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President: Mr. MEDINA (Philippines)

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** GC(XVIII)/534.

THE RECORD

GENERAL DEBATE AND REPORT FOR 1973-74
(GC(XVIII)/525, 532) (continued)

1. Mr. BOT (Netherlands), continuing the general debate, said that apart from the many problems the changed world situation in energy supply had created since the last session of the General Conference, there was an important positive element of that development which should be stressed: people all over the world had woken up to the fact that the existing energy resources were limited and that intensified international co-operation was necessary in order to secure an adequate energy supply for future generations.

2. As the Director General had pointed out, recent developments had led many Governments to accelerate the introduction of nuclear energy for power generation. [1] His Government had not yet finished the studies of all the aspects of energy supply started following the events of the previous year; it would announce its policies on the question in due course. Without anticipating the outcome of those studies, it should be stressed that his Government was most carefully weighing all relevant factors regarding the possible further application of nuclear energy. It could be said, however, that the Government deemed it imperative for a solution to be found to the unsolved problems a considerably increased application of nuclear energy would entail before nuclear energy was used for power purposes on a large scale. His Government had noticed with satisfaction that the Agency was performing many useful tasks in connection with those problems. It welcomed the fact that the need for additional efforts, especially in the field of environmental protection, had been emphasized in the proposed programme for 1975-80 [2]. The work on harmonization of safety standards for radiation protection and for radioactive wastes, especially high-level and alpha-bearing wastes, and on problems related to the decommissioning of nuclear facilities was fully supported by his Government.

3. Although the application of sophisticated safety measures in nuclear installations made the probability of nuclear incidents which could pose any threat to the surrounding population very slight, his delegation still thought that plans should be prepared without further delay so that the consequences of any such nuclear incident could be limited as much as possible. His Government knew from experience that the elaboration of such plans was a complicated matter and that many problems remained to be solved. While it welcomed the fact that the Agency was to give its attention to the problem, it would appreciate higher priority being given to the subject so that a systematic elaboration of principles to govern measures to be taken in the event of nuclear accidents could be achieved in due course.

[1] See document GC(XVIII)/OR, 168, para. 48.

[2] See document GC(XVIII)/526 and Mod.1.

4. The recent energy crisis had made it economically attractive for many developing countries to start developing or expanding programmes for the application of nuclear energy to power generation. In that connection, he noted with interest from the annual report [3] that the economic and commercial prospects for small and medium-sized power reactors were considered to be favourable; at the previous session of the General Conference, he had pointed out the advantages of such small and medium-sized reactors, in particular for developing countries [4].

5. As the Director General had rightly emphasized, an important prerequisite for the application of nuclear energy on a larger scale in the developing countries was the existence of appropriate technical and administrative infrastructures. [5] Besides the training of technicians, the Agency could provide useful advice and support in working out standards and procedures for licensing as well as in organizing appropriate administrative bodies. His delegation considered it to be of the utmost importance that systematic studies should be made first of all and without delay to establish whether other energy sources requiring less complicated technical and administrative procedures could provide an attractive alternative for a number of developing countries which urgently needed rapidly increased power generation.

6. As was well known, his Government attached great importance to the tasks performed by the Agency under the technical assistance programme. He was therefore happy to announce that his Government had decided, subject to parliamentary approval, to make a voluntary contribution to the General Fund of US \$45 000. His delegation shared the views expressed by the delegate of Indonesia regarding the financing of technical assistance.

7. His Government was greatly concerned about the explosion of a nuclear device in May that year by a non-nuclear-weapon State as defined in the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) [6]. It had also taken note of the Indian Government's statement that it remained committed to a policy of using nuclear energy for peaceful purposes only. However, since it was difficult to distinguish between nuclear tests for peaceful purposes and tests for defence purposes, his Government considered that the event in Rajasthan constituted a nuclear proliferation, at least in the technical sense. As such it represented a setback to international efforts to ban nuclear tests everywhere and by everyone, nuclear Powers and non-nuclear-weapon States alike. The event had strengthened his Government's conviction that more than ever efforts

[3] GC(XVIII)/525.

[4] See document GC(XVII)/OR, 163, para. 5.

[5] See document GC(XVIII)/OR, 168, para. 54.

[6] Reproduced in document INFCIRC/140.

should be continued to obtain nuclear arms control and disarmament. An important means of achieving that goal was, without any doubt, the widest possible adherence to NPT. In that connection, the Netherlands Parliament had recently ratified NPT and approved the safeguards agreement in connection with it. Furthermore, his Government hoped that the fullest possible use would be made of the Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (the Review Conference), which offered a welcome opportunity of enhancing the viability of the Treaty in all its aspects.

8. The agreement reached by a number of States which exported nuclear materials and equipment for peaceful purposes, on procedures relating to exports to any non-nuclear-weapon State of certain categories of equipment and material especially designed or prepared for the processing, use or production of special fissionable material, [7] was encouraging for the future of NPT. His Government fervently hoped that all exporting States which had not yet adhered to those agreements would do so, so that generally accepted standards for exporting nuclear materials and equipment could be arrived at. In that context he fully shared the opinion of the Director General that the technical scope and procedures for the non-NPT safeguards system should be defined more precisely in the light of developments and experience since 1968. [8]

9. The Agency had been studying the question of nuclear explosions for peaceful purposes (PNE) for a number of years and had proved itself to be fully competent in the matter. While his Government welcomed the Board's decision concerning the eventual establishment of a separate organizational unit for PNE-related services as representing an attempt to internationalize PNE, it considered that a careful evaluation of all aspects of peaceful nuclear explosions should be made before more definitive steps were taken. The possible political and economic benefits of an international PNE system had, for example, to be weighed against the risk that such explosions could be misused for conducting nuclear weapon tests, especially in the context of a comprehensive test ban. Furthermore, it was imperative that under such a system, services for PNEs should be provided on a non-discriminatory basis and should, as far as possible, be the same for non-nuclear-weapon States and nuclear Powers alike.

10. In his statement, the Director General had expressed the opinion that the Agency should expand its activities in the field of peaceful protection of nuclear materials and installations. [9] The Netherlands Government would welcome that. The United States delegate had quite rightly made that subject one of the main themes of her state-

ment the previous day. Though the responsibility for physical protection was primarily a national one, there were good reasons to justify the Agency playing an active role in that field. Generally speaking, States did not only have a domestic responsibility in that field, they also had a responsibility towards the international community, since the consequence of misuse of stolen material need not necessarily be limited to the frontiers of the State in which it had been stolen. Inasmuch as all States using nuclear energy would be obliged to take appropriate physical protection measures, sharing of experience would be useful to all Governments. Moreover, the increase in international transport of nuclear materials also called for internationally agreed protection measures. The undertaking of a study of the subject by the Agency would be welcome. But any such study should not be limited to working out protection standards alone, but should cover the more general problem of how fuel cycle activities should be located geographically so as to minimize the risks of theft or sabotage.

11. In conclusion, he expressed his Government's confident hope that the Agency would continue to perform its many useful tasks in close co-operation with other international organizations both inside and outside the United Nations system. Only in that way could optimum results be achieved from the available manpower and funds.

12. Sir John HILL (United Kingdom) said that it was a great pleasure to welcome two new Members to the Agency.

13. The shortfall in oil supplies and the increase in price had given greater impetus to the introduction of nuclear power. The use of nuclear energy for electricity production had now been shown conclusively to be substantially cheaper than the use of fossil fuels and he was fully confident that nuclear energy would henceforward provide an increasing share of the world's power demand. If its long-term potential was to be realized to the full, the search for additional supplies of uranium must be intensified and technology must continue to be improved and solutions to long-term waste problems to be perfected.

14. The United Kingdom had recently decided in favour of the steam generating heavy water reactor (SGHWR) for its next nuclear power station orders. It believed that the SGHWR would best meet its domestic needs. It had confidence in the technology, and the 100-MW prototype had been operating successfully for the past six years. A programme of 4000 MW of orders over the next four years was being embarked upon, which provided a base for developing industrial capability and an expansion of the SGHWR programme in the future.

15. Efforts in the fast reactor field were being maintained, and an important milestone had been reached that year with the commissioning of the 250-MW prototype fast reactor at Dounreay. The United Kingdom had now more than 10 years'

[7] See document INFCIRC/209 and Addenda 1 and 2.

[8] See document GC(XVIII)/OR.168, para. 65.

[9] Ibid., para. 63.

operating experience with the forerunner of the prototype reactor, and the next stage was commercial design and exploitation. His Government attached particular importance to further international collaboration in that important field.

16. Increasing attention was also being devoted to a number of areas of development work concerned with safety and with the broader aspects of nuclear power. Those included study of the general environmental impact of nuclear power, general safety studies, the investigation of waste management and long-term waste treatment, the study of plutonium handling and accounting, and the study of the problems of transporting nuclear materials.

17. With the upsurge of orders for nuclear power stations there had been a corresponding increase in interest in fuel services. Under their tripartite centrifuge collaboration, the Federal Republic of Germany, the Netherlands, and the United Kingdom had now completed the pilot-plant stage of their gas centrifuge process for uranium enrichment and had commenced construction of two major commercial plants: one at Capenhurst in the United Kingdom and the other at Almelo in the Netherlands. Those plants were expected to achieve a total output of 400 tonnes of separative work per annum by 1976-77. Capacity was being increased to at least 2000 tonnes by 1982 and was expected to reach 10 000 tonnes by the mid-1980s. Almost all the first 2000 tonnes was now covered by orders or options from European utilities which amounted to an order book worth over £180 million.

18. The Association for Centrifuge Enrichment (ACE), established in 1973 to study aspects of centrifuge plant usage, including technology, construction and finance, had successfully concluded its initial task. The ten member countries had been provided with an analysis of the construction costing and production of enrichment by the centrifuge process. All the countries agreed that the next phase would be concerned essentially with bilateral discussions between the individual countries and the tripartite partners. Discussion at government level covering the application of appropriate safeguards and protection of classified information would have to precede any commercial and industrial negotiations.

19. In the long term, an alternative to fission reactors was nuclear fusion with the prospect of utilizing virtually unlimited fuel supplies. During 1973 the United Kingdom had decided to expand its programme of fusion research somewhat, and to carry out the expanded programme in association with the European Atomic Energy Community (EURATOM). It had been happy to have at Culham a European design team which had been working on the so-called Joint European Torus ('JET') project. The team had prepared an outline design of a large Tokamak device so that both the project itself and the site for it could be considered by the partners and by the Council of Ministers of EURATOM.

20. At the previous year's General Conference the United Kingdom delegation had welcomed the signature of the IAEA/EURATOM safeguards agreement [10] and had stated that it was the Government's intention to negotiate a similar agreement, suitably adjusted to meet the United Kingdom's own circumstances, with the Agency and with EURATOM. Good progress was being made in the negotiation of such an agreement, directed to the implementation of the United Kingdom's voluntary offer to accept safeguards on its civil nuclear facilities. There was agreement on the general issues, and discussions would resume in October when detailed consideration would be given to specific articles of the draft agreement.

21. It had always been made clear that entry into force of the resulting agreement would depend upon progress in ratification of NPT and acceptance of safeguards by major non-nuclear-weapon States. In that context, he was pleased to note the progress being made in Europe towards the ratification of the IAEA/EURATOM agreement which he hoped would soon result in all the EURATOM non-nuclear-weapon States becoming party to NPT. It would be fitting if the EURATOM non-nuclear-weapon States which had still to ratify NPT, and indeed all others which had indicated their confidence in it but had not yet become party to it, could do so in time to participate in the NPT Review Conference.

22. His Government had always fully supported NPT as the most practical and realistic means of containing the risk to world security of the spread of nuclear weapons. It realized that some of the criticisms of NPT might be justified; no international agreement designed for universal acceptance was perfect. If NPT did not exist, however, the world would be less safe for all, and consequently all should surely regard NPT as the foundation stone upon which to build. The forthcoming Review Conference should be taken as an opportunity to strengthen it, to improve its operation and to ensure its universal application.

23. No State represented at the Conference could but abhor the further proliferation of nuclear weapons. It was their duty to ensure that the benefits of nuclear technology were enjoyed by all without being overshadowed by the threat of a nuclear holocaust. Progress in nuclear disarmament might not be as rapid as desired but it was at least progress in the right direction. The further proliferation of nuclear arms could only jeopardize that progress and would, in itself, be retrogressive and against the interests of all Members of the Agency. It was essential that in reviewing the first few years of operation of NPT, opinions of as many parties to NPT as possible should be heard, so that improvements could be made to the non-proliferation machinery to enable it to cope with the fast-moving development of nuclear technology.

[10] Reproduced in document INFCIRC/193.

24. His Government's determination to assist the effective implementation of NPT could be seen from recent actions. He had already referred to the progress made in the implementation of the United Kingdom's safeguards offer. Together with the United States of America and the USSR it had also undertaken to assist the Agency by notifying exports and imports of nuclear material. [11] It had also announced its adoption of certain procedures in implementation of its obligations under Article III, 2 of NPT and in order to prevent safeguards requirements becoming an element of competition in international nuclear trade. Furthermore, it had participated in the Agency's efforts to arrive at a greater degree of standardization with respect to the duration and termination of safeguards agreements other than those concluded in implementation of NPT; and, when providing items in connection with which safeguards were called for, it would require that the relevant agreements reflected the concepts contained in a memorandum by the Director General on the formulation of certain provisions in agreements under the Agency's Safeguards System (1965, as Provisionally Extended in 1966 and 1968), which was before the Board of Governors in February 1974.

25. On behalf of his delegation, he warmly thanked the Director General and his staff for their valuable work during the past year and for the way they were continuing to meet the challenges of today. The difficulties sometimes seemed quite irreconcilable: on the one hand there was the need to reorientate and expand the programme in response to the world's needs and on the other hand there was a need to contain the budget to a level which countries could support during a period when it was being eroded relentlessly away by inflation. He urged the Director General to continue vigorously to pursue, as he had always done, his policy of good housekeeping. The United Kingdom Government had always been prepared to make in full its assessed contributions to the Regular Budget and its voluntary contributions to the technical assistance programme. The previous year it had supported along with other Member States the setting up of a contingency fund to meet shortfalls in the Regular Budget, and had subsequently agreed to make a pro rata increase in its contribution to technical assistance, thus exceeding its voluntary contribution for 1974 by 18%. For 1975 the United Kingdom was prepared to make its assessed contribution to the Regular Budget, and following the recent recommendation by the Board of Governors to raise the target level for technical assistance to \$4.5 million it had pledged to meet in full its share of the new voluntary target.

26. In response to the Agency's needs the United Kingdom had the previous year provided facilities for 53 trainees and the services of 29 cost-free experts. An expansion of the

Agency's training programme was currently under discussion. In the meantime the United Kingdom remained ready to provide training in appropriate fields for Agency fellows from the developing countries.

27. With the expansion of nuclear power, it was desirable that there should be a move towards establishing acceptable and recognized safety codes and guides for reactors on a world-wide basis. The efforts of the Agency in that direction were welcome. However, care should be exercised to ensure that the particular characteristics of any system could be taken fully into account and that no undue constraints were placed on design and development.

28. As regards the question of physical security it was important to be clear that that was not a question of nuclear safety in any general sense, but of the particular problems which might arise from activities of lawbreakers. It was his considered opinion that the general interest would not best be served by public debate on that particular topic. To evolve measures and establish procedures designed to cope with such situations was a task of great complexity and of high security, and any disclosure of the precautions taken could only reduce their effectiveness.

29. Mr. DENES (Yugoslavia) said that as time went on the world was facing ever greater difficulties in connection with the energy crisis, which meant that one of the Agency's main purposes, the utilization of nuclear energy, assumed ever greater importance.

30. The present international situation was characterized by crises in various parts of the world, and the consequent threat to peace, security and the unimpeded development of nations was all the greater since some of the existing crises were not being settled, while many new and dangerous ones were appearing on the scene.

31. The energy crisis had led to a considerably enhanced interest in nuclear energy throughout the world, particularly among the developing countries. On the other hand, the utilization of nuclear energy called for urgent solutions to various problems, ranging from nuclear fuels to health physics and safety devices.

32. Much time had been spent on emphasizing the distinction between safeguards and technical assistance, but real life had demonstrated their interdependence as two parts of a whole.

33. His delegation considered that the Director General's approach to the problems at issue was a realistic one, and at the same time was sufficiently imaginative to yield fruitful action.

34. The declaration by the Yugoslav Government of 27 February 1970 had described the motives impelling Yugoslavia to accede to NPT. His delegation also wished to recall recent statements

[11] See document INFCIRC/207.

in favour of general and complete disarmament, including the prohibition of the manufacture and use of nuclear weapons, the destruction of all existing stocks, and the prohibition of all nuclear tests in all media throughout the world. During the recent meeting of the Committee on Disarmament at Geneva, the Yugoslav delegation had expressed anxiety at the new dimensions assumed by the armaments race, especially the nuclear one. The Agency's General Conference was clearly the appropriate forum in which to reiterate such fears. It had unfortunately to be concluded that hardly anything had been done about stopping or limiting the rush towards nuclear rearmament, and the results achieved in making nuclear technology available to developing countries had been very modest during the four years since NPT had come into force.

35. The present situation was a consequence of the monopolistic position of the nuclear Powers, in connection not only with weapons but also with the peaceful applications of nuclear energy. If the nuclear Powers did not take the quickest possible path to nuclear disarmament and the fulfilment of their obligations towards the developing countries, it could be expected that some of the latter would seek their own solutions to their problems, by the utilization of nuclear energy in all its forms. That was now becoming an increasingly feasible proposition for quite a large number of countries, even for those with a very low level of general development.

36. A comprehensive test ban was an important prerequisite for the establishment of an internationally co-ordinated system in connection with nuclear explosions for peaceful purposes. Article V of NPT provided that non-nuclear-weapon States party to the Treaty would be able to enjoy the benefits of peaceful nuclear explosions, "pursuant to a special international agreement or agreements, through an appropriate international body with adequate representation of non-nuclear-weapon States. Negotiations on this subject shall commence as soon as possible after the Treaty enters into force." However, no such international agreement had yet been concluded and neither had any negotiations taken place. His delegation felt that it was high time to convene the appropriate international conference, with participation open to all States, nuclear and non-nuclear.

37. The system which would emerge from the negotiations would have to be non-discriminatory and capable of equitable implementation in relation to all countries. The capacity of a number of States to develop the scientific and technological potential of nuclear energy for peaceful purposes was full justification for a timely international initiative as regards the regulation of activities.

38. The intensive utilization of nuclear technology for peaceful purposes, which was always advocated by non-aligned countries at their various summit meetings, could be a significant factor in the effort to accelerate the economic development of developing countries. Interest in nuclear

energy had increased owing to the energy crisis, as nuclear power was a feasible and immediately available solution for the energy problem. Interest had been stimulated also by the fact that nuclear power plants were now the cheapest way of supplying electric power for many developing countries. Numerous countries, including Yugoslavia, had acceded to NPT because they believed that the Treaty provisions relating to the peaceful utilization of nuclear energy and the transfer of nuclear technology would be honoured and implemented by the nuclear States party to NPT.

39. The resources at present available for financing peaceful nuclear activities could not keep pace with the ever-increasing requirements. A considerable part of the human and material potential of the Agency had been devoted to developing the Agency's supervisory functions in connection with NPT. The acute needs of the developing countries as regards the peaceful utilization of nuclear energy had still not been adequately met. Significant results had indeed been obtained in certain areas (agriculture, medicine, and so on), while progress in other domains was still the privilege of the highly developed countries. He believed that energetic action under, for example, the programme for utilization of nuclear fuel would considerably strengthen confidence in NPT and would promote its universal acceptance.

40. In the Agency's programme - as reflected in the statement by the Director General - the utilization of nuclear energy as a power source held a significant place. The Yugoslav delegation was of the opinion that that represented a concrete contribution by the Agency to solving the problems caused by the energy crisis. That policy should continue to guide the future activities of the Agency, and would enjoy Yugoslavia's full support.

41. Yugoslavia was among the first countries to have concluded, under the Agency's auspices, an agreement with the United States of America for the construction of a nuclear power plant and for the supply of nuclear fuel. [12] He wished to take the opportunity of thanking the United States representatives, the Agency Secretariat and the various experts concerned for their spirit of understanding and co-operation in that important work, which had been brought to a most satisfactory conclusion. The Yugoslav Government believed that all action throughout the world concerned with the generation and use of nuclear energy should be undertaken under the aegis of the Agency. For that purpose, it might be useful for countries already constructing nuclear power plants, or about to do so, to exchange relevant experience and information.

42. Yugoslavia had been consistently in favour of a substantial increase in the Agency's technical assistance to developing countries. In that

[12] See document INFCIRC/213.

connection his Government would fulfil its obligations regarding the target for voluntary contributions, as provided in the decision taken by the Board of Governors on 13 June 1974.

43. His delegation approved the report on the provision of technical assistance by the Agency with special reference to 1973. [13] It was particularly in favour of the new orientation of technical assistance towards nuclear power. It hoped also that the United Nations Development Programme (UNDP) contribution would be increased so as to meet the needs of the developing countries.

44. A number of developing countries already possessed significant experience and capability in the field of nuclear energy. Those countries should co-operate with one another in that field through active participation in the work of the Agency. Isolated and poorly integrated requests should give way to programmes co-ordinated particularly on a regional basis. In that way the most rational use would be made of available funds.

45. Turning to co-operation between the Agency and Yugoslavia, his delegation believed that such co-operation had been especially varied and fruitful since the last session of the General Conference. Among other activities, a Seminar on Radiological Safety Evaluation of Population Doses and Application of Radiological Safety Standards to Man and the Environment had been organized in Yugoslavia as a joint project with the Agency. The discussions and exchange of views and experiences had lasted several days and had covered those problems of human and environmental protection which were becoming increasingly important thanks to the projected construction of numerous nuclear power plants. His Government would lend continued support to all the Agency's activities in that direction.

46. On the subject of the report for 1973-74 and the programme for 1975-80, he wished to associate himself with the suggestion put forward by the delegate of Indonesia for more detailed descriptions of UNDP projects. [14] He also believed it would be helpful if the Agency's annual report were to cover a period coinciding with the Agency's budgetary year.

47. The report for 1973-74 gave a detailed analysis of the results achieved as well as of outstanding problems. His delegation approved the report as presenting a cross-section of the Agency's work during the past year. It showed that during that period many problems had been solved, especially in the field of nutrition, agriculture, natural sciences, economics, nuclear power engineering, safety, environmental protection and application of safeguards.

[13] GC(XVIII)/INF/148.

[14] See document GC(XVIII)/OR.169, para. 45.

48. The above areas would be the scene of the Agency's principal activities during the period 1975-80, which would also - he was gratified to see - witness a further expansion in the provision of technical assistance, particularly in connection with the introduction of nuclear power.

49. He welcomed the admission of the Democratic People's Republic of Korea and Mauritius to membership of the Agency, thus strengthening the universal character of the organization.

50. Finally, he wished to emphasize that Yugoslavia was expecting much from the Agency and he also believed that the world had similar expectations. He was confident that the Agency would not fail in its mission of making available to mankind the marvellous benefits promised by the peaceful utilization of nuclear energy.

51. Mr. LE-VAN-THOI (Viet-Nam), noting the Agency's active role in the development of international collaboration directed at exploiting atomic energy in the interests of peace, health and prosperity throughout the world, said that, in addition to its research and promotional activities in various fields of nuclear science and technology, the Agency was doing valuable work in the field of environmental protection and contributing - through the strengthening of its safeguards in connection with NPT - to world security.

52. The Agency was engaged in careful studies of the safety problems posed by power reactors and in the formulation of standards for the management of radioactive waste, and he was sure that, in view of the present energy crisis, the Agency's recommendations would be welcomed by most Member States. The developing countries would undoubtedly have recourse, during the forthcoming decades, to nuclear power, which would become less and less expensive and would at all events be cheaper than other forms of energy, especially as the risks involved in nuclear power reactor operations were very slight.

53. He was pleased to see that the Agency was giving high priority to the technical assistance programme, which would, in the opinion of his delegation, have the most lasting effect of all the Agency's programmes, helping the underprivileged countries to increase their economic potential and raise their living standards. He feared, however, that the Agency would not be able to meet the growing number of requests for technical assistance if the funds for that purpose continued to derive almost entirely from voluntary contributions. He was therefore in favour of financing a larger part of the technical assistance programme from the Regular Budget.

54. Technical assistance projects should, as far as possible, be grouped on a regional basis, so as to derive maximum benefit from the services of experts and to strengthen regional ties. As far as South Asia, South East Asia and the Pacific and the Far East were concerned, an agreement along those lines had been concluded thanks to the

Agency's efforts. [15] Under that agreement, a project relating to the radiation preservation of fish and fishery products would be starting soon and a regional meeting on radiation protection was to be held in Bombay towards the end of the year. He hoped that other regional projects would be initiated in the near future under the agreement and that they would yield concrete results within a reasonable time, thereby encouraging Governments to go further in the regional co-ordination of national research activities.

55. The shortage of qualified personnel was seriously hampering nuclear research in all developing countries and constituted a problem to which the Agency ought to devote special attention. Efforts should be made to train such personnel at the regional level, using the nuclear installations and research facilities in the region, and to organize regular courses designed to ensure a continuous supply of technicians qualified to carry out work in different fields of research. In that context, Viet-Nam was prepared to make available for training in nuclear medicine the Cho-Ray Hospital's modest radioisotopes laboratory, which had been equipped entirely by the Agency.

56. Turning to administrative questions, he proposed that the Agency's annual report be prepared on a calendar-year basis so as to facilitate comparison with the programme and budget.

57. He regretted that Viet-Nam's contribution to the development of nuclear energy for peaceful purposes had remained so modest. The war in his country, which had lasted so long and which his people had not wanted, had paralysed all teaching and research efforts, and while the Paris Agreement had put an end to the war, the return to peace was a difficult process. Looking ahead, however, his delegation hoped that Viet-Nam would become increasingly involved in the Agency's work and help to achieve the common aim of really putting the atom to the service of peace.

58. Mr. MALU wa KALENGA (Zaire) said that among the major issues concerning the General Conference were the financing of technical assistance, the amendments to the Rules of Procedure, and, of course, the energy crisis. Whereas the first two problems had been under discussion for quite a long time and certain progress had been made in overcoming the difficulties involved, the energy crisis was a matter that still required careful deliberation.

59. In that connection, the Agency was in a position to take the lead by making a concerted effort to organize a more effective distribution of information on nuclear power generation, and an efficient safeguards system that was not unduly costly.

60. Mr. SETHNA (India) said his delegation welcomed the admission of the Democratic People's Republic of Korea and Mauritius as new Member States of the Agency. India had excellent relations with both those countries and looked forward to co-operating with them in the Agency.

61. The Indian delegation wished to express its appreciation of the work of the Secretariat and the excellent documentation produced by the Agency. It was a matter of satisfaction that the Agency had responded with its customary speed and efficiency to the demands placed on it by the anticipated expansion of nuclear power programmes in the wake of the present energy crisis.

62. Recent events had underscored the importance of nuclear energy in the production of electric power especially in the developing countries, whose economies were more vulnerable to steep fuel-cost escalations. The Agency could play a meaningful role by arranging for exchanges of information and expertise so as to reduce the lead time in the construction of nuclear power plants, thereby ensuring that nuclear power would have a more direct and immediate impact upon the world energy situation in the near future.

63. In the longer term, also, nuclear energy was of immense significance, promising to help bridge the energy gap as advanced technologies, especially those relating to fast breeder reactors, became feasible. The Agency's enlarged plans relating to nuclear power reactors and nuclear safety and environmental protection had India's full support. The Agency had shown wisdom in assigning priority to those two areas.

64. Defining nuclear power production and related sectors as priority subjects did not mean, however, that attention should be diverted from certain other subjects of equal importance, particularly to the developing countries - the Agency's work in food and agriculture and in the life sciences.

65. The Agency's technical assistance programme for the immediate future had done well to make provision for the training of personnel for the operation of nuclear power reactors and for work relating to the establishment and expansion of nuclear power projects in the developing countries. India was willing to play its part in that important work.

66. One of the pressing concerns at the time of the last session of the General Conference had been the state of the Agency's finances, particularly the anticipated increases in the budget following widespread inflation and the re-alignment of currency exchange rates. While the Agency, through careful housekeeping and timely provision of funds for anticipated changes in the exchange rates, had kept the expansion of the budget within reasonable limits, there was still need for long-term discussion, in association with other United Nations bodies, on how the Agency could respond effectively to the external pressures put on its

[15] See document INFCIRC/167 and Addenda.

finances. Inflation had had a particularly serious effect on activities of special importance to the developing countries, e. g. the technical assistance programme.

67. The Conference had before it at the present session a paper on different modes of financing the technical assistance programme of the Agency [16], which followed from the deliberations of last year. While the conclusions reached in the paper represented a reasonable compromise within present-day limitations, India felt that a continuing review of all aspects of the technical assistance programme was an essential pre-requisite to its satisfactory implementation.

68. Hitherto the Agency's technical assistance programme had been administered on the admirable basic principle of non-discrimination between States on political or other considerations. At the present session of the General Conference, his delegation had heard some suggestions to the effect that States parties to NPT should in some way be preferred in the matter of provision of technical assistance. India could not fail to express concern that such a suggestion had been voiced. It could not agree to any proposal by which, in the provision of technical assistance or in the implementation of any other statutory function of the Agency, an element of discrimination was introduced as between States which were and those which were not party to a particular international treaty.

69. With the growing importance of nuclear power for the developing countries, it was becoming increasingly imperative to ensure that technically sound requests for assistance received by the Agency should be met and that funds should be made available for the purpose. The target for the General Fund set from year to year should, therefore, include not only a component to compensate for inflation but also a real growth component taking into account the increasing needs of the developing countries.

70. His Government was happy to announce a contribution of \$60 000 in Indian rupees to the General Fund for the year 1975, which amount was about 7.5% more than its assessed share.

71. India had been making resources available to facilitate the provision of technical assistance by the Agency to other developing countries. In addition to cash contributions to the General Fund it had made available a number of fellowships, the services of Indian experts, facilities for visits by scientists from other developing countries, and training courses, seminars and symposia. India had frequently expressed the view that the Agency's programme of seminars, symposia and allied activities should be dispersed geographically, with particular emphasis on holding them in the developing countries so that a larger number of scientific staff from those countries could participate in and benefit from such activities.

72. It was a matter of great satisfaction that the emphasis in technical assistance had shifted from basic radiation and isotope applications to nuclear engineering and studies directly related to the introduction and expansion of nuclear power and to agricultural applications of nuclear energy. The work of the Agency in the coming years would therefore be in line with the major world trends, focusing increasing attention on problems of food and power. It was also gratifying that in recent years the Agency had devoted considerable attention to developing co-ordinated programmes of research in which a number of institutions in various countries had co-operated in well-defined areas. The Agency could profitably think in terms of a few regional projects enabling the various geographical regions of the Agency to collaborate on an intraregional basis. Such projects would offer young scientists and engineers challenging opportunities in their home countries and help avoid a brain-drain.

73. The formula for the financing of safeguards approved by the Conference in 1971 had been conceived before the implications of the present rate of growth in the safeguards activities of the Agency had been fully realized. Practically all the developing countries were already paying more towards the safeguards budget than the minimum envisaged in the formula. As delegates were well aware, the question of safeguards financing was to be reviewed at an appropriate time after 1975. The Indian delegation believed that some advance thinking needed to be done on the present concept of safeguards financing. In view of recent developments in nuclear power production and their consequent implications for the Agency's safeguards activities, there was every reason that such a review should be carried out soon.

74. The nuclear energy programme of India had maintained its momentum. The UNDP-assisted ISOMED Project (Trombay) for the radiation sterilization of medical products was being implemented in collaboration with the Agency. The cobalt-60 source totalling some 125 000 curies, fabricated in the Trombay Isotope Laboratory, had been loaded into the plant in December 1973. The plant now provided irradiation services to manufacturers of medical products on a regular basis. Thanks to the comprehensive expertise gained with the commissioning of the plant, it would now be possible to use it as a centre for training scientists, engineers and technicians from developing countries in all aspects of radiation sterilization. A beginning had already been made with the training of scientists and technicians from some South East Asian and East Asian countries. Further assistance in that technology would be provided to developing countries in Asia through training or by the provision of experts on radiation equipment and sources.

75. The Nuclear Fuel Complex in Hyderabad had been set up some years ago for the production of fuel for the country's nuclear power programme. Its plants were now fully commissioned for fuels based on natural uranium oxide for the reactors at Rajasthan and those under construction in

[16] See documents GC(XVIII)/529 and Corr. 1.

Madras and Narora as well as the Tarapur reactors based on slightly enriched uranium oxide.

76. Plants had also been set up for processing zirconium sands for the production of finished Zircaloy products to nuclear standards.

77. The above-mentioned facilities for fuel production had made the country self-sufficient as far as fuel requirements for initial cores and replacements of various Indian reactors was concerned.

78. His delegation noted with regret some of the statements made at the Session regarding India's policy of nuclear experiments for peaceful purposes. It did not think, however, that any useful purpose would be served by entering into arguments over the unfounded allegations that had been made on the subject. Nevertheless he did wish to set the record straight. As the world community was aware, the Indian Atomic Energy Commission had on 18 May 1974 successfully conducted an underground nuclear experiment for peaceful purposes. It had been a completely contained experiment at low cost. Investigations were in progress to determine the depth at which the activity was contained. The experiment formed a part of India's programme for the peaceful uses of atomic energy. In conducting the experiment India had not violated any agreement, bilateral or multilateral, nor any agreement involving the Agency or the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water (the Partial Test Ban Treaty). [17] India had been one of the earliest signatories of the Partial Test Ban Treaty, which it had ratified in 1964, and it was fully aware of the obligations it had undertaken under that Treaty.

79. The potential economic benefits of nuclear explosions for peaceful purposes, which were already well known to the international scientific community, hardly needed to be underlined. The conclusions of the Agency's technical panels held in 1970, 1971 and 1972 had further underscored that aspect.

80. India had always reserved the right to pursue its own independent policy of using nuclear energy for peaceful purposes and of carrying out research and development into all meaningful applications of nuclear energy for economic development. The use of nuclear explosion technology underground was an integral part of that policy. In a competitive market for fuels and natural resources, such a technology was vitally important to India. India had a right to develop its own natural resources in accordance with well-established principles of international law and it saw no reason why it should allow itself to lag behind other countries in the acquisition of the latest techniques relating to the application of nuclear energy for peaceful purposes.

81. It was a curious argument to say that India's nuclear experiment for peaceful purposes had damaged NPT and the cause of non-proliferation of nuclear weapons. It became even more curious when that allegation was made by a country whose leaders had openly welcomed the large number of nuclear weapon tests conducted in the atmosphere by China. India had not become a party to NPT for certain reasons of principle, which had already been made sufficiently clear in different forums of the United Nations. It had considered, and continued to consider, that NPT was an unequal legal instrument and it would object to it so long as it remained discriminatory in character. However, India had never campaigned against the Treaty. India was opposed to nuclear weapons and naturally also to their proliferation. It had categorically repeated that it did not intend to manufacture nuclear weapons. That had been India's policy long before NPT had been conceived of. It could not therefore understand the argument that India's nuclear explosion for peaceful purposes had had an adverse effect on the future of NPT. NPT would stand or fall on its own merits or demerits.

82. The Indian Government had repeatedly declared that it intended to use nuclear energy solely for peaceful purposes and that it was totally opposed to the development of nuclear weapons. That remained the policy of the Government of India and he wished to reaffirm that policy in that august assembly.

83. Count de LIEDEKERKE (Belgium) said that the past year had been marked by many different changes and by the weakening of certain economic traditions. In nuclear energy, for instance, the atom had assumed greater importance as a result of the increase in oil prices. The Agency could play a vital role in helping Member States, especially developing countries, to acquire the technology required for the construction and operation of nuclear power stations, and the programme for 1975-80 showed that the Agency had properly apprehended that function.

84. Belgium supported the new philosophy underlying the Agency's programme for 1975-80, recognizing the urgent need to intensify activities relating to nuclear power production, nuclear safety, environmental protection, and the training of staff to introduce nuclear techniques in developing countries. Since, in addition to those vital activities, the Agency had to continue to promote other important programmes, it would be necessary in view of the present budget situation to suppress programmes which were not of high priority.

85. Although his delegation in general endorsed the programme proposals formulated by the Director General for the period starting in 1975, it felt grave concern regarding the rate at which the Regular Budget was increasing. The programme proposals for 1975 represented an increase of some 18.4% compared with the Regular Budget for 1974, corresponding to an increase of 15.1% in the regular contributions of

[17] Reproduced in United Nations Treaty Series, Vol. 480, Treaty No. 6964.

Member States. Compared with the budget figures for 1973, moreover, the proposals for 1975 represented a 49% increase in the Regular Budget, with a corresponding increase of 30% in the regular contributions of Member States. In spite of currency difficulties and the increasing cost of living, his delegation could not approve such an increase in contributions. The Agency's budgets should be kept within proportions compatible with the financial possibilities of Member States. His delegation wanted to issue an urgent appeal that all parts of the programme which were not of first priority should be either eliminated or spread out over longer periods of time, so that some of the Agency officials could be allocated to programmes of high priority. His delegation would have more to say regarding those matters in the Administrative and Budgetary Committee.

86. He had listened with special interest to the Director General's statements relating to NPT and the question of peaceful nuclear explosions. Although the fundamental matters relating to NPT were the concern of the Preparatory Committee for the Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons and not of the Agency, his delegation shared the misgivings of the Director General and of many other countries regarding the lagging accedence to NPT. It was well known that one reason for that state of affairs was that so far NPT had merely endorsed a situation in which the non-nuclear-weapon States, which were in the vast majority, agreed to immediate restrictions of their sovereign rights, while the nuclear-weapon States Party to NPT undertook "to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control". [18] It had to be admitted that results so far were somewhat disappointing. The ideal way to restore the faith of States still in doubt would be not only for States which had not yet ratified NPT to do so immediately, but also for the nuclear-weapon States to show their good faith by stemming the vertical as well as horizontal proliferation of nuclear weapons. One truly significant gesture would be for the nuclear-weapon States Party to NPT to agree immediately to Agency control of underground nuclear tests for peaceful purposes. The extension of international control to all Parties to the agreement would be justified in regard to peaceful underground nuclear tests since it was hardly possible to differentiate between them and military tests. It might then be possible to establish a better equilibrium between the obligations of all States, and NPT would assume its true role as a step on the way to prevention of both horizontal and vertical proliferation and not as an end in itself.

87. As far as safeguards were concerned, the Belgian delegation fully acknowledged the impor-

tance of the programme but wondered whether the manpower and budget estimates were entirely justified. The proposed increases were largely based on the number of States expected to accede to NPT during 1975 and the following years. Of course, it should not be forgotten that NPT provided for controls based on the entire fuel cycle.

88. In a report on its activities under Article III of NPT, presented to the Preparatory Committee for the Review Conference, the Agency compared its NPT safeguards with the ordinary safeguards based on document INFCIRC/66 and made the following statement:

"In other words, INFCIRC/66 permits and implies the desirability of a considerably higher inspection effort being applied at each individual facility than the NPT system, which is designed to take advantage of the fact that all nuclear material in all peaceful activities are under safeguards in a State, so that there are no unsafeguarded areas in the national peaceful programme. As a result the main inspection effort may be concentrated where it is most needed and can be most effective."

89. In explaining its manpower requirements, the Agency had based its estimates largely on the entry into force of the agreement between the IAEA, EURATOM and the Member States of EURATOM stating that:

"The manpower needed in 1975 for meeting the larger work load, due also to increased safeguards activities in other States, has been assessed facility by facility...."[19]

90. That approach seemed rather contradictory and could lead to a false estimate of manpower and budget requirements for the effective and economic application of NPT controls.

91. Reverting to the question of the ratification of NPT, he recalled that the Member States of EURATOM Party to NPT were taking the necessary national action for approval of NPT. Belgium hoped to have completed that work at the latest by the end of the year. Immediately after ratification of NPT, his country would follow the interpretation given to Article III, 2 of NPT by a group of countries exporting material and equipment and referred to by the Director General. The provisions of the Treaty of Rome would of course also be observed in commercial transactions within the European Community.

92. Mr. CHOWDHURY (Bangladesh) said that since 1945, when the first nuclear bomb had been detonated, the problem of controlling the proliferation of nuclear weapons had caused great anxiety, for the number of weapons and countries possessing them had gradually multiplied and it was not clear what the number would be by the end of the century.

[18] See Article VI of NPT.

[19] GC(XVIII)/526, para. M. 4.

It had to be recalled that nuclear reactors were intended for peaceful purposes, and it was therefore high time that a serious attempt be made to establish effective control over the spread of nuclear weapons. In that respect NPT had been a major step forward.

93. Nuclear generators could provide a substitute for other sources of energy, but the proliferation of plutonium sources could have dangerous consequences.

94. The safeguards activities undertaken by the Agency were important but the Agency was fundamentally a technical organization. On the basis of the reports of the Board of Governors, the General Assembly and the Security Council of the United Nations could take action against countries for non-compliance with NPT. Many countries possessing nuclear power and research reactors had not acceded to NPT, and no effective measures had been taken to persuade them to do so. Nuclear-weapon States should bring more of their nuclear installations under the Agency's safeguards system, thus boosting the confidence of non-nuclear-weapon States. There should be a complete ban on all nuclear weapons tests whether underground, in the ocean, or in the atmosphere. The United Nations and particularly the Agency should bolster up international efforts to halt the arms race.

95. Bangladesh was pledged to the peaceful use of nuclear energy. Despite the suffering of the people of Bangladesh in 1971 and in recent natural disasters, Bangladesh had been engaged on a gigantic task of reconstruction, rehabilitation and economic development, and the development of science and technology had high priority.

96. The Bangladesh Atomic Energy Commission had undertaken a modest programme for the peaceful uses of atomic energy. An important part of the programme was scientific research and development directly applicable to agriculture, food, health, industry, the exploitation of natural resources, and the development of nuclear power. Great importance had been attached to harvest improvement and the preservation of food by nuclear radiations. The Commission had also promoted basic and applied research in nuclear sciences and allied fields and the development of nuclear engineering. The skilled personnel of the Commission had been employed for small-scale production of scientific instruments for national educational and research institutes.

97. The Commission had rendered valuable services in weather forecasting with the aid of weather satellites. It also helped the universities in the maintenance and repair of scientific equipment and in teaching and research programmes.

98. Bangladesh felt strongly that nuclear power would play an important role in most of the developing countries where conventional energy resources were limited. Oil price increases had made small nuclear power plants economically competitive but there were many problems in the way of nuclear power in developing countries.

99. Owing to the tremendous demand for nuclear power plants in the wake of the energy crisis, it was now a seller's market. Turnkey contracts were no longer available, and for the promotion of nuclear power a country now had to build its own capability with expert assistance from outside. To enable developing countries to shoulder such a large and unprecedented responsibility, a very broad practical training programme was desirable. The Agency could play an important role in that respect by facilitating the free transfer of nuclear technology from the more advanced to the less advanced countries.

100. Most of the recent orders on the nuclear power market were for large plants of 600 MW or above. There was reluctance on the part of reactor suppliers to offer smaller plants, in which the developing countries would be interested. He noted that the Agency was convening a panel meeting in November on reactors of interest to developing countries and he hoped that panel would make definite recommendations and fruitful suggestions.

101. Along with 14 other developing countries Bangladesh had participated in the market survey undertaken by the Agency in 1972-73, and it welcomed the Agency's decision to undertake a more detailed study to update the market survey report published the year before.

102. His Government had decided to establish a nuclear power station at Rooppur in the western zone of the country. The decision was based on the findings of a large number of reports and feasibility studies prepared by the Agency and international consulting firms. The necessary manpower was being trained.

103. Bangladesh attached great importance to the Agency's objectives particularly in respect of technical assistance, which would bring the benefits of nuclear energy to the developing countries, and also in respect of the safeguards system. His Government was grateful for Agency help in terms of fellowship training and equipment, the International Nuclear Information System (INIS), and advice relating to safety standards, regulations for safe transport of radioactive materials, the exchange of information in nuclear and allied fields, etc.

104. The financing of technical assistance was very important to the developing countries. Unfortunately the budget share for technical assistance was decreasing and financing was by voluntary contributions and not by the Regular Budget. His Government would contribute its assessed share to the voluntary fund in Bangladesh currency.

105. He strongly supported the Agency's role in promoting and implementing international co-operation in nuclear science and technology. His delegation wanted to urge the Agency to promote larger programmes of technical co-operation so as to enable the developing countries to share fully in the benefits of nuclear technology. The Agency should facilitate the free transfer of nuclear

technology from the more advanced to the less advanced countries. Regional co-operation was important in that respect.

106. His country's link with the Atomic Energy Commission in India had been maintained and strengthened and a joint programme of visits, consultations, training and research had been established for promoting the peaceful uses of

atomic energy. Implementation of an agreement with Australia for pilot-plant studies on beach-sand minerals had also started. The Government of Bangladesh had also approved the regional co-operative agreement for research, development and training related to nuclear science and technology sponsored by the Agency.

- The meeting rose at 1 p. m.

