. The Member States of the Agency had so much to offer the world in the field of peaceful uses of nuclear energy that it would verge on the irresponsible if other issues were allowed to intrude. The world needed energy and would need more in the future. The economic and social progress which all Member States sought depended on an adequate and secure energy supply, hence nuclear power was essential if the world energy system was to achieve security and stability.

173. Each year at the General Conference, the past year's activities were reviewed in the light of the overall goals and mandates of the Agency. In his opinion, that was an excellent approach which should be continued, and it was all the more important in 1985, which was an opportunity for all to reflect upon the past and contemplate the future. The successes of the past should be reviewed, and the hard work and dedication of those that had made them possible should be noted.

174. It was, however, even more important that Member States should re-examine how their total responsibility was being fulfilled and should rededicate themselves to continuing and improving the Agency so as to achieve the lofty goals which all had set themselves.

The meeting rose at 1.10 p.m.