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RECORD OF THE ONE HUNDRED AND SIXTIETH PLENARY MEETING

Held at the Neue Hofburg, Vienna, on Tuesday, 18 September 1973, at 3.40 p.m.

President: Mr. BOSWELL (Australia)

Item of the agenda**	Subject	Paragraphs
7	Adoption of the agenda and allocation of items for initial discussion	1 - 2
8	Appointment of the Director General	3 - 10
9	Statement by the Director General	11 - 82
10	General debate and report for 1972-73	83 - 153
	Statements by the delegates of:	
	United States of America	83 - 106
	South Africa	107 - 117
	Indonesia	118 - 135
	United Kingdom	136 - 153

* A provisional version of this document was issued on 20 September 1973.

** GC(XVII)/512.

THE RECORD

ADOPTION OF THE AGENDA AND ALLOCATION OF ITEMS FOR INITIAL DISCUSSION (GC(XVII)/497)

1. The PRESIDENT informed the Conference that the General Committee recommended it to approve an agenda for the session consisting of all the items on the provisional agenda in document GC(XVII)/497, and also to allocate items for initial discussion as indicated in that document.

- 2. It was so decided.

APPOINTMENT OF THE DIRECTOR GENERAL (GC(XVII)/499)

3. The PRESIDENT observed that, as stated in document GC(XVII)/499 on the appointment of the Director General, on 12 June 1973 the Board of Governors had appointed Mr. Sigvard Eklund to the post, to serve for a term of four years to run from 1 December 1973. Pursuant to Article VII.A of the Statute, the Board requested the Conference to approve the appointment, and accordingly recommended adoption of the draft resolution set out in the document.

4. Mr. BANCORA (Argentina), speaking on behalf of Latin American Members, expressed satisfaction at the reappointment of the Director General for a further term of four years by the Board. Mr. Eklund's fourth period in office must constitute a record in the United Nations. He was gratified that he had not been wrong in supporting Mr. Eklund's candidacy twelve years previously, when the Director General was already known as a scientist, but not then as an administrator.

5. Everyone knew how difficult it was to deal with international organizations. It had not been easy to find someone with all the requisite gifts for such an arduous task, but the Director General had shown himself able to select programmes and projects which fulfilled the fundamental aims of the Agency.

6. He wished to thank the Director General for his visits to Member States, for his achievements in the provision of technical assistance and in particular for the market survey for nuclear power. [1] He wished him continued success in the future and pledged him full support.

7. Mr. KRASIN (Byelorussian Soviet Socialist Republic) said that it was a pleasant task for him to support the re-election of Mr. Sigvard Eklund on behalf of his own Government, Bulgaria, Cuba, Czechoslovakia, the German Democratic Republic, Hungary, the Mongolian People's Republic, Poland, Romania, the Ukrainian Soviet Socialist Republic and the Union of Soviet Socialist Republics. He had met the Director General many times and was happy to state that he was an objective and talented

organizer in the domain of the peaceful uses of nuclear energy. Mr. Eklund's tact, application and scientific competence made him the most satisfactory man for the task.

- 8. The draft resolution in document GC(XVII)/499 was adopted by acclamation.

- At the invitation of the President, Mr. Eklund entered the meeting.

9. The PRESIDENT informed Mr. Eklund that the Conference had approved his appointment to the post of Director General. He was pleased to be the first to congratulate him, and invited him to take the oath of office prescribed by the Agency's Staff Regulations [2].

10. Mr. EKLUND 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 interests 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."

STATEMENT BY THE DIRECTOR GENERAL

11. The DIRECTOR GENERAL expressed his heartfelt gratitude to delegates and their Governments for the confidence in him which his re-election implied. It was a great privilege to be asked to continue to work with them for the Agency, and he would do his utmost in seeking to implement their decisions.

12. It would always be his aim to make the Secretariat as efficient an instrument as possible for carrying out the decisions of the Board and the Conference. As the latter were the policy-making organs of the Agency, he had abstained from making policy declarations of his own, except on those occasions when the Conference had been requested to approve his appointment for a new term. In that tradition, he wished to take the opportunity to share his thoughts on a few subjects which he considered to be of paramount importance for the future of the organization.

13. Since the Second World War new organizations and bodies had been set up to deal with almost every imaginable problem, sometimes even to deal with the same problem, but from different angles. Not one had yet declared its purpose fulfilled; instead, there was a search for new tasks to maintain the considerable machinery which had been created.

[1] For details, see document GC(XVII)/506.

[2] INFCIRC/6/Rev.2, Regulations 1.11 and 1.12.

14. At a time when atomic energy commissions in Member States were being reorganized, disbanded, or given new "non-nuclear" tasks, it was appropriate to raise the question of the need for the continued existence of the IAEA with its present functions. Nuclear techniques were now routine operations in scientific and technical disciplines. Nuclear power had also become an attractive commercial alternative to conventional power and an integral part of the expansion plans of many utilities. Was the field of nuclear energy really so nearly unique that a special organization was required at an international level? There were compelling reasons for answering the question in the affirmative.

15. First and foremost there was the reference in the Agency's Statute to making the benefits of nuclear energy available throughout the world, bearing in mind the special needs of the developing countries, and to applying safeguards against military use. Sixteen years after the establishment of the organization, he still considered those two provisions to be the corner-stones of the Agency's activities. The safeguarding function had received increased impetus from the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) [3]. The Agency was under a legal obligation to continue its safeguarding activities, which could well serve as an example for future systems of verification and control of arms limitation or disarmament agreements.

16. As regards assistance to developing countries, the Agency had been gratified to witness the "take-off" in the nuclear field of some developing countries. However, for the majority, nuclear technology and the benefits that could accrue from its utilization were still goals to be achieved.

17. The rapid development of nuclear power and the increased concern for the preservation of the human environment had made it imperative to achieve an international consensus regarding rules for the safe operation of nuclear plants, including the handling of radioactive waste. The results of the Agency's work could assist in gaining public understanding of nuclear power in many Member States.

18. Finally, there was the field of information and the Agency's International Nuclear Information System (INIS). INIS had so far demonstrated the Agency's capacity to operate a major scientific indexing service. The ultimate success of the system, however, would depend on the extent of its utilization by Member States.

19. The activities mentioned were by no means an exhaustive list of what might be called "vital programmes". In his view, they adequately justified the continuing existence of the Agency. That did not mean that the Agency should be satisfied with the status quo. Each programme should be examined with the criterion of usefulness in mind. A number of tasks could thus be eliminated and

more substantial resources devoted to those activities where the Agency's work could have the greatest impact.

20. The future role of nuclear power assumed special significance in the context of debates about the so-called "energy crisis". In certain areas, energy systems were vulnerable because of reliance on imported fuel. The price incentive had to a large extent lost its effect in the oil market.

21. The difficulties in securing conventional fuel supplies favoured the only technically feasible alternative at the present time, namely nuclear power. The introduction of nuclear power plants had temporarily been slowed down by environmental litigation. Thoughtful environmentalists were beginning to realize, however, that on balance nuclear power had substantially fewer detrimental environmental consequences than any other form of power production. It should also be remembered that in nuclear reactors the costs of environmental protection measures had already been "built in"; to make other thermal stations "clean" in the same sense would involve substantial costs, for instance, for de-sulphurization equipment or for oil with a low sulphur content.

22. As nuclear power began to meet a significant part of the electricity requirements in several countries, it was becoming a subject for discussion in many forums which in the past had concerned themselves primarily with conventional sources of energy, for instance the World Energy Conference and the Economic Commission for Europe (of the United Nations). The Agency was being asked to share its experience in the nuclear field with those bodies. Fruitful co-operation could take place only if the Agency were able to speak the language of the utilities and had staff combining experience of the whole power production field. That need had also been evident during the market survey, and would be reflected in the Agency's recruitment policies.

23. The future development of nuclear power would depend upon the world's ability to use fissionable material in the most rational way. The Agency should seriously consider evaluating alternative reactor strategies in order to assess their impact on the utilization of resources and on the environment. In that way, assessments would be made, for example, of fast and advanced converter reactor systems, and of the potential use of thorium as fuel.

24. Most States with nuclear programmes must concern themselves with future supplies of enriched uranium. He urgently appealed to suppliers to make available, through the Agency, sufficient quantities of enriched uranium for power reactors for transfer to developing countries under less stringent conditions than at present. Mexico had been the first country to request the Agency to act as intermediary in the supply of nuclear fuel for a power reactor; other countries might follow its example.

[3] Reproduced in document INFCIRC/140.

25. Enrichment facilities were, for the time being, limited to five countries. The enriched uranium situation was critical in certain parts of the world. It was to be hoped that additional co-operative ventures would be started in order to alleviate the situation.

26. The introduction of nuclear power in the developing countries presented the Agency with a new challenge. The market survey, the results of which had recently been published, represented one way in which the organization could be of assistance to countries which had reached that stage of development. It was to be hoped that national energy bodies and financing and industrial organizations would find the document useful in their planning activities. The results of the market survey would need to be up-dated and expanded in the light of new information becoming available. However, the basic methods, procedures and tools, e.g. computer programmes, developed during the course of the survey would continue to be applicable and useful for the continuing assistance which the Agency could give to Member States.

27. In that context, it had been very encouraging for the Agency to learn that on 1 September 1973 the Philippine authorities had decided to start the construction of a 600-MW(e) nuclear unit on Luzon.

28. Public concern about the environment had ebbed somewhat since the United Nations Conference on the Human Environment held at Stockholm in 1972. He sensed a less emotional, more realistic appreciation of the problems, and hoped that Governments would continue to lend their support to national, regional and international efforts, in that order of priority.

29. The Agency's work on nuclear safety and environmental protection had been strengthened through voluntary contributions and some re-ordering of priorities. As an impartial international organization, the Agency could be of assistance to Member States by working out standards, codes of practice and regulations which could be referred to by atomic energy authorities.

30. The Agency had noted the trend in some national Governments to separate promotional and regulatory activities in the nuclear energy field and the suggestion made that the internal organization of the Agency should be changed to reflect this. It should be recalled that under its Statute the Agency was required to carry out both promotional and regulatory activities. He had not found it appropriate to put forward in his statement any organizational suggestions for the Agency's environmental work in the future. However, the importance which Member States attached to that complex field and the extent to which it involved negotiations with other international organizations had made necessary a study on appropriate organizational consequences. The study would be undertaken and included in the next six-year programme and budget for 1975, to be presented at next year's General Conference.

31. Several in-depth studies on nuclear safety were in progress in Member States. He hoped that the Agency would receive the results to enable it to serve as a common denominator for the views and findings, which were of such fundamental importance. The Agency should also assist licensing authorities in Member States by studying various problems arising in the safety assessment of nuclear plants.

32. In the area of waste management, there were many opportunities for increased international collaboration. It had been estimated that a nuclear power programme comprising 30 000 MW(e) justified the setting up of one reprocessing unit. That meant the operation of a maximum of six to eight reprocessing plants for the whole of Europe by 1985. Economies of scale might bring the optimum number below that figure. The location of the reprocessing plants should be closely related to the question of radioactive waste disposal sites. The Agency had a task of great importance in defining criteria for disposal sites which, in a crowded continent like Europe, should be conceived of as regional or international. The whole question should be pursued vigorously by the Agency.

33. The 1972 London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter had referred to the Agency as the competent body to define high-level radioactive matter which should not be dumped at sea and had also called upon the parties to take full account of the Agency's recommendations when issuing permits for dumping other radioactive matter. The Board was now considering draft recommendations, which the Agency hoped to transmit early in 1974.

34. The newly-established United Nations Environment Programme (UNEP) had expressed interest in supporting certain proposals made by the Agency.

35. He would continue to seek collaboration and support from UNEP, but at present it appeared that its financial support to the Agency could only be marginal. The major burden of expanding safety and environmental activities would have to be borne by the Agency's Regular Budget.

36. Scientific meetings might be called the backbone of many Agency programmes and their importance in fulfilling the statutory mandate "to foster the exchange of scientific and technical information" should never be underestimated. However, there was a universal tendency for one meeting to give rise to a further one, so that a chain reaction was started. National and regional bodies also contributed to the "proliferation of international meetings".

37. The time had come to be much more selective, to have far fewer, but better prepared, meetings on topics which were currently of great interest. The economies thus obtained could be used to secure the participation of particularly well-qualified experts, to cover the additional costs of

holding a meeting in a developing country, or to extend travel grants to participants from developing countries.

38. A sizable reduction in the number of meetings would also free staff for other work in their programme area, such as advisory missions to countries asking for assistance. For that purpose the Agency should be able to recruit people of the highest professional standards, who were in touch with the latest advances in science and technology.

39. In seeking policy guidelines, the Agency had so far depended upon ad hoc panels of experts convened as and when considered necessary. A more coherent approach might be to establish a standing committee or working group on certain problems, such as siting, safety, the licensing of nuclear plants, etc. The group would examine the policy, legal and technical aspects concerned. Other areas could also be covered. The views of the Conference on the suggestion would be welcome.

40. Then there were the Agency's extramural activities, namely the Seibersdorf Laboratory, the International Laboratory of Marine Radioactivity at Monaco (the Monaco Laboratory) and the International Centre for Theoretical Physics at Trieste (the Trieste Centre).

41. A considerable proportion (24%) of the work at Seibersdorf was devoted to agricultural research and development in support of the programme of the Joint FAO/IAEA Division of Atomic Energy in Food and Agriculture. That programme had recently been scrutinized by a group of experts who had unanimously endorsed it.

42. Another portion (16%) of the resources at Seibersdorf was set aside for tasks related to the Agency's safeguarding obligations, a share that would increase considerably in the future.

43. Other activities at Seibersdorf should be the object of a thorough review, for which he intended to ask for the help of a group of experts.

44. The Board had noted the intention to extend the work of the Monaco Laboratory to include the study of some non-radioactive pollutants, mainly with the help of nuclear techniques. The expansion would be funded by UNEP, on the basis of a joint proposal by the Agency and UNESCO.

45. Activities in the field of theoretical nuclear and atomic physics at the Trieste Centre had been highly successful. The approach followed by the Agency, and later through the operation of the Centre by the Agency and UNESCO, could be applied to other branches of science as well. With the support of the United Nations Development Programme (UNDP), UNESCO was sponsoring symposia on mathematics and theoretical meteorology at the Centre. The agreement between the Agency and UNESCO and the Italian Government was expiring in 1974, and preliminary talks were under way for an extension. Should present plans for a "world university" be realized, the Trieste Centre might be associated with it as one of its

"centres of excellence". If that were the case, the whole question of the Agency's participation in and contribution to the Centre should be re-examined.

46. A step towards fuller implementation of NPT had been taken in April 1973 when the agreement between the Agency and the non-nuclear-weapon States Members of the European Atomic Energy Community (EURATOM) had been signed in Brussels. Preliminary talks on safeguards in connection with NPT had been continuing with a number of countries, including the United States of America and the United Kingdom, with regard to their offer to place their peaceful nuclear installations under Agency safeguards. The acceptance of Agency safeguards by certain nuclear-weapon States for various installations was a sign of confidence and goodwill, and went some way towards proving the general acceptability of the Agency's safeguards work.

47. He personally was much concerned at the rate of actual implementation of NPT. Seventy-eight non-nuclear-weapon States had now ratified the Treaty, 45 safeguards agreements in connection with NPT had been concluded, while others were overdue. As had been the case at previous sessions of the General Conference, a special office had been opened on the Conference premises to assist States wishing to conclude such agreements with the Agency. Of the 11 000 MW(e) of nuclear power installed in non-nuclear-weapon States, only 3000 MW(e) were covered by agreements in connection with NPT, though another 5000 MW(e) were covered by other Agency safeguards agreements. The situation would improve as soon as NPT was implemented in the States Members of the European Communities, where at present the nuclear power installed amounted to 3000 MW(e), but unfortunately the time-table for ratification of the Treaty or the safeguards agreement by all the non-nuclear-weapon States in the Communities was not yet clear. There were still several key countries which had not ratified NPT or had disassociated themselves from it. Of the seven countries in the world with populations of over 100 million, only two had ratified NPT, namely the Soviet Union and the United States.

48. The continued testing of nuclear weapons was of course not an encouragement to countries which were being urged to accede to NPT. A complete test ban would seem to be an appropriate way for nuclear-weapon States to show their willingness to honour their obligations under Article VI and the Preamble of NPT. The Strategic Arms Limitation Talks, the progress of which seemed hopeful a year ago, now had to face the difficulties raised by the rapid development of nuclear arms technology.

49. An agreement to cut off the production of special fissile material for weapons purposes would be a positive step, and had received support in the Conference of the Committee on Disarmament. The Agency's services could, under the terms of its Statute, be used in the transfer of materials no longer used for military purposes to other States for their peaceful programmes.

50. There had been some positive developments, albeit outside the NPT framework. Perhaps the most important of those was the recognition by many threshold non-nuclear-weapon States that their best interests were not served by acquiring nuclear weapons. The Treaty for the Prohibition of Nuclear Weapons in Latin America (the Tlatelolco Treaty) [4] had been given new impetus by the ratification of Protocol II by France and the People's Republic of China. The declaration in 1965 by India offering to reprocess fuel for countries in the region and for the Agency was a reflection of the same spirit.

51. The 1975 Review Conference on NPT would give Governments a chance to assess the progress of the non-proliferation regime established by the Treaty. He felt that the Agency would be able to go to that Conference with confidence in its performance in connection with the Treaty. More work than was generally realized had been done in applying analytical methods, technical knowledge and sound judgement to achieve a balance between what was desirable and what was possible in the field of safeguards.

52. In that connection he attached great importance to the network of safeguards analytical laboratories, whereby certain States could participate in the regulatory work and not just be themselves the object of verification.

53. Looking further into the future there were many problems which should be prepared for now. The amount of plutonium in storage, use and circulation in all non-nuclear-weapon States would increase during the next ten years from a few hundred kilograms to over 50 tons. Could the Agency's safeguards system cope with that growth? Should the Agency do more about the physical security of materials? What would be the effects of substantial developments in the field of fusion on safeguards?

54. The organizational aspects of the Agency's safeguards effort would need to be re-examined in order to achieve maximum efficiency in discharging its growing responsibilities and he intended to ask for the advice of outside experts in that connection.

55. The recent meeting of the Pugwash movement in Finland had unanimously commended the Agency's work in implementing safeguards in connection with NPT, and had urged that the authority of the Agency should be strengthened and supported. In that context he wished to stress that a sine qua non for the widespread use of nuclear power was that peace should be maintained.

56. It was extremely important to keep a balance between the Agency's regulatory and promotional activities; the latter category included those programmes which were of special interest to the developing countries. Apart from the Operating

Fund, important resources were being made available to the Agency by a number of States with a view to allocation to projects for assisting the developing countries; and it was highly encouraging to find that such projects, and their governmental counterpart support, had increased considerably both in number and size.

57. He personally considered the Agency's technical assistance to be of the greatest importance for developing countries; even though little in monetary terms, it had been enough to make it possible in many cases to embark on a line of research or prepare for a pre-investment application of substantial significance.

58. Outstanding examples in that respect were the results achieved by the Trieste Centre, at which, since its establishment, some 130 fellows from 44 developing countries had actively participated in research work.

59. The market survey, to which he had already referred, was another example of assistance whose benefits could not be fully appreciated at present but which undoubtedly would be considered as a most important contribution in the future to the introduction of nuclear power in developing countries.

60. During the last ten years, the rate of increase in agricultural production in 42 developing countries had been less than the rate of population growth. Under those circumstances a considerable fraction of the nuclear energy resources of those countries was being devoted to agricultural problems. In those activities the assistance given by the Joint FAO/IAEA Division was highly appreciated but was always found insufficient in the context of the magnitude of the problem. He had not asked for an increase in the Agency's share of the budget for the Joint Division, as he believed that it should be for FAO first to make a larger contribution. Faced with the deteriorating food situation, he had, however, become convinced that the Agency should devote increased resources to a short-term research and development programme aimed at assisting developing countries in their efforts to improve their unsatisfactory, vulnerable and unstable nutrition situation.

61. For the first time, more than 90% of the target for voluntary contributions to the General Fund had been reached; however, the value of the contributions had been eroded by further changes in currency exchange rates, and by inflation. He had been instructed by the Board to appeal to Member States to contribute to the General Fund in an amount larger than their assessed ratio of the established target of \$3 million.

62. The Secretariat had begun a study, requested by the Board, of all possible methods of financing the provision of technical assistance by the Agency, including financing from the Regular Budget.

63. The Agency was enjoying rewarding collaboration with several agencies in the United Nations family, such as FAO, IMCO, WHO and WMO. He

[4] Reproduced in the United Nations Treaty Series, Vol. 634, No. 9068.

was, however, concerned at the ever-increasing work load involved in supplying different bodies in the United Nations family with information already given to them but now required in another form of presentation. He was grateful to the Agency's Board for having established a simplified procedure in reporting to the Economic and Social Council of the United Nations (ECOSOC), and he hoped for continued understanding in his efforts to avoid loading the Secretariat with unnecessary paperwork.

64. The establishment in Vienna of the Institute of Applied Systems Analysis would, he hoped, result in close collaboration with the Agency, especially in the study of energy systems.

65. The Agency could also look back on a long and close association with the Nuclear Energy Agency (NEA) of the Organization for Economic Co-operation and Development (OECD). The joint surveys on uranium resources and the joint food irradiation project were just two examples of activities which had been much appreciated by the States Members of the two organizations.

66. The membership of NEA now included 20 western European States and Japan, with Canada and the United States as Associate Members. Rather than establish joint regional undertakings, NEA now planned to concentrate on major nuclear energy problems such as radiation protection, long-term availability of nuclear fuel and long-term waste management.

67. The Members and Associate Members of NEA were also Members of the Agency and were taking part, within the framework of the latter, in projects dealing with the same major nuclear energy problems as those just mentioned. Unless care was taken, that could give rise to duplication and the formation of a sort of rich man's club, representing 80 to 90% of world nuclear capacity by 1980. Any breakdown into groups was something the Agency should continue to avoid. The Agency's success in handling difficult problems and reconciling divergent views was due to the willingness of all its Members to seek a consensus as a single unit.

68. Because of the effects of currency fluctuations and inflation, the Agency's total budget was higher, but its programme showed virtually no growth as compared with the last two years. He deeply regretted that static situation, which was prevailing for the second consecutive year, especially in the light of the rapid growth of nuclear power in numerous Member States, a situation which in fact should result in an expansion of the Agency's activities.

69. In the Board, Member States had so far responded positively by accepting a supplementary appropriation, in order to do something to protect approved programmes against the effects of currency fluctuations, and in addition the Secretariat had been able to absorb part of the losses through savings. The point had now been reached, however, where the only way to make significant further economies was to cut programmes, and to

stop the taking of any fresh initiatives. He was sure that no Member State would wish the Agency to adopt that course.

70. Programme budgeting had been carried further in the Agency than in any other United Nations organization. Member States could now evaluate in detail what particular programme components cost in relation to the budget as a whole. The new programme presentation also permitted some evaluation of what had been achieved in the past. It was now possible for Member States to give their views on the relative priorities to be accorded to the various activities, and he very much hoped that delegates would take the opportunity of doing so.

71. He looked on the Scientific Advisory Committee (SAC) as an idea-generating body. During the present session, an informal meeting of the members of SAC attending it would discuss agenda items for, and the frequency and timing of, meetings of SAC and, in general, would consider how best to use the collective skills and competence represented by its membership. He himself considered that it was becoming more and more important to have technologists and economists participating in the work of SAC.

72. The most valuable asset of the Agency was its staff. Without that asset none of its programmes and objectives could be carried out. With a competent, devoted and enthusiastic staff, even difficult tasks could be undertaken and brought to a successful outcome.

73. In that context he wished to draw attention to the virtual breakdown of the present Professional salary system, which was beginning to affect the morale of the staff. Governments would have to take a decision on the proposals to be submitted to the General Assembly of the United Nations at its current session, aimed at rectifying the present unsatisfactory situation. The long overdue review of the salary system would have to await the establishment of the International Civil Service Commission. In the meantime, a proposal had been made to incorporate several classes of post adjustment in the base salary. In all fairness to the staff, that was something which should be done.

74. The amended version of Article VI of the Statute was now in force [5] and would be reflected in the new and enlarged Board, which would show a fuller representation of developing Members. The Secretariat had in the past enjoyed a close relationship with the Board and the Resident Representatives of Member States. With the enlarged membership, an additional effort would be called for to maintain the good working atmosphere and spirit of co-operation that had made the Board such an efficient governing body.

75. A suggestion had been made that during the current session the Conference should change its Rules of Procedure in order to take account of the

[5] See document INFCIRC/159/Rev. 3.

implications of the amendment of Article VI of the Statute, and also in order to simplify the Rules in the light of the experience gained during 16 sessions of the Conference. [6] He would consider it a sign of strength if the Conference were able to take that action.

76. The Austrian Government continued its tradition of assisting and supporting the Agency in different ways. Construction work had started on buildings for the Agency's permanent headquarters in the Donaupark. Occupancy was now scheduled for early 1978.

77. He wished to welcome the German Democratic Republic and the Mongolian People's Republic as new Members of the Agency. They were as a matter of fact no newcomers, as they had both concluded agreements with the Agency in connection with NPT [7].

78. The Agency was closely following the development of international nuclear law and, where appropriate, contributing to its development. Such was the case with the 1963 Vienna Convention on Civil Liability for Nuclear Damage, which, unfortunately, still lacked one ratification to enter into force; the 1962 Brussels Convention on the Liability of Operators of Nuclear Ships had suffered the same fate [8]. As those Conventions had been adopted over ten years ago, the question now arose whether they should remain a dead letter or whether new Conventions should be drafted.

79. Another initiative in nuclear law had taken the form of a suggestion that the Agency should embody in an appropriate legal instrument the principles governing co-operation in the peaceful uses of atomic energy. That would be a document to which atomic energy authorities could refer when drafting bilateral co-operation agreements with States.

80. In nuclear law, as well as in other areas of the Agency's activities, the active participation of Member States was, of course, essential. A comprehensive body of nuclear law was only of use if it was in force in a significant number of Member States, just as an extensive computerized information system was of value only if utilized to the full.

81. It had become a cliché to say that the Agency was facing years of challenge ahead. The real test for the organization, at any time, was whether it fulfilled a need and was useful to its Members. The Agency must have the courage to stop activities which had become mere time-worn routines, to embark on new initiatives, and to expand the scope of its programmes.

82. To that end the constructive suggestions, the support and the understanding of Members of the Board and the General Conference were needed. In accepting a new term of office, he relied upon the continuation of that assistance, thus far so freely and generously given by Member States.

GENERAL DEBATE AND REPORT FOR 1972-73
(GC(XVII)/500, 500/Corr.1, 510)

83. Miss Dixy Lee RAY (United States of America) wished to commend the Director General for his outstanding leadership of the Agency over the past twelve years. Her delegation was delighted to join with the other delegates in the unanimous support for the reappointment of Mr. Eklund to a fourth term in office. It also paid a tribute to members of the Agency's staff who had served with such diligence and distinction.

84. Next month, the United Nations Association of the United States planned a salute to the Agency as part of its annual celebration of the anniversary of the United Nations. As a contribution to the event the United States Atomic Energy Commission (USAEC) was opening a new exhibit in Washington. Mr. Eklund was planning to participate in those events and to visit a number of nuclear installations in the United States. The Agency had a number of significant programmes in the environmental, waste management, and nuclear safety fields, among others, and the United States looked forward to the opportunity to exchange ideas on those important subjects.

85. The President of the United States had asked her to extend to the delegates his best wishes for a productive and rewarding meeting. The activities of the Agency related directly and significantly to President Nixon's concern for world peace and his determination to meet urgent energy needs without endangering the environment.

86. In the United States, President Nixon had taken decisive action to meet the energy challenge. He had recently requested an extensive reorganization of the Government agencies dealing with energy policy, natural resources, and research and development. He had established an Energy Policy Office in the White House and had proposed to the Congress the creation of three Federal agencies: a Department of Energy and Natural Resources, which would be responsible for the balanced utilization and conservation of the country's resources, an Energy Research and Development Administration, which would use the present research and development structure of the Atomic Energy Commission, and a Nuclear Energy Commission, which would have the appropriate regulatory functions and responsibilities for health and environmental safety.

87. In his June message to Congress setting forth those proposals the President had also announced that he was initiating a Federal energy research and development effort, to cost US \$10 000 million over a five-year period beginning in 1974. To give impetus to that drive, he had directed that an

[6] See document GC(XVII)/503.

[7] Reproduced in documents INFCIRC/181 and 188 respectively.

[8] The texts of the two Conventions are to be found in Legal Series No. 4 (STI/PUB/102).

additional \$100 million be authorized in the current year to accelerate existing projects and to undertake new initiatives in a number of research and development areas.

88. The energy problems facing the United States had variously been described as a crisis or a dilemma, but it was preferable to view them as a challenge and an opportunity to apply to the whole field of energy the research and development techniques which had proved successful in the country's atomic energy programmes and in other complex technological projects.

89. In the United States nuclear energy was just beginning to fulfil its promise as a power resource for civilian purposes. The commercial operation of nuclear power plants reflected nearly 30 years of discussion and development. During that period the light-water reactor had established itself as a major new source of electrical energy that was both economical and safe. The development of a liquid-metal fast-breeder reactor had now been assigned the highest national priority in the matter of nuclear power production. The breeder reactor was expected to become available in the 1980s. The development of fusion power should present a new option perhaps by the year 2000, by which time nuclear power might account for about half of the world's electric generating capacity.

90. Vital as those efforts in nuclear technology were, the United States recognized that it must meet the energy challenge on a broad front that went far beyond the nuclear sciences. The scarcity of oil and gas supplies had forced it to give increasing attention to other sources of energy which had not been fully developed in the era of relatively cheap, domestic petroleum products. The Federal Government and American industry were now studying ways of better utilizing the country's substantial coal reserves. There was also renewed interest in developing geothermal energy, and some advanced research had already started on harnessing solar energy and other natural sources of power. One of the key features of the proposed Energy Research and Development Administration was that the new agency would have authority to conduct research and developmental work on all those potential energy sources as well as on atomic energy.

91. Although the United States looked forward with confidence to rapid growth in the use of nuclear power, it was determined that that development should not result in greater risks to man or to his environment. The USAEC was devoting a substantial portion of its research and development resources to evaluating and reducing potential hazards of nuclear power plants. It was further reducing the already minuscule impact of radioactivity resulting from nuclear power plant operation and devoting greater attention to the thermal effects of cooling water used in those plants. The proliferation of nuclear power plants also placed in a new perspective the transportation, management and ultimate disposal of radioactive wastes. Stricter regulations had been imposed on the shipment of those materials and the introduction

of new methods of solidifying and storing radioactive waste materials was being stepped up.

92. The Agency had already taken a significant step with its recently completed, in-depth market survey of the power requirements of 14 developing countries, in Asia, south-east Europe and Latin America. The report of the survey - which was to be considered in detail during the present session - was an outstanding piece of work and an excellent example of the contribution the Agency could make to world energy efforts. The United States was convinced that the study would be useful both to the developing countries in assessing their power needs and to the nuclear industry. It believed that open competition in the market would determine which types of power reactors could help developing countries meet their growing power needs in the most economical way.

93. In conducting the survey, the Agency had acquired both the manpower and the supporting elements, such as specialized computer programmes, that would enable it to evaluate the possible role of nuclear power in developing countries. It would be a waste of valuable resources if those resources should now be dissipated. The study made it clear that in the years ahead nuclear power would become a very real option for a number of developing countries. As they weighed the possibilities and problems of nuclear power, those countries would need assistance in a variety of ways - in the training of personnel, detailed planning of network expansion, drafting of legislation and regulations, and evaluation of environmental impact. Surely, the Agency could play a major role in helping to supply or secure such assistance; the completed survey should not be regarded as the end of the Agency's involvement with the potential for nuclear power in developing countries.

94. Since its inception, the Agency had regarded nuclear safety as one of the most urgent and important items on its agenda. The United States had supported and encouraged every improvement in the Agency's nuclear safety programmes. Recently the United States had proposed a modest increase in Agency staff and some revisions in procedures designed to enhance the Agency's ability to conduct safety reviews requested by Member States on projects proposed or being built in their territory. That kind of advice was essential for countries just getting started in the nuclear energy business. The Agency was the only international agency that could give such advice and it was to be welcomed that the Director General had appointed an internal task force to work out recommendations as to how the Agency's programme could be modified to provide such assistance.

95. The United States had devoted major efforts to the development of standards, reactor designs, construction practices and operational techniques designed to ensure that safety was maintained at a high level. Later in the present month, the United States would be host to a workshop on regulatory principles and perspectives for representatives of a number of countries who were

interested in learning about some of those techniques. It was glad to share that information because it believed that any improvement in safety achieved anywhere was of benefit everywhere. She understood that representatives of the Agency would be attending the workshop.

96. The United States recognized that the Agency had a highly significant role to play in taking actions designed to protect the environment. Everyone working in the nuclear field was fully aware of the inescapable environmental problems associated with the development of new energy resources of any type. The United States was convinced, however, that nuclear energy was the only alternative to fossil fuel at present available as a source of significant increments of power during coming decades, and that its environmental effects could be properly controlled.

97. It was equally convinced that any successful effort to attack the environmental problems associated with nuclear power would require not only energetic and imaginative work but also close international co-operation. By their nature, those problems were international in scope and hence many of the Agency's services in that connection were of direct value to all mankind.

98. Her delegation recognized with gratification that the Agency already had a strong programme in matters concerning nuclear environmental protection, which had begun almost as soon as the Agency had come into existence and had steadily expanded. The Government of the United States had supported all aspects of that programme and, during recent years, had taken part in other efforts by the Agency to deal with the environmental impact of nuclear energy.

99. The United Nations Conference on the Human Environment at Stockholm in June 1972 and the London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter last December had given further impetus to the Agency's environmental programmes. Her delegation supported the environmental programme recommended by the Board of Governors in the budget for 1974 [9] and anticipated that it would be supplemented in future years by financial support from the United Nations Environment Fund. The United States strongly urged all Member States to support adequate budgetary provision for that programme when the 1974 budget came up for consideration later in the Conference.

100. In the opinion of her delegation, the Agency represented a unique multinational focus for research in problem areas which might ultimately be capable of solution only on an international basis. It therefore concurred in the emphasis being placed by the Agency on supporting and co-ordinating research in radiological safety and waste management, especially in view of the need for continuous attention to changing national and

international requirements. The United States supported the programme of the Monaco Laboratory, to which it had made special contributions of equipment worth about \$100 000 during the last four years. It was very pleased that the Board of Governors had endorsed the Director General's proposal, developed by the Agency and UNESCO, that the Monaco Laboratory's programme be expanded to include the use of nuclear and other techniques to monitor specified non-radioactive marine pollutants. It would encourage financing of that programme by the United Nations Environment Fund.

101. The objectives of NPT, including the Agency's responsibility for administering the Treaty's safeguards provisions, continued to have the strongest support of the United States. It was a source of satisfaction that the European Communities and States Members thereof had signed a safeguards agreement with the Agency. Her delegation hoped that all the countries involved would promptly ratify the agreement and NPT.

102. Although the United States was not required under the Treaty to accept international safeguards in its territory, negotiations were now actively in progress concerning its offer to permit the Agency to apply its safeguards to United States nuclear activities, excluding those with direct national security significance. The United States had offered to permit Agency safeguards to be applied in the United States, when they were being applied broadly in the other highly industrialized non-nuclear-weapon countries, in order to demonstrate its belief that there was no risk to proprietary information by the application of the Agency's safeguards, and to meet the concern felt by some that they might suffer commercial disadvantage from NPT.

103. The United States would continue to support the Agency's efforts to develop technically meaningful and widely acceptable procedures to meet its safeguards responsibilities and urged other Member States to do the same. As the use of nuclear power became more widespread, the Agency's safeguards responsibilities would increase and the safeguards programme would need continued support, both through Members ensuring an adequate budget and through their making available their best people and most advanced safeguards research results.

104. The United States delegation would support the 1974 budget as recommended by the Board of Governors, as it believed the budget represented a well-balanced use of the resources that were expected to be available.

105. The United States delegation fully supported the Agency's technical assistance programme. The Director General had called attention to the rising costs involved in the provision of technical assistance. It hoped that the \$3 million target for voluntary contributions to the Operational Budget for 1974 would be fully met by Member Governments, at least at the level recommended by the General Conference, and if possible above it.

[9] See document GC(XVII)/505, paras E.10.1-E.10.18.

Subject to Congressional appropriations, the United States planned to continue contributing generously to the target and to make additional in-kind grants for study in the United States, for the provision of services by its experts, and for equipment grants to approved technical assistance projects. The United States also looked forward to discussion in 1974 of an increase in the target for 1975. Her Government was pleased to renew its pledge, for the fifteenth consecutive year, to donate up to \$50 000 worth of special nuclear materials for use in Agency projects in research and for medical therapy.

106. With regard to the United States materials supply policy, the USAEC's uranium enrichment facilities, which currently supplied a large share of the world's needs, would be able to meet anticipated requirements for enrichment services only through the early 1980s, despite a current improvement programme representing an investment of almost \$1000 million. Like other nations which would rely increasingly on nuclear power, the United States wanted to make certain that there would be no need to curtail those nuclear power programmes because enrichment services were not fully available. The United States, drawing on one or more of several alternatives available to it, would move in ample time to ensure that such services would be available to meet both its own needs and the rapidly expanding requirements of the international market.

107. Mr. ROUX (South Africa) wished also to express his great personal pleasure and that of his delegation and of the South African Government in the unanimous reappointment by the Board of Governors of Mr. Sigvard Eklund for a further four-year term as Director General of the Agency. It was a striking fact that since Mr. Eklund's original appointment some 12 years ago, no other contender for that vitally important post had been seriously considered. It was to Mr. Eklund's lasting credit that the Agency's enviable record of sound and prudent administration continued to set an example in the United Nations family.

108. Over the past year commendable and successful efforts had been made by the Director General and his staff to redirect the energies of the Agency towards new goals and priorities, conforming to the needs of the day. Of increasingly vital importance had been the intensified programme relating to the protection of the environment and the safe management of nuclear waste. In particular, the question of the disposal of radioactive waste at sea required urgent attention and the London Conference on the Prevention of Marine Pollution had in fact given the Agency the specific task of defining high-level radioactive matter unsuitable for dumping in the seas. That was tangible recognition that the Agency was the appropriate body to shoulder those great responsibilities. Of course, such activities would cost money and it was highly encouraging that the Director General's appeal for special contributions to finance the Agency's additional environmental activities in 1973 had elicited a substantial

response from several Member States, including South Africa.

109. To ensure that the Agency's role in the important fields of nuclear safety, waste management and environmental protection remained unchallenged, it was of the highest importance that a co-ordinated and continuing programme of nuclear safety and environmental protection should be established. That programme would have as its goal not simply the execution of specific tasks referred to it from time to time by some particular organization or conference, but - more significantly - the highly complex task of advising Governments of Member States on the multitude of problems concerning waste disposal and related matters. He had in mind the establishment of a permanent working group or committee consisting of technical experts in nuclear safety and environmental protection. Such a body could give direction and purpose to a vitally important aspect of the Agency's activities which at present could at best be described as a series of projects, rather than a co-ordinated forward-looking programme. Through it the Agency would be fully prepared to meet the many challenges in the field of nuclear safety which the inevitable and tremendously accelerated adoption of nuclear power was bound to create in the years ahead.

110. Such a development was an inescapable consequence of what was commonly termed the "energy crisis", which had already affected some of the Member States. Many references to future power shortages had been made from the General Conference rostrum in years gone by, but now, suddenly, the spectre of a world critically short of energy had become an immediate reality. Nuclear energy would unquestionably play a leading role - if not the leading role - in riding out the storm. But it was also evident that the situation constituted an integral crisis for industrial as well as developing countries, and a careful mixture of various types of energy, having regard to varying local factors, would be required. Energy research and development was, however, widely scattered throughout the United Nations family. The United Nations itself, for instance, dealt with geothermal energy, while UNESCO had recently held a conference on solar energy. There seemed to be a need for a centralized clearing-house where future energy requirements, particularly in the developing countries, could be considered objectively on a comparative basis. While not advocating any basic departure from the Agency's nuclear role, he did suggest that, if it was to play an effective role in providing the developing countries with balanced guidance and advice in regard to nuclear power, it must be fully familiar with sources of energy other than nuclear.

111. On the other hand, the situation needed to be viewed in its true perspective. To call it a crisis was perhaps to dramatize it, for the present conditions were to some extent rather localized and transitory. The real crisis was yet to come - probably towards the end of the century - and would consist in the serious depletion of all known energy resources rather than in an immediate

shortage of energy as such. It would appear that the prospects of adequately augmenting energy supplies from environmentally "clean" sources such as those of solar or hydro origin were dubious and that the effort must therefore be concentrated largely on established sources. Because electricity was very convenient to employ as a secondary form of energy, the increase in generation of electrical energy would be substantially greater than that of other forms, and nuclear power would unquestionably account for the lion's share. The world's uranium reserves were, as well known, not evenly distributed and it therefore behove those countries fortunate enough to be endowed with significant reserves, to bend every effort towards meeting demand and extending the world's supplies. His own country was keenly aware of its responsibilities in that regard and was ceaselessly prospecting and undertaking research designed to ensure maximum possible utilization of nature's gift of uranium.

112. His delegation warmly approved the steps taken to foster and promote prospecting activities and techniques, but it believed that there was a need for a longer view - a view which extended beyond immediate preoccupations to the day when the real crisis of depleted energy sources would arrive. Nuclear scientists had for many years been investigating the difficulties of controlled nuclear fusion and there was a steadily increasing measure of co-operation between Member States in that field. However, there was no evidence of overall co-ordination and international encouragement of that activity. His delegation earnestly hoped that the programme of Agency meetings would, from next year onwards, reflect a much more direct realization of the need to work more urgently on that potential key to the energy problems of the future.

113. The universal problem was that of funds. Price increases, relentless inflation, the uncertainties of the international monetary situation had all conspired to make 1973 an exceedingly difficult year for the Agency in the implementation of its plans, despite the best efforts of the Director General and his staff to economize wherever possible. The Agency has been obliged to seek supplementary appropriations to enable it to meet its immediate financial obligations. The problem of financing was becoming more complex and difficult each year and it was essential that a solution be found. He realized that that was no easy matter, but he trusted that all possible alternatives were being explored, such as, for example, the partial financing of the budget in local currency.

114. Nowhere had the effect of the unstable international financial situation been felt more keenly than in the Agency's technical assistance programme. South Africa had always attached the greatest importance to that activity and had always met all its financial obligations under the system of voluntary contributions. It had also been able to finance, on a bilateral basis, projects within its geographic region which the Agency had been unable to fund from its own resources. Some

years ago, South Africa had taken the lead in the Board of Governors in getting the target for voluntary contributions raised to a more realistic figure. It noted with approval that for the first time in the history of the Agency, approximately 91% of the target would apparently be met in the present year. His delegation believed that a realistic target, fully subscribed, was of greater benefit to all concerned than an unrealistic figure undersubscribed. In that connection, he was happy to be able to state that, with a view to restoring the real value of the target, the South African Government had decided, in response to the Director General's appeal, to pledge an additional voluntary cash contribution of \$1500 to the General Fund for 1974, over and above its assessed target ratio of \$15 600. South Africa would not view unfavourably a recommendation by the Board next year for a reasonable rise in the target for 1975. He expressed the hope that before long the full target figure would be reached and perhaps even exceeded.

115. On 1 June 1973 the amendment to Article VI of the Agency's Statute had entered into force and would result in a larger, more representative membership of the Board. On behalf of the South African delegation he expressed the hope that the newly constituted Board would carry out its duties with the same degree of diligence, impartiality and goodwill as the earlier one.

116. On the subject of the Agency's safeguarding activities it was common knowledge that the responsibilities of the Department of Safeguards and Inspection had increased greatly during the past year and would increase even further in the year ahead. In the circumstances it was most encouraging to note that it had nevertheless been found possible to limit the manpower requirements of that department to reasonable numbers. He felt confident that with the further standardization of safeguards implementation, and with the regular application of modern methods and techniques, that trend would continue.

117. In conclusion, he was glad to note an item on the agenda relating to the amendment of the Rules of Procedure so as to enable Conference procedures to be somewhat simplified. His delegation had long felt that those procedures might be streamlined and it welcomed the Director General's initiative in that connection.

118. Mr. ANAK AGUNG (Indonesia) said that he would first like to congratulate the Director General on his reappointment for a further term of office. During the long years that he had occupied the post of Director General, Mr. Eklund had been a brilliant and competent administrator, and his contribution to the functioning of the Agency had made it one of the most smoothly-running organizations in the United Nations family.

119. Evaluating the Agency's annual report and the budget for 1974, it was clear that difficult years lay ahead in view of the financial difficulties associated with the prevailing monetary crisis and currency fluctuations. Yet that obstacle could

be overcome, if a joint effort was made to find a solution to the problem. Without impairing the progress of the Agency, it was necessary to evolve ways and means of cutting down expenditure, in such a way that priorities were given only to those projects that were essential for the Agency, and also to impose stricter control of the budget.

120. Steps should also be taken as soon as possible, in conjunction with the other members of the United Nations family which had been affected to the same extent by the monetary problem, to develop a satisfactory plan to overcome those difficulties.

121. There could be no doubt that the financial difficulties with which the Agency was faced resulted from a world-wide currency crisis which it was beyond the competence of any individual country or group of countries to solve. His delegation was therefore opposed to any solution by which every currency realignment was followed by a supplementary budget aimed at obligatorily increasing the assessed contribution of Member States. Such a policy would be totally unacceptable to Indonesia, which was a developing country and had already suffered greatly through the currency crisis.

122. Except for the increase in safeguards activities, which was out of proportion with other Agency activities, his delegation fully supported the annual report. It was gratifying to see the results of the nuclear power market survey, which would be of great value to the countries concerned in determining their power policy. It was hoped that the Agency would in due course undertake a second survey to cover those countries which it was not possible to include in the first one, among them Indonesia.

123. His delegation appreciated the technical assistance rendered to the developing countries, which was the best the Agency could do in face of its financial difficulties, due either to the fact that the target for the voluntary contributions had not been reached, or to the heavy increase in costs as a result of inflation and monetary instability.

124. It was commendable that in technical assistance a great deal of attention had been given to the application of isotopes and radiation in agriculture and medicine; such was fully in line with the Statute and ranked among the ultimate aims of the Agency. Considerable activity had also been developed by the Agency in the fields of nuclear engineering and technology, in addition to the prospecting for, mining and processing of nuclear materials. Also important were the research contracts, and it was hoped that more funds would be allocated to that item.

125. The fact, however, that practically nothing had been said in the annual report about regional co-operation and associated projects suggested that in that connection the Agency was experiencing some problems, possibly of a financial nature. In view of the fact that the project was relatively new, it was only fair to give the Agency ample time to

develop it. He hoped, however, that within the regional co-operation framework the transfer of knowledge and technology would be given further consideration and that it could be activated and accelerated, especially as concerned results or experience gained in large-scale projects financed by UNDP, more particularly in agriculture, and under bilateral agreements on the transfer and exchange of technology between countries, for instance between India and Indonesia under the sponsorship of UNIDO. That process could also take the form of the exchange of experts and placement of trainees.

126. He would like to suggest that in the future the Secretariat should add to the report an overall review of the achievements of the four or five years prior to the year of the report concerned, so that it could be judged how the Agency was progressing. To enable an objective evaluation to be made, the effect of price increases and similar factors should be taken into account.

127. Progress in the developing countries in the use of nuclear power ought not to be seen as a process divorced from the world trend towards a switch from conventional power to nuclear power. The annual report showed that the world's installed nuclear capacity in 1980 would be 315 000 MW, as compared with 73 000 MW in 1972. Such an increase was, of course, a tremendous achievement.

128. But there was, unfortunately, another side to the problem. The rapid development of nuclear power brought with it the problem of safeguards, which had for some reason become the responsibility of the Agency and was now felt to be a growing burden by the majority of Member States.

129. The Agency's budget for 1974 contained significant facts regarding the rapid increase in the safeguards activities of the Agency, and the concomitant increase in its budget. For example, staff salaries in the Department of Safeguards and Inspection would be increased by 60% over the three years between 1972 and 1974, travel expenses by 40%, and the cost of equipment by 50%, while the number of Professional staff would go up by 60% over the same period. Yet the other, no less important activities of the Agency remained at the same level as in 1972, and in the case of technical assistance were even declining. Furthermore, promotional activities under the Regular Budget showed an increase of only 20% in the budget, which was not necessarily the actual figure to be attained in view of the price increases caused by inflation and currency realignment.

130. In the course of four months there had been two proposals for an increase in the estimates for the Regular Budget for 1974, to compensate for increased costs. [10] Those two increases in the Regular Budget in such a short time implied that the Agency's activities under the Regular Budget, especially the safeguards programme, were to continue without due regard for the financial hardships faced by the majority of

[10] GC(XVII)/505/Mod.1, para. 3(a).

Member States and despite their wishes with regard to technical assistance, a programme which was just as important as the Agency's other activities.

131. He wished to stress that in pointing out the imbalance in the Agency's budget he was not objecting to safeguards as such, but felt that the priority assigned to the safeguards programme should be reconsidered and readjusted so that a more reasonable balance could be restored between all activities of the Agency.

132. As far as the technical assistance budget was concerned, the only solution at the present juncture was to increase the ceiling for the voluntary contributions to the General Fund covering the technical assistance budget to a target above the level of the \$3 million provided for in the 1974 budget.

133. In addition to the imbalance in the budget, there was another problem preventing technical assistance from developing in a satisfactory manner. It had been fully recognized by representatives of many advanced countries that the provision of technical assistance should be one of the principal activities of the Agency. That recognition was evident from the willingness with which those countries made their voluntary contributions to the General Fund. It was sad to note, however, that the voluntary contributions were insufficient to cover the cost of the technical assistance, if the objective of expanding the technical assistance rendered to the developing countries by the Agency in line with their needs was to be attained. In his Government's opinion, the problem could be solved by including the financing of technical assistance in the Regular Budget, a concept which was not new in the Agency's history, as was known from the resolution which the Board had adopted in 1963 [11], which had the same purpose as a draft resolution Indonesia had submitted to the Board in June 1973, and which had resulted in the Board's deciding to request the Secretariat to study the possibilities and implications of all modes of financing the provision of technical assistance by the Agency, particularly from the Regular Budget. His delegation hoped to take up the matter again in the Programme, Technical and Budget Committee.

134. Touching briefly on developments in Indonesia during the past year, he said that the Indonesian National Atomic Energy Agency's programme continued to stress the promotion of research in, and applications of, atomic energy, which were of relevance to the national development plan. During the past year the use of radio-isotope tracer techniques for determining the movement of silt in harbours had been initiated. Another promising field of research was the use of radiation to produce new varieties of rice by improving the locally available varieties. Both those activities were being supported by funds

from UNDP. Further, the regulatory functions of the National Agency had been enhanced by the initiation of inspection of facilities utilizing radiation in Java, Sumatra and Kalimantan. In the field of energy, there had been another seminar on the introduction of nuclear power, which had confirmed previous findings that the introduction of nuclear power would be competitive only in the 1980s. That was also in line with the findings of the Agency's market survey carried out in 14 other developing countries. Although Indonesia had abundant oil resources, the steadily increasing price of oil would justify the eventual use of nuclear power, especially if an economically exploitable uranium deposit could be found in Indonesia.

135. In conclusion, he wished to thank the Director General and the Deputy Director General for Technical Assistance and Publications for their visit to Indonesia, which enabled them to acquaint themselves at first hand with Indonesia's activities and programmes in the field of atomic energy.

136. Mr. ALLEN (United Kingdom) expressed his delegation's pleasure at the fact that Mr. Eklund had agreed to accept the post of Director General for a further period.

137. Over the past year there had been growing concern about world energy supplies, a problem in the solution of which the development of nuclear power would undoubtedly play an important role. Currently, nuclear power met less than 1% of the world's total energy requirements, but the proportion would grow quite quickly. It was therefore essential to ensure that the excellent safety record of nuclear power was maintained and that the people who would benefit from the increased energy supplies had the true facts about nuclear power put impartially before them. The Agency would have a significant part to play in those two areas.

138. In countries with nuclear power programmes, considerable new capacity was already under construction or being planned for the next decade, while - as the Agency's recent market survey had indicated - developing countries were examining the possibilities of nuclear power in relation to their overall power requirements. Wise exploitation of the potential of nuclear power would entail improved fuel utilization and continuing attention to environmental and safety questions.

139. The past year had been a particularly difficult period in the Agency's financial affairs. The budget had been hit by external factors, while there had been strong internal pressures from some Member States for budgetary increases to reflect changes in the world scene. Technical assistance, safeguards and environmental problems were all important aspects of the Agency's work, and it was more necessary than ever to establish realistic priorities and avoid duplication of effort. The United Kingdom was ready to make its full assessed contribution to the 1974 Regular Budget and, encouraged by the response to the 1973 target for voluntary contributions, to make its full voluntary

[11] Reproduced in document GC(VII)/236, Appendix A.

contribution for 1974 in sterling and give what support it could in kind. It was also ready to give sympathetic consideration to proposals for increasing the target for voluntary contributions for 1975.

140. Following the United Nations Conference on the Human Environment, the London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter had placed on the Agency further responsibilities in respect of radioactive waste disposal into the sea. The Agency was to be congratulated on the speed with which it had formulated recommendations on the management of radioactive waste.

141. Aware of the environmental implications of nuclear power generation, some Member States had voluntarily contributed about \$150 000 to help finance the Agency's expanded environmental protection programme, while the Agency had convened a number of expert panels to advise on environmental questions. In addition to its financial contribution, the United Kingdom would continue to give the Agency the benefit of its experience in that important field.

142. In the United Kingdom, the nine Magnox reactors being operated by the Electricity Generating Boards had continued to perform reliably, very economically - compared with power-generating plants using other fuels - and with high availability. The first advanced gas-cooled reactor stations of the Electricity Generating Boards were planned to start operations in 1974. With the conclusion of the current construction programme, 10% of the United Kingdom's electricity requirements would be met by nuclear power. In other words, nuclear power's annual contribution towards meeting the United Kingdom's energy needs would be equivalent to some 25 million tons of coal or 15 million tons of oil.

143. During the past year, the British nuclear construction industry had been restructured to enable it to respond to future demands at home and abroad. It was expected that most new power stations ordered in the United Kingdom would be nuclear; at the same time, in view of the increasingly international character of the nuclear industry, the ground had been prepared for strengthening and extending collaborative ties.

144. The results of tests on fuel for the advanced gas-cooled reactor (AGR) and of studies to determine the optimum coolant composition had been particularly satisfying. In addition, work had continued on the steam-generating heavy-water reactor and the high-temperature reactor. As regards the United Kingdom's largest programme, the sodium-cooled fast reactor, construction of the 250-MW(e) prototype at Dounreay had been completed and commissioning was under way.

145. Work on the safety of nuclear power reactors had continued and, on the basis of 20 years of development and operational experience, increasing attention was being devoted to the environmental

implications of nuclear power generation, including fuel reprocessing and waste management.

146. In the field of nuclear fuel, the United Kingdom, in partnership with the Netherlands and the Federal Republic of Germany, was building up capacity for providing enriched uranium by the centrifuge separation method, the joint target for 1980 being 2000 tonnes of separative work capacity. Experience of centrifuge construction and operation indicated that the centrifuge method would be a reliable and fully competitive method of enrichment.

147. Encouraging technological progress had been made at the Culham Laboratory and elsewhere in the field of electricity generation through controlled thermonuclear reactions. It had been decided that efforts should be expanded somewhat, it being assumed that the United Kingdom would collaborate fully with the other countries working in the field, particularly those belonging to the European Communities. The stage was being reached when - although actual power stations were still a long way off - big and expensive machines were needed to continue the good progress made in recent years, and there was considerable opportunity for collaboration among the countries which were developing the necessary technology.

148. Turning to safeguards, he congratulated the delegations of those States which had become party to NPT during the past year and noted with pleasure that certain States which had hitherto hesitated about becoming party to NPT appeared to be re-examining the question.

149. The United Kingdom welcomed the signing, on 5 April, of the safeguards agreement between the Agency, EURATOM and the non-nuclear-weapon States Members of EURATOM. It opened the way for the ratification of NPT by the States concerned and might encourage other States to follow their example. Under the agreement, which had rightly attracted a great deal of attention, account would be taken of the technical effectiveness of EURATOM's existing control system resulting in an integrated system under which each controlling authority could ascertain, in co-operation with the other, whether its similar but distinct safeguards requirements were being fulfilled. The nuclear activities of the seven non-nuclear-weapon States Members of EURATOM would be subject to both EURATOM and Agency safeguards.

150. Meanwhile, since 1 January, EURATOM safeguards were being applied in the United Kingdom with the result that the number of facilities for which EURATOM's inspectors were responsible had nearly doubled and British nuclear operators had been required to adjust to the discipline of new procedures. Substantial progress had been made and, subject only to those exclusions necessary for national security reasons, the whole of Britain's nuclear programme had been submitted to that discipline. Regular reports on the use, stocks and movements of civil nuclear materials were being submitted and visits by EURATOM inspectors had begun. Such progress would not,

however, have been possible without the expertise and practical good sense of the EURATOM Safeguards Directorate.

151. The United Kingdom now hoped to negotiate with the Agency and EURATOM an agreement for Agency co-operation with EURATOM in the application of safeguards in the United Kingdom, the objective being to create a single, coherent system on the lines of the one arrived at in the agreement with the non-nuclear-weapon States Members of EURATOM but modified to take account of national security exclusions and the agreed principles discussed in the Safeguards Committee on 5 February 1971. It was the United Kingdom's intention to initiate consultations before the end of the year with that objective in view and to co-operate fully in negotiating a system for the application of safeguards to the United Kingdom's civil nuclear programme which would accord with the voluntary offer made by the United Kingdom Government on 4 December 1967.

152. On the question of timing, he recalled that reference was made in the offer to "such time as international safeguards were put into effect in the non-nuclear-weapon States in implementation of the Treaty". The United Kingdom, encouraged by the progress already made within EURATOM and looking forward to similar progress elsewhere, adhered to the timing provision which he had just quoted.

153. The past year had been one of great activity and no mean achievement in the field of safeguards. Looking ahead to the review of NPT due to take place in 1975, there was every reason for confidence that the Treaty would have made the world safer and promoted the peaceful uses of atomic energy.

● The meeting rose at 6.15 p.m.