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RECORD OF THE THREE HUNDRED AND THIRTIETH PLENARY MEETING

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President: Mr. TREMEAU (France)

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The composition of delegations attending the session is given in document
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REPORT BY THE CHAIRMAN OF THE SPECIAL SCIENTIFIC MEETING ON NUCLEAR POWER PLANT UPGRADING AND LIFE EXTENSION

1. The PRESIDENT said that, with the Conference's permission, he proposed to invite Mr. Kenneth Carr to report on the conclusions of the Scientific Meeting on Nuclear Power Plant Upgrading and Life Extension, which he had chaired so ably.

2. Mr. CARR said that a special scientific meeting had been held on 18-19 September 1990 to address the topic of nuclear power plant upgrading and life extension. The first session had provided an overview of the topic from the international perspective of the IAEA and from the point of view of a researcher, a regulator and a designer.

3. The second session had provided examples of national experience and policies in nuclear power plant upgrading and life extension. Speakers had emphasized various aspects of the topic in the context of experience with VVER reactors, standardized plants, backfitting and development of life extension methodology, problems and issues facing developing countries, preventive and predictive maintenance techniques, instrumentation and control, extension of operation of plants beyond their original design life, and pressure vessel annealing.

4. The third session had consisted of a panel discussion on topical aspects as perceived by researchers, designers, regulators and operators of nuclear power plants. The papers presented at each session had given excellent technical coverage to the topic, had been highly informative and had been followed by lively discussion by participants.

5. Fatigue, embrittlement, effects of temperature loads, and outdated electrical and electronic systems were among the main problems of plant ageing that could give rise to the need for plant upgrading if operation was to continue, either during the original design life of the plant or for a period beyond that. Furthermore, while the features that contributed to the ageing of nuclear power plants were common to all plants, different countries might use different approaches to cope with plant ageing and questions of life extension. Some countries, for example, might require some form of safety assessment on an annual basis as a condition for continued operation, while

others might require a major reassessment at longer intervals or as a condition for consideration of operation beyond the design life. Safety reassessments performed for plant life extension varied from once a year to once every ten, twenty or more years in different countries.

6. Participants had generally agreed that the design life of a plant could be extended through careful monitoring and upgrading of systems and components, which would provide for up to 50 to 60 years of safe operation. However, the plant had to continue to meet its original safety criteria, including any backfitting requirements imposed since the plant was originally licensed. In addition, for plants to be considered for life extension, operation and maintenance records had to be well documented. A probabilistic safety assessment was also considered to be very helpful in determining what upgrades might be appropriate. Fulfilment of those conditions had been considered important by all concerned.

7. The economic viability of plant life extension appeared to be established. However, if an adequate level of safety could not be maintained as a plant aged, cost considerations became irrelevant. The challenge in seeking to extend the useful lifetimes of current nuclear power plants lay in achieving comprehensive preventive maintenance programmes which would mitigate the effects of ageing, while at the same time controlling the costs of production.

8. There were advantages and difficulties in plant life extension. The obvious advantages were enhanced safety through reassessment and refurbishment, cheaper electricity in comparison with the construction of new facilities, utilization of an existing site and less opposition from the public. Public acceptance was of particular interest in today's environment. While there had been considerable worldwide debate on whether new nuclear power plants should be built, public attention had not focused as much on the question of the ageing and life extension of current plants. The difficulties included scarcity of spare parts for much older plants and maintenance of the original design basis documentation for the plant.

9. It was generally agreed that older plants should not pose significantly more risk than new plants. That necessitated a reasonable degree of compromise between safety requirements for older plants and new plants. Differences between older plants and new plants could be compensated for by backfitting, where necessary, and by strength in other areas such as the qualifications and experience of operators and maintenance crews with the plant and enhanced accident management and emergency procedures. It should not be forgotten, however, that plant personnel also aged. The training and retraining of plant personnel for older plants were thus particularly important.

10. There was a continuing need for international co-operation in determining how safe was safe enough and for a concerted effort in managing nuclear power plant safety. Methods to identify and combat the effects of plant ageing represented another area where international co-operation was essential. That was particularly important for nations with small and developing nuclear power programmes where the research and engineering infrastructure might not yet be well established.

GENERAL DEBATE AND ANNUAL REPORT FOR 1989 (GC(XXXIV)/915) (resumed)

11. Mr. AMOO-GOTTFRIED (Ghana) said he wished to extend a warm welcome to Namibia, which was participating in the work of the General Conference for the first time as an independent country.

12. It was a matter of great satisfaction to his delegation that the necessary steps had been taken in the past year to make the African Regional Co-operative Agreement (AFRA) operative. He appealed to all Member States that were in a position to do so to help make AFRA a success.

13. His delegation could approve the Agency's programme and budget for 1991 and 1992. However, after seven years of zero real growth in the budget, it was time to take a hard look at the effect of that policy on the Agency's safeguards system and on its promotional activities. The demands on the Agency's resources were increasing and, if it were to be able to meet the challenges of a changing world, it must also be able to change with it.

14. The Agency was to be commended for the continued effective and reliable operation of its safeguards system at a time of severe budgetary constraints.

The Agency should continue to make efficient use of the limited resources at its disposal in order to maintain international confidence in the system. His country also appealed to States with significant nuclear programmes to submit all their nuclear facilities to full-scope Agency safeguards.

15. The question of amending Article VI.A.2 of the Statute had now been before the General Conference and the Board for over a decade without any concrete steps being taken to correct the under-representation of Africa and the Middle East and South Asia. Membership of the Agency in those regions had increased considerably, and there should have been a corresponding increase in their representation on the Board. The time had come for positive steps to be taken to rectify that glaring injustice.

16. He was happy to be able to announce that over the past four years Ghana had intensified its efforts to establish a viable nuclear programme. Massive renovation work had been carried out on the physical infrastructure of the National Nuclear Research Institute, its nuclear equipment had been updated and the number of scientific staff had almost doubled.

17. Current research activities concentrated on the use of nuclear techniques in agriculture, industry and medicine. One major breakthrough was the construction of a multipurpose gamma irradiation facility designed for food preservation and radiation sterilization of medical products. The facility was to be commissioned in June 1991.

18. Nor had his Government neglected the question of radiation protection: a national radiation protection law would be promulgated soon; frequent checks were made on users of ionizing radiation and advice was given when appropriate; and a national training course on safe operating practices was to be held for some 30 X-ray machine operators in October 1990.

19. The Agency's technical assistance programme had played no small role in the development of Ghana's nuclear programme, and he hoped that the zero-growth philosophy would soon be abandoned in favour of real growth that would enable the technical assistance programme to grow in a manner commensurate with the needs of developing countries. Ghana would continue to play its part in technical co-operation by making its facilities available, at subsidized rates, for regional and interregional training courses.

20. The world's attention continued to focus on the increasing dangers posed to the earth's atmosphere by the burning of fossil fuels. As more facts emerged about those dangers and about adverse climatic changes brought about by the greenhouse effect, many countries would begin to consider pollution-free alternatives to fossil fuel. Moreover, recent events in the Gulf had once again demonstrated the uncertainties inherent in absolute reliance on fossil fuel. The fragile economies of many developing countries had been thrown into complete disarray by the sudden and catastrophic increase in oil prices. Under such circumstances, the development of nuclear energy seemed the most viable alternative to conventional energy sources, although the enormous cost of installing safe nuclear reactors might act as a great disincentive to many developing countries. He appealed to the Agency to initiate efforts aimed at pooling resources to assist developing countries to establish nuclear power programmes.

21. His country was deeply concerned about South Africa's continued refusal to place its nuclear installations under IAEA safeguards. It would have welcomed a positive announcement from South Africa, as it believed that a move towards transparency by that country would boost confidence-building in the region and enhance peace and security. However, his delegation's hope that the current session of the General Conference would be spared the usual pre-Conference letters and statements concerning South Africa's readiness to accept IAEA safeguards had again proved to be unfounded. Such manoeuvres were designed simply to prevent drastic action being taken against South Africa during the General Conference.

22. South Africa's nuclear capability combined with its continued refusal to place its facilities under safeguards posed a serious danger to the rest of Africa. He therefore once again urged the Conference to take the necessary measures to drive it home to South Africa that its intransigence and blatant disregard of international opinion would no longer be acceptable.

23. Mr. SODNOM (Mongolia) observed that the thirty-fourth regular session of the Conference was significant in that it was meeting at a time when events leading to the democratization of society in Europe and Asia and warming of the international climate were taking place. Those circumstances

were propitious for extensive and fruitful scientific, technological and economic co-operation at the international level. In that context, the Agency would have a much greater role in organizing global co-operation. While atomic energy offered an important alternative source to meet the growing energy demands and to satisfy the ecological requirements, it was meeting with serious constraints associated with the assurance of full safety of nuclear power plants. In that connection, he wished to emphasize the especial importance of the Agency's safeguards functions, which were directly related to ensuring international peace.

24. His delegation approved the Agency's activities in the area of nuclear safety in connection with the Incident Report System (IRS), International Nuclear Event Scale (INES), Radioactive Waste Safety Standards (RADWASS), Code of Practice on the International Transboundary Movement of Radioactive Waste, etc.

25. Considering the great importance of wide international co-operation in the case of a nuclear accident and radiological emergency arising from it, Mongolia had acceded to the two conventions approved at the special session of the Conference in 1986.

26. His delegation had pleasure in supporting the Agency's main programmes related to safeguards, nuclear and radiological safety, nuclear power, technical co-operation, the environment and the nuclear information system.

27. He also approved the Agency's annual report for 1989 and endorsed the Board's recommendations on the programme and budget and the Technical Assistance and Co-operation Fund for 1991 and 1992.

28. He shared the Director General's concern at the insignificant increase in the budget, while welcoming the Secretariat's efforts to improve efficiency, especially in the area of technical assistance to developing countries.

29. He commended the Agency's efficient management of technical co-operation, and expressed his gratitude for the technical assistance provided to his country.

30. During the current session his delegation had visited the Department of Technical Co-operation, where it had discussed and approved the draft plans for 1991-92. He wished to thank the Department's staff for their assiduous evaluation of his country's proposals and their understanding of its requirements.

31. Mongolia welcomed the increase in the number of staff members drawn from developing countries and would be interested in making its specialists available for employment in the Secretariat.

32. Since December 1989 important social and political changes had been taking place in Mongolia, where a multiparty democratic system had been introduced and on the basis of which the country's President, Parliament and Government had been elected. The new Government had adopted a programme of building a democratic State based on the rule of law, of changing over to a market economy and of co-operation with all countries. It was counting on the support and help of international organizations, including the IAEA, in those complex transformations.

33. Thanks to the Agency's support, Mongolia had continued to implement its programmes on agriculture, medicine, geology, science and education and environmental protection, which would promote the economic and social well-being of its people. He expressed his appreciation, in particular of the Radiation Protection Advisory Team (RAPAT) and many IAEA experts who had visited his country in the current year.

34. In conclusion, he wished to assure the Agency that Mongolia would continue actively to support and participate in its activities and to fulfil its obligations.

35. Mr. GLEISSNER (Austria) said that the past year had seen a further intensification of the public debate on energy and the environment. The question at the centre of that debate had continued to be how to reconcile the two aims of responding to the increasing demand for energy to satisfy the economic needs of a growing world population and of securing an environment fit for future generations to live in. There was a broad consensus on some basic facts and assumptions. One was the expectation of a substantial

increase in world primary energy consumption in the coming decades. Another was the perception of fossil fuels as the most important contributor to man-made carbon dioxide emissions, which were one of the main causes of damaging changes in the atmosphere and the climate and had given rise to demands for fossil fuels to be replaced by forms of energy that were less harmful to the environment.

36. There was no single answer to that problem. At present, more than 30 Member States had chosen to make use of nuclear power as part of their energy policy. In some of those countries a growing tide of public opposition to the expansion of nuclear energy programmes was interfering with the endeavours of governments to reduce carbon dioxide emissions. Other Member States had forgone the nuclear option. The policy of the Austrian government was well known. It was based on a decision of the Austrian people taken in a referendum and set out in a law prohibiting nuclear fission to be used as a source for power production. That negative attitude to nuclear power did not, however, diminish his country's appreciation of the important role the Agency was playing in a world in which nuclear power was a matter of fact. Austria set great store by the Agency's indispensable activities in safeguards and by its growing role in enhancing the safety of existing reactors. While his country wished others would follow its example, it shared the desire of States operating nuclear plants to make them as safe as possible and it therefore welcomed the Agency's recent initiative to review the operational safety of older reactor types in the light of current thinking on safety. The proposal to hold a high-level conference on nuclear safety in 1991 was also welcome.

37. His country was pleased with the progress made in the Standing Committee on Liability for Nuclear Damage towards establishing a new, comprehensive and, it was to be hoped, universal contractual regime in that area. He envisaged establishing such a regime through an extensive revision of the Vienna Convention. There was some agreement that under the new regime the definition of nuclear damage must be significantly expanded to cover - inter alia - environmental damage and the cost of preventive and re-instatement measures. That would require a corresponding expansion of

financial liability for nuclear damage. Austria shared the view expressed by many delegations in the Standing Committee that that could only be brought about by strengthening the legal and economic involvement of States in which a nuclear facility was located with regard to liability. Such involvement, together with that of the State claiming compensation for environmental damage or for the cost of preventive or re-instatement measures, called for a new claims procedure which would be an integral part of the new regime and which could deal satisfactorily both with claims raised on the governmental level and with a multitude of individual claims, for which the present system was totally unsatisfactory. At all events, the efforts being made to establish a new regime of international liability for nuclear damage was one of the Agency's most important activities and deserved strong support.

38. Less than a week previously, the Fourth NPT Review Conference had completed its work in Geneva. The principle of non-proliferation clearly continued to have the support of the international community. The NPT regime was one of the cornerstones of international arms control and disarmament policy. That policy was an essential part of the great improvement in international relations which had led to the fundamental changes that had taken place in Europe and, as a consequence, to the revitalization of the United Nations as a global force for peace.

39. His delegation noted with interest the Agency's involvement in the international programme to assess the radiological consequences of the Chernobyl accident and expressed its pleasure at the contribution being made by Austrian experts to the project.

40. The General Conference had on its agenda the adoption of a draft Code of Practice on the International Transboundary Movement of Radioactive Waste, establishing a set of principles designed to ensure that no transboundary movements of radioactive waste took place unless they were consistent with existing international safety standards. The adoption of those rules would further enhance safety in international nuclear waste transactions.

41. He was pleased to announce that Austria had ratified the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency in November 1989.

42. At the bilateral level, his Government had continued to promote a dialogue and an exchange of information on nuclear safety and radiation protection matters with countries in its immediate and wider neighbourhood. Agreements with the Soviet Union and the Czech and Slovak Federal Republic (CSFR) had come into force in March and July 1990 respectively, and another agreement had been signed with Poland in December 1989. Arrangements for co-operation in the field of nuclear safety had also been made in the context of the so-called "pentagonal initiative" involving Austria, Czechoslovakia, Hungary, Italy and Yugoslavia.

43. Construction work on the training wing to be added to the Agency's Laboratories in Seibersdorf was being completed. Together with the United States, the Federal Republic of Germany and FAO, Austria had contributed to the extrabudgetary funding of that project. He was confident the new facilities would become a useful tool in the implementation of the Agency's technical co-operation programme.

44. Mr. SAETI (Libyan Arab Jamahiriya) expressed his appreciation of the efforts made by the Director General and his staff to raise the Agency's efficiency in carrying out its functions relating to the peaceful uses of atomic energy.

45. As to the contributions of nuclear energy to improving living standards and economic and social development, Libya had since the Great September Revolution endeavoured to achieve scientific competence and capability in that area with the assistance of the Agency and its Member States desirous of co-operation in the interests of human welfare without discrimination. It highly valued the Agency's help and would make every effort to extend its co-operation with the organization to meet the growing demands of its scientific and economic development.

46. He expressed his gratitude to the United Nations and its specialized agencies and in particular to the IAEA and FAO for their action on combating the screwworm. In that connection, he pointed out Libya's contribution in terms of manpower and facilities sharing more than 30% of the cost of the programme on combating the pest, its spread to neighbouring African countries and to Europe.

47. Referring to resolution GC(XXXIII)/RES/515, in which the Conference had approved Libya's request concerning a plan for the production of low-cost potable water, and to operative paragraph 1 thereof, he commended the Director General and the Agency's technical staff and the Member States who had participated in the study as a first step towards a long-term plan. He drew attention to the conclusions and recommendations contained in document GOV/2465 and in particular the following:

- (1) The freshwater shortage was becoming a question of life in many areas of the world, such as the Middle East and the southern part of the Mediterranean. In other areas such as Italy, Spain, France, Greece and certain parts of the United States, a water shortage might have an increasing impact on the quality of life;
- (2) The energy required for water desalination accounted for about 50%, on average, of the production cost. Therefore, nuclear energy had a potential for reducing that cost;
- (3) Nuclear desalination was considered to be technically feasible on the basis of the experience gained on the subject, especially in the USSR;
- (4) A detailed technical study of desalination mainly using nuclear energy sources was considered essential and should be carried out at one or more Middle Eastern and Mediterranean sites.

48. Libya's initiative and its contribution within the United Nations family to seeking solutions to pressing problems ought to be pointed out and taken into account. Moreover, he wished to emphasize that, from the same considerations and with the same determination as in the case of the screwworm programme, it would participate in finding and implementing economic solutions to the problem of a shortage of potable water and in implementing a plan for producing such water economically.

49. He wished to stress the impact of the rise in oil prices and the contribution of the burning of oil to environmental pollution and related problems, such as the rise in temperature, the reduction in rainfall, the occurrence of acid rain, the depletion of the earth's ozone layer and so on.

Those problems could be alleviated by completely stopping the burning of oil, by afforestation and by combating desertification, which measures could be implemented only by creating a clean energy source and by supplying appropriate water.

50. The cost of having no water was much greater than that of producing fresh water at any price using clean energy sources. That was why he was requesting the Conference to implement the recommendations contained in document GOV/2465. The Jamahiriya, for its part, would contribute actively to the conduct of a feasibility study and to a plan for producing potable water economically.

51. He assured all Member States which were interested in bilateral and multilateral co-operation to implement such a plan, which had offered their facilities in that connection (such as Argentina, India and the Soviet Union) and any other States which wished to participate in establishing and executing an international co-operative programme on combating drought and desertification with the participation of the United Nations and its agencies, including the IAEA, that his country was fully prepared to apply all its physical and human resources to implementing and making available commercially the best water desalination and treatment systems, to solving the problem of drought and desertification and to creating a clean, healthy environment. He considered that nuclear desalination should be included as one of the Agency's future programmes.

52. He had pleasure in supporting the request submitted by the Arab Atomic Energy Agency concerning the conclusion of a co-operation agreement with the IAEA (GC(XXXIV)/924) since such agreements promoted technology transfer and collaboration with the IAEA in implementing its programmes in the States concerned.

53. Libya set a high value on the Regional Co-operative Agreement for Africa and urged the Agency and its advanced Member States to lend active support to that agreement with a view to raising standards and promoting technology transfer in the African region so that it could, with the other regions, accelerate its progress of its peoples towards prosperity and well-being.

54. In that connection, he wished to express, as he had done in the past, his country's willingness to make available to the Agency the Tajoura Nuclear Research Centre for use as a regional centre for the purposes and programmes of the agreements referred to. It was therefore necessary to expedite the preparation of a work programme to make use of the facilities of that centre, together with a training programme.

55. Radioactive waste without proper treatment was a serious disadvantage of nuclear energy and caused concern. In that context, he considered a Code of Practice for transboundary movements of radioactive wastes, mentioned in resolution GC(XXXIII)/RES/509, to be of great legal value. Libya, as a developing country, demanded a total ban on the export of such waste by industrialized States and their companies and was strongly opposed to the exploitation of the difficult economic and social conditions of some countries, including those in Africa, for dumping nuclear waste on their territory. He had no objection to the technical working group continuing its work in order to achieve its purpose which served the cause of peace and security everywhere, and thanked it for its valuable work.

56. As everyone knew, the Zionist entity, with the collaboration of the racist régime in southern Africa, had acquired nuclear military capability and was encouraged and supported by some States. The reply received by the Director General from that entity concerning the application of Agency safeguards in the Middle East showed that it and its racist ally in southern Africa still took no account of the demand to comply with international customs and the Agency's Statute and to place all their nuclear facilities under Agency safeguards. That defiance must be countered and those two entities be isolated until they abided by the will of the world and were mindful of world security.

57. Lastly, in spite of successive resolutions on the staffing of the Agency's Secretariat and numerous requests made on the subject, the representation of developing countries, including Libya, in the Secretariat continued to be inadequate. He hoped that the existing inequity would be corrected before long, especially in the case of Africa and Asia.

58. The deliberations and conclusions of the present session of the Conference might be useful not only for the present but also for the future generations. He was confident that the delegates would show a spirit of co-operation with a view to bringing benefits to all and to enabling the Agency to continue fulfilling its objectives in ensuring the peaceful and safe use of nuclear energy.

59. Mr. ELAGIB (Sudan) considered that the Agency should promote basic research in order to achieve a breakthrough in the conversion of atomic energy. The current technology had disadvantages so that the high cost and industrial complexity made it inaccessible to developing countries. Moreover, people viewed it with suspicion even in advanced countries, where the two worst disasters had taken place. The new efforts announced at the Conference and at the scientific meeting organized by the outgoing President were in the same old direction, namely development of reactors in which radiation was used to produce steam. Large amounts of energy could only be generated by means of large installations involving risks of radioactive contamination. However, there did exist the possibility of directly converting radiation energy into electricity. In that connection, he endorsed the outgoing President's appeal for international scientific and technical co-operation in finding a new approach. He also welcomed the United States' assurance that scientific co-operation in basic research would be open and unhampered by commercial or security considerations, and noted the Director General's emphasis that the Agency was in favour of openness and co-operation in that area.

60. Paying a tribute to Italy's contribution to scientific co-operation, he recalled that it had collaborated with the Agency in establishing the Trieste Centre. It had a number of scientific cities like Trieste and was the host of numerous scientific institutions. While the contributions of other countries were considerable, they should follow Italy's example in establishing scientific cities, adopting an open-door policy and enabling Third World scientists to participate actively without discrimination based on political, ideological, racial or security considerations. Multiplicity of sources and environments in scientific research could lead to breakthroughs not only in the industrial world but also in the Third World.

61. He agreed with the Director General that the Agency's mission was to promote the peaceful uses of nuclear energy in various developmental areas and to contribute to the non-proliferation of nuclear weapons by creating a climate suitable for encouraging those uses and by strengthening confidence in the safety of nuclear technology.

62. Sudan appreciated the Director General's participation in the first meeting held recently in Cairo of the African Regional Agreement and hoped that the Agency and States which could do so would help the African countries to develop their peaceful nuclear capabilities.

63. His country continued to feel concerned at the growth of Israel's nuclear capability and the threat it posed to peace and security in the region, which issue had been discussed by the Conference every year. He regretted Israel's refusal to place all its nuclear facilities under Agency safeguards in persistent disregard of the Charter of the United Nations, the Statutes of its different agencies and the IAEA and of the resolutions adopted by them. His delegation hoped that the Director General would redouble his efforts and continue his discussions with the States concerned in the Middle East region with a view to applying Agency safeguards to all nuclear facilities there. The similar refusal and the possession of nuclear weapons by the regime in southern Africa posed a serious threat to peace and security in the world, especially in Africa, and increased the danger of nuclear proliferation. He condemned the refusal to comply with the Agency's request and urged the Director General to do everything possible to persuade South Africa to place its facilities under Agency safeguards. There had been some relaxation in that area, which he hoped would continue, and the following session of the Conference could assess the situation.

64. Disposal of radioactive waste on the territory of developing countries was a threat to the environment and to human life, and he commended the action taken by the Agency in that matter. Approving the Code of Practice contained in document GC(XXXIV)/920, he considered that it would form the basis for further measures aimed at creating a machinery to regulate the movement of waste under Agency supervision. He requested the Director General to circulate the Code of Practice as widely as possible, especially to the United Nations and its agencies.

65. A large number of African countries, including Sudan, depended on animals as an important source of food and wealth, which were threatened in Libya and the neighbouring countries by the scourge of the screwworm. He expressed his appreciation of the Agency's efforts to eliminate the pest in Libya and hoped that the Agency would enable its neighbours to benefit from its experience in that matter.

66. Referring to the problem of potable water, he recalled that according to studies carried out by international organizations there was an acute shortage of such water in about 80 countries, which number was expected to increase in the near future owing to the population explosion. In that connection, he noted with satisfaction the conclusions of the consultants' group contained in document GC(XXXIV)/928, which confirmed the world-wide need for potable water and the potential of nuclear energy for providing such water economically, and its approved recommendations. Those recommendations should now be implemented and the topic be included in the Agency's technical co-operation programme.

67. His country attached particular importance to the financing of the Agency's technical co-operation and safeguards activities. During discussion of the 1991-92 budget at the June meetings of the Board, the Group of 77 had suggested establishing a relative balance between those two activities in utilizing the surplus from the 1988 budget but the proposal had not received sufficient response. The expenditure on safeguards had grown with no increase in the financing of technical co-operation activities. Sudan considered that there should be a balance between the two and supported the request made to the Director General that he provide comparative data on the expenditure on safeguards and on technical co-operation activities.

68. While nuclear power had become a major source of energy, nuclear safety and radiation protection continued to be problems of utmost importance. In that connection, he was pleased to say that his country was implementing the Convention on Early Notification of a Nuclear Accident and to note that the Agency's Emergency Response System had been put into operation. Sudan had now only to apply the nuclear safety measures in connection with that Convention.

69. The issue of amendment of Article VI.A.2 of the Statute had long been under discussion and it was time to find a solution taking into account the importance of increasing the number of seats for Africa and the Middle East on the Board of Governors in accordance with the principle of equitable geographical representation of those areas.

70. In conclusion, he wished to stress his country's growing interest in the peaceful uses of atomic energy, and its efforts in that area, which it considered crucial for future progress and well-being. Sudan was now establishing the infrastructure and developing programmes on the application of radioisotopes and radiation in agriculture, medicine and industry. In that context, he referred in particular to the existing fruitful collaboration between his country and the Department of Technical Co-operation and expressed his gratitude to the Agency for its assistance in various areas such as radioimmunoassay techniques for hormones, establishment of the infrastructure and facilities for occupational exposure monitoring, monitoring of the environment and foodstuffs, groundwater surveys and maintenance and fabrication of electronic devices.

71. Sudan was also interested in environmental studies with a view to studying the movement of desert sands, the movement of water evaporating from the vegetative cover in the tropics and forming the source of rain in continental areas, and the influence of the depletion of tropical forests on that movement. He hoped that the Agency would participate in those studies, which were to be carried out by nuclear techniques.

72. Another area which the Agency should be concerned with was solar energy, which was basically nuclear energy and required the same kind of scientific expertise.

73. Thanks to Sudan's geographical situation and suitable environment for co-operation in such areas, Sudan was willing to establish specialized scientific cities.

74. Mr. ELIADES (Cyprus) welcomed the comments made by the Director General on the staffing of the Agency's Secretariat and stressed his delegation's view that there should be a wide balanced representation of all

Member States. Although his country had no nuclear power plants, it attached great importance to the Agency's work particularly in the areas of non-proliferation, nuclear power plant safety and safe nuclear waste management. His delegation welcomed the proposed Code of Practice on the Transboundary Movement of Radioactive Waste and hoped that it would be adopted by the General Conference and implemented by as many countries as possible.

75. Cyprus highly appreciated the Agency's technical assistance in the fields of hydrology, agriculture and other related sectors and he had pleasure in informing the Conference that his Government had approved its assessed contribution to the Technical Assistance and Co-operation Fund for 1991 amounting to US \$9800.

76. Mr. MAHIGA (United Republic of Tanzania) commended the Agency's efforts in preventing the diversion of nuclear energy from peaceful uses to nuclear weapons or other nuclear explosive devices, but noted that a substantial amount of nuclear material in the world was not safeguarded by the Agency and that only peaceful and not military facilities were safeguarded. The Agency's safeguards system could perhaps be strengthened to become one of the international instruments for promoting and perhaps monitoring the implementation of general complete disarmament agreements.

77. With technical assistance provided by the Agency, Tanzania had been able to establish a viable radiation protection infrastructure which was a necessary prerequisite for the development of the peaceful applications of nuclear technology. The infrastructure was supervised by the National Radiation Commission, a statutory body responsible for all atomic energy matters and charged with the role of planning, co-ordinating and to some extent implementing the peaceful applications of atomic energy.

78. The Agency was also very active in supporting national research activities in the areas of agriculture, animal husbandry, health, hydrology and in strengthening nuclear physics education at the University of Dar es Salaam. In recent years, the Agency had increased the number of training courses and fellowships, the supply of technical equipment and the provision of short-term experts in the above fields. Tanzania would continue

to require technical assistance in those fields in order to consolidate the achievements obtained so far and in order to cover new areas.

79. His delegation was grateful for the contributions made by Member States to the Technical Assistance and Co-operation Fund. Tanzania also welcomed initiatives to promote regional co-operation in the development and use of nuclear energy, especially in Africa. Such an approach was not only a way of realizing economies of scale, but also a sure way to ensure transparency and mutual confidence in the peaceful use of nuclear energy at regional levels.

80. The Fourth NPT Review Conference had not ended with a Final Declaration, but it had reviewed the provisions of the Treaty relating to nuclear disarmament responsibilities and obligations and had commended the Agency's safeguards system. Although Tanzania had not yet acceded to the NPT, it was a consistent advocate of disarmament and non-proliferation. His country continued to have reservations about the Treaty which it regarded as discriminatory and which it believed should be altered to ensure a balance of responsibilities and obligations between those States which had nuclear power programmes and those which did not. There were already positive indications that a new era with better prospects for vertical disarmament and peace was emerging with the easing of East-West tensions. It was to be hoped that regional conflicts could also be solved and that enduring regional security arrangements could be established to curb the horizontal proliferation of nuclear weapons.

81. His Government was particularly concerned about the activities of certain States with a nuclear weapon capability which were only partially covered by the safeguards system and whose domestic and military policies were threatening and destabilizing other States in their regions, as was the case in southern Africa and the Middle East. Stalling tactics were being used to avoid negotiations with the Agency for full-scope safeguards while fresh evidence and reports pointed to a continuing build-up and improvement of their nuclear weapon capability and ballistic missile technology. The General Conference should take appropriate measures to demand that those States complied with the Statute or their privileges should be suspended.

82. South Africa's insistence that its decision to accede to the NPT should be dependent upon the accession of other States in Southern Africa was simply a diversionary and procrastinating tactic, since South Africa's neighbours had no nuclear weapon capability. The world needed to be convinced that negotiations for political change to dismantle apartheid were irreversible. If South Africa was committed to peace and security in the region and the world, it should negotiate in good faith with the Agency to conclude a comprehensive safeguards agreement applying to all its nuclear facilities.

83. The Agency was operating with a zero-real-growth budget at a time when the challenges were becoming more complex. His delegation hoped that the Agency would ensure that there was a judicious balance between the safeguards requirements and the needs for technical assistance to developing countries. In view of the Agency's current financial difficulties, it was particularly important that Member States should heed the Director General's appeal to fulfil their financial pledges to the Agency.

84. The Agency had shown remarkable initiative and resourcefulness in responding to nuclear accidents, especially after the Chernobyl accident, and in taking steps to prevent the occurrence of such accidents. It had also taken a leading role in providing guidelines for the storage of radioactive materials and the regulation of transboundary radioactive wastes.

85. Finally, as scientists and Governments around the world strived to make nuclear reactors safer and more efficient and as the Agency prepared to embark on a public information campaign to make nuclear energy acceptable in industrialized countries, the needs of the developing countries should be given equal attention and nuclear energy should be made available and affordable to them, since the current world energy crisis required a global response and strategy.

86. Mr. SIMARRO (Spain) thanked the Director General for his introductory statement; the information contained in it and in the Annual Report, document GC(XXXIV)/915, showed clearly the importance and quality of the work performed under his expert guidance.

87. The existing nuclear park in Spain had a capacity of 7.8 GW and had produced 39% of all the electricity generated in the country in 1989. That figure was a historic maximum. In previous years output had been fairly equally divided between nuclear power, hydroelectric power and power produced using fossil fuels. Thus, nuclear power constituted one of the three pillars of Spain's energy base. In the area of nuclear power the Agency was called upon to play a double role: on the one hand, it had to lay down standards and recommendations for nuclear facilities and objectively improve safety conditions by in-depth analysis of plant behaviour; and on the other, it had to provide reliable information to the public at both national and international level on any feature of nuclear energy and on the safety of nuclear installations. The Agency's work in those areas was fundamental. In particular, the systematic safety assessments, carried out by international experts, were very valuable - at the beginning of the current year Spain had received an Operational Safety Review Team (OSART) mission at the Cofrentes nuclear power plant, and Spanish experts had taken part in OSART missions and in Assessment of Safety Significant Events Team (ASSET) missions in other countries. The Incident Reporting System (IRS) helped disseminate operating experience amongst member countries, and Spain had both supplied information to and used information from that system.

88. The Agency's efforts to collaborate with the countries of Central and Eastern Europe were laudable and received the full support of the Spanish Government. Of special interest was the programme for reviewing the safety of older reactors, in particular the WWER-440/230 model; Spain had already stated its willingness to contribute both financial and technical help to that programme. The planned activities on ageing of nuclear power plants were also most interesting. Spain had already done a great deal of research work in that area and would play an active part.

89. The Agency's involvement in the clean-up activities pursuant to the Chernobyl accident and in the creation of the Chernobyl centre for international research represented an extraordinary opportunity to study the effects of radiation. Spain was very interested in participating in work at the Centre and was playing an active part in the drawing up of the agreement, together with the Commission of the European Communities.

90. Spain was also collaborating with the Agency on the revision of various safety documents such as the codes of practice and safety guides produced by the Nuclear Safety Standards Programme (NUSS). Those standards were used as a reference by the Spanish regulatory authorities, together with national standards and the standards of the country which had supplied the technology for each plant. The activities of the International Nuclear Safety Advisory Group (INSAG) were also very useful when defining safety requirements for nuclear facilities. Spain set great store by the Agency's efforts to standardize the safety criteria applied in various countries and to revise national regulations.

91. He noted with interest the International Nuclear Event Scale which the IAEA had produced jointly with the Nuclear Energy Agency of the Organisation for Economic Co-operation and Development. Spain had committed itself to using that Scale during the testing period which the Agency was implementing which was to last until the end of 1991.

92. Since the previous year's General Conference, Spain had ratified the Convention on Early Notification of a Nuclear Accident and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, and they had entered into force. The planned safety conference in 1991 was a welcome move and Spain planned to play an active part.

93. The safeguards system had functioned well during 1989 and no diversions of nuclear materials under safeguards had been detected.

94. The continuous growth in real terms in technical co-operation and assistance activities was commendable, particularly in view of the budgetary restrictions to which the Agency was subjected. Spain had continued to provide resources for technical co-operation and assistance in the form of the participation of Spanish experts in missions, provision of Agency training courses, and hosting of Agency fellows in Spanish institutions and firms. In other words, Spain had, as far as possible, placed its existing technological capacity in the nuclear sector at the disposal of those countries whose nuclear industry required technological support from outside. During the thirty-third regular session of the General Conference the Spanish delegation

had announced that the Spanish Government intended to finance footnote-a/ projects for the first time; Spain intended to consolidate and expand its efforts in that area.

95. Mr. SHIRZAD (Afghanistan) said that over the past year the Afghanistan National Atomic Energy Commission (NAEC) had taken a number of strides forward: a statute had been drawn up for the NAEC, its staff had been expanded to include specialists in all areas of the peaceful uses of atomic energy, and plans had been prepared for the establishment of a library of all scientific publications relating to atomic energy.

96. The Agency had provided much assistance over the years to Afghanistan in many different areas, but he wished to draw attention to one project in particular. A cobalt therapy unit had been set up in the Ali Abad Hospital with the Agency's assistance in 1977. Since then 5400 cancer patients had been treated by the unit. However, owing to difficulties caused by the war in Afghanistan, the cobalt-60 source had not been renewed and its strength had declined from the original level of 5000 Ci to less than 700 Ci. As a result, the exposure time for each treatment had increased from 10-15 seconds to 10-15 minutes, with consequent delays in the treatment of most patients. The limited number of radiologists, physicists and technicians had also given rise to serious problems. He therefore appealed to the Agency to provide urgently needed assistance by renewing the existing cobalt-60 source, supplying a further cobalt-60 radiotherapy unit, supplying equipment needed by the nuclear medicine department, including a radioisotope generator to produce iodine-131 and technetium, and awarding at least two long-term training scholarships and two short-term training fellowships each year for radiologists, radiation physicists and technicians.

97. Four projects concerning dosimetry in radiotherapy, nuclear medicine, radiation protection and nitrogen-15 analysis had been proposed by the NAEC to the Agency in 1986 and had been approved. Unfortunately, the war in Afghanistan had led to the suspension of the implementation of those projects, and his delegation requested the Agency to extend the period of implementation of those projects for a further four years.

98. In conclusion, his country attached great importance to the role of the Agency in creating a high level of safety for the peaceful use of nuclear energy and in hindering the proliferation of nuclear weapons. Afghanistan would continue to give its full support to the Agency's activities.

The meeting rose at 5.5 p.m.

