GC

International Atomic Energy Agency

General Conference

GC(XI)/OR.114
8 February 1968

GENERAL Distr.

ENGLISH

RECORDS OF THE ELEVENTH REGULAR SESSION (26 SEPTEMBER - 2 OCTOBER 1967)

ONE HUNDRED AND FOURTEENTH PLENARY MEETING

Held at the Neue Hofburg, Vienna,
on Thursday, 28 September 1967, at 10.45 a.m.

President: Mr. NEUMANN (Czechoslovak Socialist Republic)

CONTENTS

*. GC(XI)/368.

GENERAL DEBATE AND REPORT OF THE BOARD OF GOVERNORS FOR 1966-67 [GC(XI)/355, 355/Corr.1, 366] (continued)

1. Mr. GANEV (Bulgaria) said that over a period of ten years, the Agency had been actively pursuing its lofty goal of making atomic energy available for the well-being of mankind. It was a source of satisfaction to note the efforts made by the Agency to enable a larger number of nations to utilize the positive achievements of atomic science.

2. It was obvious from the Review of the Agency's Activities and from the comments and recommendations of Member States submitted at the request of the Director General [1] that the Agency's main activity was, and should continue to be, to provide technical assistance to developing countries and to enable all Member States to enjoy the benefits of atomic energy.

3. That activity took the form, mainly, of awarding fellowships, supplying equipment and materials, sending out experts, organizing scientific visits, etc. All those things undoubtedly demanded great financial expenditure and the Agency was right in

[1] GC(XI)/362 and Add.1 and 2.

The composition of delegations attending the session is given in document GC(XI)/INF/96/Rev.2.

directing its efforts towards finding the necessary funds for meeting more fully the developing countries' needs. In that connection he announced that his Government would make a contribution of 5000 leva to the Agency's General Fund.

4. For 1967 a sum of $597 000 would be spent on the services of experts but only $378 000 on the provision of equipment and other materials. At the present stage his delegation considered that such a ratio was incorrect and it therefore supported the opinion expressed by a number of countries that there was a disproportion between the amount of assistance provided in the form of equipment and material and that consisting of the provision of experts.

5. The Bulgarian delegation was in no way inclined to underestimate the assistance rendered by experts, particularly when it was provided in response to requests by a given country, but it did consider that a larger percentage of funds should be set aside for supplying equipment and materials.

6. He noted with approval the good work done by the Agency in the applications of radioisotopes in agriculture, industry, hydrology and food preservation, and also in health protection and in the processing of radioactive wastes. He was convinced that in future the Agency would endeavour to intensify its assistance to those countries needing it. In that connection he suggested that the Agency should pay greater attention to the solution of problems of practical interest to developing countries.

7. Bulgaria was following the Agency's activities along those lines with great interest, particularly the work on the application of radioisotopes in industry and agriculture — with special reference to the irradiation of food products. Evidence of that interest was provided by the establishment in Bulgaria the year before of a special organization known as "IZOTOP", mainly for the purpose of introducing radioisotope techniques and nuclear technology to industry and agriculture, and by joint research with the Soviet Union and Hungary, within the framework of the Council for Mutual Economic Assistance (COMECON), into problems connected with the use of irradiation for the preservation of food products.

8. Another promising form of Agency activity was the solution of a number of practical problems connected with the technological and administrative aspects of nuclear energy. The number of nations including nuclear power in their electricity generating plane was constantly rising. Bulgaria had also begun to tackle that problem and was ready to co-operate on a bilateral or multilateral basis in the interest of a more rational utilization of the technological and economic possibilities available. During the coming yeat it would, with the help of the Soviet Union, start to build a high-capacity nuclear power plant to generate electricity.

9. He welcomed the Agency's action in setting up an international nuclear information system (INIS) and his country would co-operate to the best of its ability in that work, the success of which would depend primarily on the goodwill of the developed nations.

10. On a number of occasions his delegation had pointed out that it was opposed to any expansion of the Laboratory's activities, since they were already very extensive and beyond the scope of the Agency. It felt bound to express, once again, its concern at the constant increase in expenditure under that heading and trusted that it was not the Agency's intention to turn the Laboratory into a scientific institute, since it ought to be primarily a consultative and co-ordinating centre for solving problems of a more general nature, such as standardization, measurement of low-level radiation, development of intercomparison systems and so forth. Moreover, despite the provisions of the Statute, laboratory activities continued to be financed improperly, 75 % of the funds coming from the Regular and not from the Operational Budget. The elimination of that state of affairs would enable the Agency to make certain economies necessary for balancing its budget.

11. He wished to touch briefly on the conclusions of the General Assembly's Ad Hoc Committee of Experts to Examine the Finances of the United Nations and the Specialized Agencies [2], which showed that an ever greater proportion of funds was being used to defray increasing administrative expenditure. It was well known that the main explanation for the increase in the Agency's budget was the steady rise in administrative expenditure. The Secretariat ought to seek a solution to that problem primarily in a fuller and more rational use of the existing set-up without increasing it further. The Bulgarian delegation considered that the proposed budget increase of 10.41 % for 1968 was very considerable. It would not lead to a real expansion in the Agency's activities, but would mainly be used to cover administrative expenditure. For that reason he could not support it.

12. The Agency was a humanitarian organization and he wished to use it as a forum for reiterating the protest of the Bulgarian people and its Government against the increasing intensification of the barbaric war being waged by the United States in Viet-Nam and the bombing of the peace-loving Democratic Republic of Viet-Nam. He expressed the fear that what was now happening in that country could be a prelude to a conflict which would bring incalculable disasters to mankind.

13. At the same time, the Organization of American States was being used as a cover for preparing provocative acts against Cuba. World public opinion continued to be centred on the Israeli aggression

---

[2] See United Nations document A/6343.

against the Arab countries, which was categorically condemned by Bulgaria. With a view to elminating the after-effects of that aggression, Bulgaria was lending the Arab people brotherly aid.

14. Against that background the Eighteen-Nation Committee on Disarmament, of which Bulgaria was a member, was working on the conclusion of a non-proliferation treaty whose main objective was to render the dissemination of nuclear weapons impossible, thereby contributing to a lowering of world tension and creating a firmer basis for nuclear disarmament. A treaty would enable non-nuclear States to concentrate all their scientific, technological and material resources on the peaceful uses of atomic energy and would create favourable conditions for extensive international co-operation in that field.

15. The Agency and its Safeguards System (1965, as Provisionally Extended in 1966) [3] could make a positive contribution to solving the inspection problem in the implementation of any such treaty. His Government would do its utmost to contribute to a positive solution of that problem and would welcome any steps which would lead to such a solution.

16. The Government of Bulgaria supported the action that had been taken by Czechoslovakia [4], Poland [5], the German Democratic Republic [6] and Hungary [7] and considered it useful and constructive; furthermore it was itself prepared to place the IRT-1000 reactor of the Physics Institute of the Bulgarian Academy of Sciences under Agency safeguards if the non-nuclear Members of EURATOM, and in particular the Federal Republic of Germany, would agree to undertake similar obligations.

17. It was essential to consider the question of the admission to the Agency of sovereign States which had expressed a desire to become Members and which could contribute to the attainment of its lofty goals. The Agency should consider the admission to membership of the German Democratic Republic, a sovereign State with highly developed industries and an enviable record of achievement in the peaceful uses of atomic energy, which had even aroused interest in the Agency itself.

18. He was confident that the present session of the General Conference would take decisions that would help consolidate the Agency's role as an organization whose activities were directed towards using the atom for the good of mankind.

19. Mr. GUZINA (Yugoslavia) said that, since the success of the Agency's work depended on world peace and harmonious international relations, it was highly regrettable that the United States of America was intensifying its military action in Viet-Nam. Another example of the growing tendency to use force was the recent Israeli aggression directed against the Arab countries. In accordance with the basic principles of the United Nations Charter and his Government's policy of peaceful co-existence, Yugoslavia had taken an active part in trying to find a just political solution to the Middle East problem.

20. The fact that the Soviet Union and the United States of America had, however, achieved considerable progress in drafting a treaty on the non-proliferation of nuclear weapons was a welcome development which would help to prevent nuclear war and would probably involve the application of Agency safeguards. Some countries, however, were opposed to the present draft of the treaty on the grounds that the Powers possessing nuclear weapons would not be obliged to enter into any commitment.

21. The Agency had already gained sufficient experience to enable it to administer the safeguards provided for in the treaty and in that connection he agreed with the Director General that, to be effective, a safeguards system must be international [8]. As a result of the extension of its safeguards system to all stages in the fuel cycle and the growth in the number of installations subject to its safeguards, the Agency had gained the confidence of many countries. It should now further expand its safeguards activities and try to solve the financial problems involved, while ensuring that its other activities were not adversely affected.

22. The extraordinary extent to which certain types of reactors and nuclear power stations were becoming commercially available led to a high degree of competitiveness, and consequently the financial resources available should be employed in a more rational manner to enable the poorer countries to enjoy the benefits offered by nuclear energy.

23. The Agency should study the latest scientific and technological developments in national nuclear energy programmes, since they had a bearing on its work. It should also do more to help the developing countries in carrying out work requiring an advanced scientific knowledge and wide technological and manufacturing experience.

24. Because of the rapid growth in the number of nuclear power plants the Agency should devote more attention to the safety evaluation and economic and technological aspects of nuclear power, and to the construction and development of nuclear power plants and their integration into national power systems. It should constantly undertake studies of the fuel cycle, industrial infrastructure, siting and waste disposal. It should also play a

[3] INFCIRC/66/Rev.1.
[4] See document GC(X)/OR.104, para. 14.
[5] See document GC(X)/OR.103, para. 56
[6] See document GC(X)/INF/91.
[7] See document GC(XI)/OR.112, para.97.

[8] GC(XI)/ OR.III, para. 32.

more active part in co-ordinating work on breeder reactors.

25. His delegation had always done its utmost to contribute to the solution of problems relating to technical assistance. The inadequacy of the resources available to meet the ever-growing number of requests for assistance from developing countries was a major difficulty, which could be overcome only partially by reducing the amount of money spent on administration. An effort must be made to find more funds for technical assistance, and the requests received should be carefully evaluated.

26. The Agency's work in the collection, processing and distribution of scientific and technical information was a valuable activity, and he therefore welcomed the establishment of INIS. In that connection, account should be taken of the wide differences in the stages of economic and technical development in Member States, geographical considerations, etc.

27. There were, of course, many other problems, which the Agency could solve only with the full support of its Members. He welcomed the spirit of co-operation evinced by delegations to the General Conference and hoped that Member States would do their utmost to promote the expansion of the Agency's work under the able direction of the Board of Governors and the Director General.

28. Sir Philip BAXTER (Australia) expressed his delegation's deep regret at the death of Sir John Cockcroft; Sir John had been closely associated with Australia and his loss would be keenly felt there.

29. He thanked the Austrian Government for its generous offer of a new headquarters building for the Agency which, he was sure, would greatly facilitate its work.

30. He proposed to restrict his remarks to technical and economic matters which fell within the area of interest and responsibility of the Agency. He would not follow the example which had, unfortunately, been set by some speakers at the Conference and use that forum to air a variety of political opinions which, however real the situation to which they referred might be, were outside the area of competence of the Agency and irrelevant to its business. That there were deep and important differences of opinion between the nations of the world on a number of issues and policies was known to all, and the positions which were taken up were equally well known. Most would agree that such positions were sincerely held, even though they did not coincide with their own. The United Nations was the place created for discussion of those matters, and their intrusion into the Agency's work contributed nothing to their solution, while it made co-operating in dealing with the technical and economic problems which the Conference was called upon to solve that much more difficult.

31. There was no urgent need in Australia to use nuclear power for industrial purposes since black and brown coal were plentiful and cheap, and significant amounts of oil and gas had recently been discovered with the promise of more to come. In the main industrial States in Australia power costs below 4 mills. per kWh were not unusual. The demand for power was doubling every seven to eight years and it was expected that 500-MW plants would be in operation from about 1975.

32. The research done on nuclear power, which had commenced in 1956, was primarily based on a high-temperature ceramic-fuelled, gas-cooled reactor using beryllium oxide as a moderator. The programme provided opportunities for research in practically all branches of science and engineering relating to nuclear power and, since it did not duplicate work done elsewhere, it provided a basis for exchanging and collaborating with other countries under bilateral agreements. A substantial new technology had been established, increased knowledge had been gained in the fields of materials science and reactor physics and, finally, conceptual engineering design studies had been prepared, from which reliable cost estimates could be made. The programme had provided Australia with an excellent team of nuclear scientists and engineers, on whose work future developments would be based.

33. When it had become apparent a year previously that nuclear power could be used economically in the main industrial areas in the mid-1970's, a further study had been made of the various systems in use throughout the world and the conclusion had been reached that the operation of the high-temperature beryllium-oxide moderated reactor would not be so economic by comparison with certain other types of reactor as to warrant the high expenditure required for industrial operation. That conclusion had, of course, been based on the assumption that large fast reactors would displace converters towards the end of the century. It had accordingly been decided to cease work on that reactor system, after completing some scientific studies of general application, and to work with the type of reactor chosen as most suitable for general introduction in Australia in the next decade. The choice had been made taking into account, first, that the cost of power had to be competitive with alternative fuels and alternative nuclear systems, secondly, that the system chosen had to be proven industrially but still be as advanced as possible in design, and thirdly, that it was essential that natural uranium should be used, since his country did not wish to buy enriched fuel with foreign exchange or to be dependent on imported fuel which was obtainable only from a limited number of sources. Thus heavy-water-moderated natural-uranium-fuelled systems had been chosen and the choice of coolant had been left open.

Australia was now devoting serious attention to reactor systems and was carrying out joint studies with the United Kingdom and Canada.

34. When nuclear power became economic in Australia in the next decade, an increasing number of nuclear stations would be built and major new industries were expected to result.

35. Australia noted the expansion of the Agency's safeguards activities, and had recently had its own facilities inspected by Agency inspectors, who had performed their work efficiently and with courtesy. Because of the importance of safeguards and the high level of expert knowledge required to implement them, he believed inspectors should be employed for a period of not less than five years. The safeguards policy should be decided by the Board of Governors, and nothing would be gained by convening for that purpose a small committee, which might inaccurately reflect the composition of the Board. The development of safeguards had shown that the technical procedures involved needed to be simplified, particularly in the case of research reactors and nuclear research and development facilities, since the primary purpose of safeguards would not be achieved if excessively detailed and largely irrelevant inspections and procedures were carried out.

36. He agreed in principle with the proposal to establish INIS. First of all, a few highly qualified experts should develop a rational and efficient system for the storage, retrieval and dissemination of information to ensure that as many Member States as possible, particularly the developing countries, would benefit. In view of the high level of specialization that was necessary and the need for continuity in the work involved, the professional staff required should be appointed for longer periods than the staff in other Departments.

37. He was particularly gratified by the work of the International Nuclear Data Committee, which enabled many countries, including Australia, to contribute to and benefit from the collection, collation and evaluation of nuclear data.

38. Australia was experiencing an expanding demand for radioisotopes for medical, scientific and industrial purposes. The isotopes were produced in the Australian Atomic Energy Commission's research reactor Hifar and almost 5000 consignments, valued at about $180 000, had been sold in the last financial year. The Commission could supply hospitals with all the radioactive cobalt used in teletherapy, and orders for cobalt-60 had been received from foreign countries, including a substantial order from the United Kingdom.

39. Fluorescence analysis techniques developed in Australia offered very promising possibilities for routine analysis of ores and on-stream process control in the mineral industry; radioisotope sources were used and the techniques were already in use in several industrial plants.

40. The Commission's gamma-irradiation facilities were widely used in hospitals and in industrial and scientific organizations. The study of food preservation by irradiation was continuing in conjunction with the Commonwealth Scientific and Industrial Research Organization. He welcomed the proposal to hold an IAEA Regional Study Group Meeting on Isotope Production in 1968 since it would be of considerable value to Member States in the area of South East Asia and the Pacific.

41. He supported the resolution arising out of the review of the Agency's activities conducted during the past year, but believed that the rule requiring equipment to be accompanied by experts should not always be applied, since many countries already had competent technical personnel.

42. During the past year Australia had sent experts in radioisotope production and radiation chemistry to Taiwan and an expert in nuclear instrumentation to the Congo. It had also provided Agency fellows with training in reactor operations and isotopes production. A course in nuclear technology and three radioisotopes courses had been held in the Australian School of Nuclear Technology and had been attended by 10 students from countries in the region. A course in nuclear technology and radioisotopes courses for graduates and non-graduates would also be held in 1968.

43. The 1967 edition of the Agency's Regulations for the Safe Transport of Radioactive Materials [9] was very valuable. In that connection he hoped uniform international and national regulations covering land, sea and air transport would be adopted, and he strongly urged the Agency to co-operate closely in the co-ordination of standards with the International Air Transport Association, the Intergovernmental Maritime Consultative Organization and the International Organization for Standardization.

44. The Agency should restrict its activities to those provided for in its Statute. For example, the Seibersdorf Laboratory should only perform work which was proper to the Agency, but unfortunately some of its work in agriculture and medicine did not fall into that category. The time might come when the Laboratory's primary task would be to solve technical problems resulting from the expansion in the Agency's safeguards work. He believed the Agency should confine itself to the development and teaching of new nuclear techniques, since otherwise it would find itself competing with other organizations in the provisions of technical assistance, training and research contracts. On the other hand, he welcomed the increased co-operation with the specialized agencies, and he hoped that would eliminate duplication in the case of technical assistance.

---

[9] STI/PUB/148.

45. Subject to parliamentary approval, Australia intended to raise its voluntary contribution to the General Fund to the amount assessed according to the United Nations formula. The contribution would consist, first, of $20 000 in cash, and secondly $8 400 in Australian currency for the purchase of equipment, materials or services in Australia.

46. Finally, he supported the adoption of the annual report of the Board of Governors to the General Conference [GC(XI)/355, 355/Corr.1, 366] and thanked the Director General and his staff for their assistance during the past year.

47. Mr. HIRSCH (France) recalled that the Agency was entering on its second decade of activity. Whilst it was difficult to note outstanding changes and a marked evolution from one year to the next, the Agency's accomplishments were much clearer when viewed over a period of several years. It was obvious that the Agency's work was possible only with the technical and financial participation of all Member States. Those contributions might appear limited in the case of each country viewed by itself and taken for any one year, but in the long run they constituted a fairly large fund which had enabled the Agency to extend its activity into many fields.

48. During the first ten years, a total of about $86 million had been made available to the Agency, which had endeavoured to apportion that sum as reasonably among the various tasks entrusted to it. The French contribution to the Agency's Regular Budget in ten years amounted to over $4 million to which had to be added voluntary contributions totalling $300 000.

49. In an effort to compensate for its restricted voluntary contributions, France had provided the Agency with equipment for its laboratories or the development of research work in developing countries chosen by the Agency. That equipment consisted of electronic apparatus or apparatus for radioisotope applications or neutron studies and represented a value of F.Fr. 1 million or $200 000. Whenever possible, experts had carried out missions to install the equipment and train staff in its use. For that and other purposes, France had made available about 60 experts for technical assistance missions. In addition, it had admitted to its research centres and university institutes more than 300 Agency fellows for training.

50. From the very beginning, French specialists had taken an active part in many symposia and panels organized by the Agency and had presented papers on their most recent work. In the matter of information, France provided all scientific documents requested from it as well as films and documentation for the general public.

51. In summing up the position, he wished to emphasize his Government's interest in the activities of the Agency, the authorities of which had always enabled it to express its opinion and participate satisfactorily in the taking of decisions.

52. He would not dwell on technical assistance problems. He was aware of the scale of requests and of the Agency's endeavours to meet them as best it could with the funds available. Nor would he comment in detail on the impressive development throughout the world of nuclear power plants. However, he did wish to mention that the most interesting development for France during the year had been the hopes which had arisen in regard to fast-neutron reactors.

53. Such reactors played an increasingly large part in the French nuclear programme, a trend that was justified by their very favourable economic prospects and also by the fact that they permitted the fullest possible use of fissile material resources. Fast-neutron reactors involved the use of structural techniques different from those required for thermal-neutron reactors and for that reason, in the initial stage, the Commissariat à l'Energie Atomique — with the collaboration of EURATOM — had installed a large number of experimental rigs in its Cadarache Nuclear Research Centre.

54. The start-up of the MASURCA installation in December 1966 had made it possible to devise critical mock-ups with which to carry out experimental neutron and reactor physics studies. That installation was supplemented by a reactor source, HARMONIE, supplying a stable fast-neutron flux for the development and calibration of the measuring instruments used in the critical mock-ups. The year's most important stage had been reached when the 20-MW thermal, sodium-cooled, experimental reactor RAPSODIE went critical. The advance to rated power had taken place extremely rapidly and the reactor was now operating under optimum conditions.

55. The progress of those operations had shown that fast-neutron reactors could be constructed and started up according to plan, and that the techniques involved could be mastered. It had therefore been decided to construct a fast-neutron, 250-MW industrial prototype to be called PHÉNIX at Marcoule Nuclear Centre. It would be constructed in 1969 and would go critical five years later. Its main function would be to supply the basic technical and economic data needed for industrial reactors of the future.

56. The Agency's Budget for 1968 [10] showed a very marked increase. France appreciated the Agency's effort to carry out the tasks entrusted to it to the best of its ability but was aware of the difficulties with which Member States were faced if the budget grew too rapidly. In that connection, a

---

[10] GC(XI)/360.

choice had to be made between the various items of expenditure and the choice had to be reviewed objectively each year, taking into account new requirements but also attempting not to continue activities which the Agency could no longer undertake.

57. The work of the Department of Safeguards and Inspection had shown a definite increase during the year and the increase was likely to continue rapidly with the growth in the use of nuclear energy in the world and the extension of the Agency's activities and responsibilities that was certain to occur. The French Government's views regarding the financing of safeguards was well-known: they could be financed from the Agency's Regular Budget so long as research reactors, certain types of power reactors and some reprocessing plants were concerned since it could be considered that the development of methods of control and the acquisition of the experience essential for future operations were involved. On the other hand, as a result of the transfer to the Agency of the administration of safeguards in relation to bilateral agreements, a large number of power reactors would soon be subject to Agency safeguards and the relevant expenditure would tend to constitute a large fraction of the budget. There could be no question of such expenditure remaining a drain on the Agency's budget. The costs of safeguards, like those of normal accident insurance, should be borne by the sellers and users concerned; that would mean, in the long run, including them in the cost per kWh.

58. France continued to believe that the Agency's laboratories performed useful task and that they were staffed by highly qualified scientists. It appreciated the Agency's technical assistance work and was in favour of a reasonable increase in the funds which the Agency devoted to it. The French Government had decided to donate to the Agency a second loop for low-temperature irradiation in a research reactor. The loop, representing a value of F.Fr. 200 000, or $40 000, was identical with the first one donated and would make it possible to perform numerous experiments in basic research on solid state physics. It was to be offered to a developing country and it was for the Agency alone to choose the beneficiary from amongst the countries best able to use it in a suitable plant. France was also prepared to send experts to the centre in which the equipment was to be used, give training in its operation and ensure the best possible use of it.

59. For some months, there had been considerable development of nuclear power on the industrial scale. The Agency's role in exchanges between advanced countries was limited for the time being to organizing very interesting symposia, such as the one which had recently been held in Vienna on heavy-water power reactors.

60. It was obviously the developing countries which could best benefit from the Agency's work, and the Agency had already been able to play a useful role, made all the more difficult by the fact that it had to be adapted, as well as possible, to the potentialities of each country. It was important not to repeat prestige operations for which many countries had allocated sums which were disproportionate to their general scientific and technical effort.

61. France hoped that the Agency would be able to continue its activities and that, whilst facilitating meetings of experts from the advanced countries on the more important subjects, it would endeavour to provide information for countries wishing to forecast future requirements and to help them in establishing nuclear programmes, whose effectiveness would be all the greater if they were adapted to the capacities of such countries.

62. The Agency would thus continue to play its international role and contribute to the harmonious development of nuclear energy activities throughout the world.

63. Mr. DOSTROVSKY (Israel) congratulated the Board, the Director General and his staff on the excellent document on the review of the Agency's activities. The review clearly showed that the available funds were insufficient to enable the Agency to carry out its task, and consequently, priorities should be established and a programme developed which would yield the maximum benefit with the funds available.

64. He thought it likely that the applications of isotopes and radiation in agriculture, medicine and hydrology would prove to be of most immediate benefit to the developing countries. Such applications included agricultural research using isotopes, crop preservation through irradiation, yield enhancement through seed irradiation, pest eradication, especially by the sterile male technique, medical research using isotopes, radiation therapy and radiosterilization of medical supplies. Furthermore, scientists in developing countries had the necessary training to enable them to play a part in such activities.

65. Since work relating to nuclear power was of a long-term character and was already being carried out successfully in the more advanced countries, the Agency should concentrate on the dissemination of information, the provision of advice and guidance and the objective evaluation of the need for nuclear power and of the type of plant which would be most suitable.

66. Israel had been actively engaged in all the activities he had mentioned; it had made an intensive study of the use of irradiation in crop preservation, and the Ministry of Health had recently approved the use of irradiated potatoes and was expected to approve the use of irradiated onions in the near future. The extended storage life of the crops in question would have important economic

implications. The commercial use of irradiation techniques and the sterilization of medical supplies by irradiation was planned. The use of the sterile male technique to eradicate the Mediterranean fruit fly had been studied in Israel and large-scale breeding and sterilization facilities had been set up. Israel was also participating in a joint project with the Government of Italy, the Agency and FAO to eradicate the fruit fly on the island of Capri.

67. The use of isotopes in agriculture, medicine and industrial research continued to increase and a growing proportion of the isotopes had labelled compounds required was produced locally. For example, a new phosphate calcination kiln had recently been brought to maximum operating efficiency through the use of radiolanthanum tracer.

68. Progress had been made in research on desalting processes, some of which would probably be more effective than the existing processes, and the possibility of setting up a major dual-purpose plant was being studied.

69. He agreed with those delegates who had said that the Agency should provide equipment and supplies to developing countries which had the necessary trained personnel without insisting on the provision of an expert.

70. The extension of co-ordinated research projects was a welcome development and the Agency should give priority to such projects, particularly if they involved research centres in several countries since the results would then probably be more satisfactory than those achieved by establishing regional centres.

71. Since the Agency was a technical and scientific body, all staff appointments should be based primarily on technical and scientific qualifications, and geographical distribution should be taken into account only when the applicants for posts were equally well qualified. Unfortunately, however, that practice, although laid down in the Statute, was not followed, and the circular letter sent out by the Agency suggested that in certain circumstances possible candidates should refrain from sending in applications.

72. Israel took an active part in the practical work of the Agency, e.g. panels, symposia, research projects, fellowship awards, provision of experts, etc. Yet in all the years of it membership it had never been given the opportunity — on grounds which were quite irrelevant in a body such as the Agency — of serving on the Board or in any of the elective offices in the General Conference.

73. In conclusion, he announced that Israel would continue to make its voluntary contribution to the General Fund and also continue to support the training programme by awarding Type II fellowships.

74. Mr. SARABHAI (India) expressed his regrets at the death of Sir John Cockcroft, under whom he had been privileged to study.

75. The recent dramatic decline in the cost of generating electric power in nuclear reactors offered developing countries an excellent opportunity of transforming their economies. The establishment of high-capacity nuclear reactors to supply cheap power both to industries which were heavy consumers of electricity and for irrigation or desalting appeared to be a feasible plan. Managerial and technical skills of a high order would be necessary for the implementation of such a plan, and they could best be acquired through contact with nuclear energy and other advanced technologies. Within that context the Agency had an important part to play.

76. The review of the Agency's activities provided a valuable basis for future work. However, care should be taken to ensure that any future expansion of the Agency's activities did not entail an undue increase in the assessed contributions of Member States, since the developing countries might thereby be faced with an excessive drain on their foreign exchange reserves, which they needed for their own national atomic energy programmes. That could be achieved only by ensuring that the annual increase in the Agency's budget did not exceed 5 %. Deserving activities such as INIS and the Agency's laboratories might have to be sacrificed to that end.

77. He was particularly disturbed by the fact that the long-term budgetary implications of INIS had not been thoroughly studied. He wished also to point out that the main financial impact of administering safeguards had yet to be felt. One method of raising funds to meet the cost of administering safeguards might be to impose a levy on the installed nuclear power generating capacity of Member States. He suggested that a study be made of the costs of carrying out inspections in a number of representative cases.

78. Expenditure on the Seibersdorf and Monaco Laboratories and on the International Centre for Theoretical Physics had been increasing at a disproportionate rate, with the result that expenditure on technical assistance had remained relatively static. In that connection, he considered it worth pointing out that the overall cost of maintaining a research staff member at the Agency's laboratories was about four times the figure for a developing country.

79. With regard to the International Centre for Theoretical Physics, he had assumed that, when the Board had authorized the Director General to seek sponsors other than the Agency and the Government of Italy, it had not intended that Member States should be approached for financial support, which might merely be reflected in a commensurate reduction in voluntary contributions to the General Fund.

80. In the light of his comments on the review

of the Agency's activities he suggested that the Board, assisted by its Committee of the Whole, study and report on the financial and budgetary implications of the review.

80. In the technical assistance field, he considered that programmes should be tailored to the individual requirements of each receiving country. For example, where sufficient expertise was already available in a country requiring a certain type of equipment, the Agency should be prepared to supply that equipment without insisting that it should be accompanied by an Agency expert.

82. The role of the Agency in establishing regional training centres and similar institutions should, he felt, be a purely catalytic one and should not entail continued financial support.

83. In that connection, he expressed the hope that further candidates from Member States would receive Agency sponsorship for training in power reactor operation at the Tarapur Atomic Power Project, where the reactor was expected to become critical within a few months. Another project which might develop into a regional training centre was the Food Irradiation and Preservation Facility established at Trombay in collaboration with the Government of Canada.

84. Referring to the problem of the non-proliferation of nuclear weapons, he pointed out that India had certain reservations regarding the draft treaty under consideration in Geneva. However, his country had supported the establishment of the Agency's safeguards system and it commended the proposal that the Agency should devise procedures for the inspection of uranium-235 separation plants.

85. In conclusion, he said that India was again making a voluntary contribution of $35 000 in national currency and pledged his country's continued support for the Agency.

86. Mr. HAYMERLE (Austria), after welcoming Malaysia and the other new Members of the Agency and expressing Austria's sense of personal loss at the death of Sir John Cockcroft, said that the annual sessions of the General Conference provided an extremely valuable opportunity to reassess progress in the peaceful uses of atomic energy During the past year increasing emphasis had been laid on the Agency's responsibility for extending technical assistance to developing countries. Taking into account the Agency's own programme and that of the Technical Assistance Component of the United Nations Development Programme, the amount of assistance afforded in 1967 was quite impressive, even though it represented only 37 % of the assistance requested and additional cash contributions to the General Fund were therefore urgently required. He welcomed the increased emphasis that was being laid on practical service to Member States during the early stages of nuclear power projects. In his view the Agency, including the Seibersdorf Laboratory, should be increasingly concerned in the development of applied nuclear technology. The number and capacity of nuclear power plants was growing rapidly, and during 1967 alone new orders equivalent to about 23 000 MW had been placed. Austria particularly appreciated the Agency's interest in new ways for the production of electrical power, including magneto-hydrodynamic electrical power generation, and regarded the symposia held on that and other subjects as one of the Agency's most valuable contributions towards the achievement of its paramount goal. Austria also warmly supported the work of the International Centre for Theoretical Physics in Trieste and the efforts made to develop INIS.

87. Turning to the Budget for 1968, he pointed out that the 10 % increase in the estimates was largely due to the real growth of the Agency's activities by nearly 6 %. Compared with a corresponding figure of 1 1/2 % for 1967, that suggested that the Agency was entering a new period of dynamic growth. Austria would therefore support in principle the budget estimates submitted by the Board.

88. The Board's estimate that between $150 000 and $200 000 would be required over the next five years to provide additional office space illustrated the necessity of a permanent headquarters which would meet the Agency's needs for the foreseeable future. He therefore welcomed the fact that the Board had decided to accept the Austrian Government's offer to erect at its expense an appropriate building on the so-called Donaupark site. Detailed planning work still lay ahead, but given the goodwill of the Austrian authorities and the competent advice of the Agency's staff, he was sure it would be possible to solve all problems that might still arise.

89. During the past year most significant developments had taken place in the field of safeguards. The increasing number of safeguards agreements approved by the Board and of nuclear facilities covered by such agreements was very encouraging, and the improvement of safeguards techniques, together with the proposed extension to processing plants and fuel fabrication plants, would make the system still more effective. His delegation welcomed the Treaty for the Prohibition of Nuclear Weapons in Latin America, and was glad that in providing for the application of Agency safeguards the Treaty contributed towards general adoption of a universal safeguards system. His Government had followed with the closest interest the progress achieved towards the conclusion of a general treaty on non-proliferation of nuclear weapons, and sincerely hoped that if it came into being that treaty would not remain an isolated step of limited importance but would form a starting-point for further progress towards general and complete disarmament under effective international control. For the Agency, such a treaty would undoubtedly bring new functions and new

responsibility, but the Agency's record for the past 10 years clearly showed that it was capable of meeting all the new challenges opening before it.

90. Mr. KOCH (Denmark) expressed his deep sorrow at the death of Sir John Cockcroft, who had always lent a helping hand to Danish scientists and had been awarded the Niels Bohr medal for his achievements in nuclear physics.

91. During the past year, Denmark had had the privilege of serving on the Board and thus had been able to play a part in determining the Agency's policy. In that connection, he wished to thank the Director General and his staff for the excellent documents presented to the Board and their constant readiness to assist it in its work.

92. While the review of the Agency's activities in order to find ways and means to increase its asistance to developing countries had undoubtedly been useful, the Agency and its Member States, including the developing countries, should constantly strive to make the provision of technical assistance as efficient as possible with the limited funds available. Furthermore, all the Member States which could afford to do so should make generous voluntary contributions to the General Fund. His Government had always been happy to discharge that obligation and, in the current year, it would make a voluntary contribution and provide a number of cost-free fellowships at the Danish Atomic Energy Commission's Research Establishment at Risø.

93. His Government was following with considerable interest the work of the International Centre for Theoretical Physics at Trieste. It believed the Centre had been a scientific success. The Centre had also given scientists from developing countries an opportunity to meet and work with colleagues from other countries and to keep in constant contact with them after their return to their home countries, which in turn had enabled them to keep abreast of recent developments. Accordingly, his Government intended, in response to the Director General's request, to make a special contribution to the Centre in 1968.

94. He believed the Agency should promote fundamental science and research, and his country was pleased that it would have the opportunity to act as host for the Agency's Symposium on Inelastic Scattering of Neutrons in May 1968. The Agency should also consider the possibility of carrying out joint projects with other international organizations. In that connection, his Government believed that the Joint FAO/IAEA Division of Atomic Energy in Food and Agriculture was doing very valuable work.

95. Turning to safeguards, he said his delegation supported the establishment of a working group to consider the extension of the safeguards system to plants for processing and fabricating nuclear material and would participate in its work. Danish facilities had been subject to Agency safeguards for some time, and the system had worked smoothly and efficiently and had entailed a minimum of extra work for the staff of the facilities in question. However, in order to improve inspection techniques, the Research Establishment at Risø had, with the Agency's approval, started to carry out research on control methods, with particular reference to safeguards instrumentation.

96. It was generally realized that, if the present discussions on a treaty for the non-proliferation of nuclear weapons were successfully concluded, the Agency might be required to assume new responsibilities. He was sure the Director General would bear that contingency in mind and that the Member States and the Secretariat would willingly shoulder those responsibilities, if they were required to do so.

97. In conclusion, he thanked the Austrian Government for its generous hospitality and for its kind offer to the Agency of a new headquarters building at the Donaupark. He interpreted that offer as an indication of the Austrian Government's faith — which was shared by all — in the future of the Agency.

The meeting rose at 12.45 p.m.