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President: Mr. NEUMANN (Czechoslovak Socialist Republic)

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^{*} 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. LE-VAN-THOI (Viet-Nam) congratulated the Director General for having succeeded in maintaining the purely scientific character of the Agency's activities despite the troubled political atmosphere that weighed so heavily on the world and for having intensified international co-operation in placing the atom at the service of man. Without close co-operation between the advanced countries no progress would have been made in the various domains of nuclear technology, and the Agency's Safeguards

System would not have met with such striking success. In that connection, regional co-operation had also contributed to an intensive use of nuclear techniques in the solution of problems peculiar to the different areas of the world.

2. It would be unfair not to mention the Agency's own contribution to the application of radioisotopes, its work on the standardization of radiological protection measures and its efforts to modernize the system for exchange of nuclear information. It was a source of satisfaction that the Agency's activities were being directed towards extending the benefits of the peaceful uses of fission

to an ever-increasing number of developing countries. The Agency should continue that policy, thereby ensuring that the benefits of atomic energy would become increasingly available to the least-favoured nations, above all in the two spheres most closely bound up with their standards of living: medicine and agriculture.

- 3. In that connection, an important, if not crucial, role was undoubtedly played by technical assistance, because the developing countries lacked everything. Only through enlightened, attentive and long-term support would the Agency be able to achieve positive and satisfying results in its technical assistance programme. It was not enough to recommend the utilization of a particular nuclear technique: the State receiving aid ought also to be given opportunities to benefit from any advantages to be gained from it. The Agency should therefore lend the developing countries every possible assistance in overcoming their shortages of research workers and their lack of material resources.
- 4. The advice and opinions of the Agency on nuclear legislation were being increasingly sought. Viet-Nam wished to express its satisfaction with the well-conceived aid that had enabled it to adopt regulations which were in conformity with the Agency's radiological protection standards. A further cause for satisfaction was the Agency's plan to organize legal training courses in Vienna during 1968 to familiarize administrators and government legal experts with the various practical problems relating to nuclear legislation.
- 5. As regards the training of scientific personnel, the provision of fellowships was considered to be very useful. However, as the number of fellowships was limited the best solution would be to promote, through concerted efforts, the establishment in developing countries of suitable courses in nuclear science designed to provide training not only for research scientists but also, and most important, for research assistants. The Agency should also consider the provision of systematic assistance to enable developing countries to hold introductory courses in new nuclear techniques for workers in different fields who were implementing national programmes.
- 6. The developing countries had to cope with another and no less serious difficulty: the virtual absence of nuclear research materials on the local market. Very often such a situation was an obstacle to research and sometimes even a threat to the continuation of work. Perhaps the Agency could consider setting up a department responsible for the rapid procurement of scientific supplies for countries that urgently needed them.
- 7. Another important point was the spur given to research in developing countries by research projects on a regional basis, assisted by the Agency by means of research contracts. The Agency had done much in that sphere, but its grants were not always

- allocated equitably among the Member States. The Agency's regional representative ought to play a more important part in such matters; through his direct and frequent contacts with those in charge of nuclear programmes in the countries of the area, he was the person best qualified to work out common denominators for joint research programmes in the interests of all.
- 8. In the matter of regional co-operation, Viet-Nam was also in favour of the plan to set up a nuclear research centre intropical medicine in South-East Asia. Likewise, the establishment of a centre for nuclear research in agriculture in the same area would serve eminently practical needs and would meet the wishes of many countries in the area.
- 9. Despite its difficult situation, which was only too well known, Viet-Nam had not lost sight of the over riding importance of the economic and social problems that would shape its future. It was therefore already making every effort, day after day, with sweat, blood and tears, to establish the guidelines for the technical and technological work to be done in years to come for the well-being of all its people.
- 10. Bearing in mind Viet-Nam's unrelenting efforts to achieve the objectives of the Agency, he hoped the Agency would reciprocate by paying constant attention to his country's problems and by granting it appropriate assistance.
- 11. Mr. BUXO-DULCE (Spain) after congratulating Malaysia on its accession to membership of the Agency, said that during the past year Spain had continued to collaborate with the Agency in the financing of fellowships for scientists and technicians from various countries, and in Agency research contracts.
- 12. As he had pointed out on other occasions, it was to be hoped that that collaboration would extend to the recruitment of staff members of Spanish nationality for scientific and technical posts in the Secretariat, since an excessive number of those posts were still allocated to certain countries and geographical areas. Over the last five years only one Spanish scientist had worked briefly with the Agency, and he had now departed.
- 13. In December 1966 the administration of safeguards relating to the bilateral agreement on the civil uses of nuclear energy between the United States of America and Spain had been transferred to the Agency [1] and work concerning the application of the safeguards had begun. The role played by safeguards would be enormously increased if the agreement on the non-proliferation of nuclear weapons at present under discussion at Geneva were concluded.

^[1] See document INFCIRC/92.

- 14. As he had intimated the previous year, it was desirable that the system of safeguards, whether negotiated directly by the Agency or applied as a consequence of present or future agreements, should acquire world-wide scope as soon as possible, without discrimination between countries with and countries without nuclear armaments; as long as that discrimination existed, the countries suffering it would have great difficulty in developing the peaceful uses of nuclear energy.
- 15. Spain was very interested in nuclear power, which was already an economic proposition and would contribute to the rapid growth in the demand for electricity. Spain had consequently launched a large-scale nuclear power programme.
- 16. Progress was being made in the construction of the pressurized-water nuclear power station at Zorita, to the east of Madrid, and although some delays had occured, the station with a capacity of 153 000 kW would go into operation at the beginning of 1968.
- 17. The building of the Santa María de Garoña station in the north of Spain (460 000 kW, with a boiling-water reactor) was proceeding according to plan and the station would go into operation in 1970.
- 18. The contract had been signed for the construction of the Vandellós station in Catalonia, as had also the agreement between the Governments of Spain and France pertaining thereto. Its capacity would be 480 000 kW and the project would extend to the nuclear sphere the collaboration already existing between Electricité de France and the Spanish electricity undertakings. It would also represent a milestone in the co-operation between the French and Spanish atomic energy authorities, a co-operation which would be considerably reinforced by means of research and development agreements.
- 19. Tenders would shortly be invited for the erection of a fourth power station of 500 000 kW at Peñíscola.
- 20. Furthermore, the Spanish nuclear power programme envisaged the erection of a 500 000 kW station each year until 1975 and of two 500 000 kW stations annually between 1976 and 1980. By 1980 Spain would thus have an installed capacity of the order of 8 to 8.5 million kW.
- 21. Characteristic of the technical progress made in recent years had been the strengthening of cooperation between the Junta de Energía Nuclear (JEN) and private industry, with a view to promoting the use of nuclear energy in Spain. Negotiations were nearing completion for the construction of a uranium ore concentrating plant with a capacity of 1000 tons of ore per day, which, in conjunction with the existing capacity, would make Spain the second largest uranium producer in Western Europe. At the Moncloa National Research Centre large pilot plants for the refining of fuel element material

- and fuel element fabrication and reprocessing were in operation. The fuel elements would be marketed by a nuclear fuel manufacturing company with the financial participation of the JEN, as a result of which it would be possible to supply the fuel elements required for the Spanish programme and to reprocess irradiated fuel in future. The position of Spain as a producer of source materials and the demands of its technological and industrial development called for more extensive and sustained co-operation with the executive and advisory bodies of the Agency. The JEN was also engaged in work on the desalting of sea water. Mention should be made in that connection of the work being done on electrodialysis and inverse osmosis, also in collaboration with Spanish industry. Studies were likewise under way on the subject of a dual-purpose plant to desalt water and generate electricity; they were conducted by the JEN in association with Spanish and foreign industrial undertakings. Desalting was of great importance for Spain, and it would be gratifying if the Agency were to continue, intensify and expand its activities in that connection.
- 22. Promotion of the use of radioisotopes and radiation sources, the demand for which had increased by about 30 %, together with the start of work on irradiation of foodstuffs under the auspices of a special inter-ministerial committee and in close co-operation with industry, represented further basic aspects of the technical activities in which the JEN was engaged in association with industry.
- 23. Finally, in order to meet the country's nuclear engineering requirements, the Jen had continued its work in that field and was at present in a position to provide advice on various subjects to interested Spanish undertakings. To improve the effectiveness of that activity, close co-operation was maintained with Spanish engineering companies, which regarded the JEN as their extension into the sphere of nuclear energy. The JEN was also concerned with fast reactors. The CORAL project, in which the Agency had actively co-operated as regards the supply of fuel and the solution of safety problems, was nearing completion and was about to become operational.
- 24. Research in molecular biology had been another of the most important activities in recent years, as had also fresh research on radioisotopes, medical applications, solid-state physics, and the physics of elementary particles.
- 25. The JEN had signed bilateral agreements with its counterparts in various countries, and was conducting negotiations with a number of others.
- 26. Spain was a party to bilateral agreements with the United States of America, the United Kingdom, Canada, India, Italy, Pakistan and Argentina, and was at present negotiating such agreements with Egypt, Brazil and Peru.

- 27. Mr. MOROKHOV (Union of Soviet Socialist Republics) said that the Agency did not exist in a vacuum, and its activities could not fail to be affected by the course of the world events. The origin and existence of the United Nations and the setting up of the Agency were an expression of the efforts of nations to ensure peace and to attain international collaboration in various fields, including the peaceful use of atomic energy.
- 28. It was, however, readily apparent that certain aspects of the present state of the world were unfavourable to fruitful international co-operation. The eleventh session of the General Conference was being held in conditions of increased international tension, which had an adverse effect on the Agency's activity.
- The intensification of the United States' aggression against the Vietnamese people was continuing; the barbaric bombing of towns and industrial targets in the Democratic Republic of Viet-Nam was increasing, and the blood of completely innocent people was being shed. Together with other peaceloving States, the Soviet Union demanded the unconditional cessation of United States aggression in South-East Asia. A new imperialist attack had recently been launched by Israel, directed against the Arab States. The sympathies of the Soviet Union were on the side of the Arab States as the victims of aggression. In accordance with its policy of assisting States fighting to liberate themselves, the Soviet Union firmly supported the Arab States and demanded the immediate withdrawal of Israeli troops from the occupied territories.
- 30. Any act of aggression intensified the danger of war and inevitably led to a stepping-up of the arms race, including the development and improvement of nuclear weapons, all of which seriously impeded the general and widespread use of atomic energy for peaceful purposes, hindered the development of international co-operation between States in the field of atomic energy, including co-operation through the Agency, and made it impossible for all nations to enjoy the benefits of the use of atomic energy.
- 31. The nuclear arms race gave rise to the danger of thermonuclear war, and for that reason the Soviet Union and the other socialist countries consistently advocated the prohibition of nuclear weapons and the destruction of all stockpiles. The Soviet Union had accordingly proposed the inclusion in the agenda for the twenty-second session of the General Assembly of the United Nations of the important and urgent question of concluding an agreement to forbid the use of nuclear weapons and had put forward a draft for such an agreement.
- 32. The danger of nuclear war would be immeasurably increased by the spread of nuclear arms throughout the world and by placing that terrible weapon within the reach of the forces of aggression,

- militarism and revanchism. To prevent such a development it was essential to conclude an international treaty on the non-proliferation of nuclear weapons, and the Soviet Union was firmly in favour of concluding such a treaty.
- 33. Certain positive developments had recently taken place in the work of the Eighteen-Nation Committee on Disarmament. The Soviet delegation had submitted to the Committee a draft treaty on the non-proliferation of nuclear weapons, and an identical draft had also been submitted by the United States delegation.
- 34. The draft solved the main problem concerning non-proliferation, i.e. the prohibition of both direct and indirect access to nuclear weapons. The important problem of international control to verify that the obligations laid down by the treaty were being fulfilled still awaited solution. Such control was necessary in order to ensure that the treaty was effectively applied.
- 35. The Soviet Union and many other countries felt that the best way of ensuring the treaty's application was to use the Agency's Safeguards System, which had been developed and approved by the Agency's Member States and had proved itself in practice.
- At the previous session of the General Conference the Polish People's Republic and the Czechoslovak Socialist Republic had again manifested their faith in the Agency's Safeguards System by declaring themselves ready to submit their nuclear facilities to Agency inspection if the same was done by the Member States of the North Atlantic Treaty Organization (NATO) which did not possess nuclear weapons, and in particular by the Federal Republic of Germany [2]. The Soviet Union had supported that initiative on the part of the two socialist countries, and also welcomed and supported the similar declaration of the Hungarian People's Republic made at the previous meeting by the head of the Hungarian delegation [3]. The Soviet Union supported the statement of the Government of the German Democratic Republic on the subject of application of the Agency's safeguards, which had been brought to the notice of delegates at the tenth General Conference [4]. His Government also felt the justice of the legitimate desire of the German Democratic Republic to become a Member of the Agency, and was convinced that the Agency could only gain from such a move, since the achievements of the German Democratic Republic in the peaceful uses of atomic energy were well known.
- 37. Unfortunately, neither the Federal Republic of Germany nor the other West European Member

^[2] See documents GC(X)/OR.103, para. 56, and GC(X)/OR.104, para. 14.

^[3] GC(XI)/OR.112, para. 97.

^[4] GC(X)/INF/91.

States of NATO had yet responded to the constructive initiative of the socialist States. They continued to insist on the application not of the generally accepted international safeguards system of the Agency but of the control system established by the European Atomic Energy Community (EURATOM) a narrowly regional organization which was in fact a closed group of States inspecting and controlling each other. That showed yet again the real attitude of the revanchiste forces of Western Germany regarding the solution of the problem of non-proliferation of nuclear arms.

- 38. If the Agency was entrusted with the enforcement of the treaty for the non-proliferation of nuclear weapons, it would acquire new responsibilities. It was therefore necessary to embark immediately on a study of all aspects of the organization and functioning of the Agency's control and inspection machinery, in order to be in a position to institute effective controls at short notice. For that reason the Soviet delegation had proposed at the Board meetings in June 1967 the setting up of a special committee to study all problems connected with reorganizing the Agency's control and inspection machinery in the light of the above-mentioned new responsibilities.
- 39. The present practice of the Agency's inspectorate was still not satisfactory. In the inspection of facilities under Agency safeguards insufficient use was made of inspectors from socialist countries, and the principle of equal representation of the three groups of States existing in the world was not adequately applied in selecting the inspectors.
- 40. The Soviet delegation felt that it was time to develop procedures and methods for applying Agency safeguards to plants for separating uranium isotopes, which were an important part of the nuclear fuel cycle. It had therefore proposed that the Secretariat should study the problem and present its views to the Board in June 1968. The Board had agreed with that proposal and had passed a resolution to that effect.
- His delegation was convinced that the Eighteen-Nation Committee on Disarmament would bring its work on a non-proliferation treaty to a successful conclusion. The signing of that treaty would undoubtedly serve to decrease international tension and lessen the threat of nuclear war; it would also open the way to a solution of the problems of nuclear disarmament. His delegation was convinced that the Agency would cope successfully with the problem of enforcing the treaty. That conviction was strenghtened by the Director General's statement at the 111th plenary meeting. The Soviet delegation therefore felt it important for the General Conference to come out in favour of rapid conclusion of the treaty and state that the Agency would be ready to take whatever steps were laid down in the treaty to ensure that it was enforced. In its view, the Director General

- should then communicate the Conference's resolution on the subject to the General Assembly of the United Nations and the Eighteen-Nation Committee on Disarmament.
- 42. It gave him special pleasure to speak about the achievements of the Soviet Union in the peaceful use of atomic energy on the threshold of the celebration of the 50th anniversary of the Soviet State, the first socialist state in the world, which, in the period of its existence, had achieved great success in many branches of nuclear science and technology, and had trained scientists and other atomic specialists who were making an important contribution to nuclear science and whose names were known throughout the world.
- In 1949, when the ominous mushroom cloud 43. from the atomic explosions over Hiroshima and Nagasaki had scarcely cleared, the Soviet Union had begun to develop a project for the first nuclear power station in the world, which had gone into operation on 27 June 1954. In 1958, the first section of the Siberian power station, with a capacity of 100 MW(e), had gone into operation, using a uranium/graphite reactor, and the present overall capacity of the station was more than 600 MW(e). In 1963 the first block of the Beloyarsk power station, with a design capacity of 100 MW(e), using a uranium/graphite reactor, had gone into operation. The second block, with a similar reactor of 200 MW(e), was being built. The reactors of the Beloyarsk station had been the first in which superheated steam had been produced directly in the reactor; its parameters (90 atm amd 500°C) ensured an efficiency of about 37 % and allowed the use of modern standard thermal power equipment.
- 44. In 1964 the first block of the Novovoronezh power station, with a design capacity of 210 MW(e), had begun to produce power. The station used pressurized water reactors, which had become widely used in the Soviet Union and in other countries. In February 1965 the capacity of the first block had been raised to 240 MW(e), and the power station had shown itself to be reliable and consistent in operation. It had so far produced about 3000 million kilowatt-hours of electrical power. The construction of the second block with a capacity of 365 MW(e) would be completed in 1967.
- 45. In 1965 a power station with a capacity of 50 MW(e) had gone into operation in Melekess, using a boiling water reactor. Such reactors might be somewhat cheaper than two-circuit types, and plans were therefore being drawn up for power stations using them.
- 46. A study of the prospects for the industrial use of fast neutron reactors had begun in the Soviet Union in 1949, and had necessitated the construction of a series of experimental reactors. The first such reactor, the BR-1, had been built and started up in 1955; in 1956 the BR-2, with a thermal

^[5] See document GC(XI)/OR.111, paras 33-36.

capacity of 100 kW, had been built, and in 1958 the BR-5, with a thermal capacity of 5000 kW and using plutonium dioxide and sodium cooling.

- 47. On the basis of the experience obtained with the experimental reactors, work had been started on the construction of large power stations with fast neutron reactors; in particular, the industrial power plant in Shevchenko was nearing completion. Apart from producing electrical power [150 MW(e)], the station would provide steam for water desalting and produce up to 120 000 m3 of fresh water a day.
- 48. The BOR-60 experimental reactor with a thermal capacity of 60 MW was being built in Melekess. Increasing the average power density of the core to 900-1000 kW/1, the sodium temperature at the outlet to 600°C and the burn-up of the nuclear fuel to 1 million MWd/t would, according to calculations, make for much more economic operation of power stations. The reactor was the prototype for the first series of economic power stations using fast neutron reactors.
- 49. Work to construct power stations of low and relatively low capacities was also being developed.
- 50. In 1961 the TES-3 mobile power station with an electrical capacity of 1500 kW had gone into experimental operation. It was the prototype of low-capacity power stations, and used pressurized water. Its operation over a period of time had confirmed its reliability, good handling qualities and ease of servicing.
- 51. Another type of low-capacity power station, specially developed for remote regions, was the ARBUS (750 kW), with a vessel-type reactor. An experimental model had gone into operation in the summer of 1963.
- 52. To meet industrial and domestic requirements for electricity and heat in one of the remote regions of the Soviet Union, a typical unit with a capacity of 12 MW (e) was being built in the Far North to serve as an autonomous atomic thermal-electrical power station, which would use a uranium/graphite reactor.
- of the first atomic power stations in the Soviet Union, work had been undertaken on the use of atomic power for various forms of transport. In the spring of 1960 the nuclear-powered icebreaker "Lenin" had made its first Arctic voyage; operation of the vessel over a lengthy period in the difficult conditions of the Arctic Ocean had shown its excellent qualities and the reliable running of the atomic power plant. In the light of the results obtained, it had been decided to build two new nuclear-powered ice-breakers, taking into account the experience gained in operating the "Lenin".

- 54. The Soviet Union now had an adequate and up-to-date basis in design and experimental work which would allow it to undertake extensive and far-reaching development work with a view to introducing atomic energy applications into the national economy Already, the national economy was saving about 200 million roubles a year solely through the introduction of radioisotope techniques.
- 55. The Soviet Union's plans for the peaceful use of atomic energy were extensive, and with every year nuclear power would play an increasingly important role in the total power production of the country, especially its European part.
- 56. Methods of applying radiation to various materials in order to produce materials with new qualities and increase the efficiency of existing technological processes were going beyond experimentation and assuming a place in industrial production, while instruments based on the use of ionizing radiations were becoming the basis for the equipment and automation of production. Medicine, which already made wide use of ionization techniques in diagnosis and treatment, was now using them as an efficient means of caring for people's health.
- 57. With reference to the practical use of atomic energy, he wished to dwell on fundamental research, and pointed out that the world scientific community was well aware of the outstanding achievements of Soviet scientists in theoretical nuclear physics; their experimental work, which served to supplement and develop the theoretical studies, had led to a large number of very remarkable discoveries.
- The high specialized instruments used in physics were an essential part of the equipment of all Soviet research centres. A symbol of current developments in nuclear physics was the very powerful proton accelerator being completed close to Serpukhov near Moscow. Producing protons with an energy of 70 000 MeV and a beam intensity of 1012 particles per pulse, the instrument was built on a grandiose scale. The diameter of the accelerator ring was almost half a kilometre, its magnet weighed 20 000 tons, and the hall containing the experimental equipment was large enough to hold a very modern stadium. The main structural work on the Serpukhov accelerator had been completed, and installation and start-up work was proceeding successfully.
- 59. Work on controlled nuclear fusion had developed further in recent years. The research centres of the country (the Kurchatov Atomic Energy Institute, the Novosibirsk Nuclear Physics Institute, and the Physico-Technical Institutes at Sukhumi and Kharkov) were developing and studying new methods of controlling the thermonuclear process (high-frequency, turbulent, impact, and ion-cyclotron heating of the plasma, among others). While it had

not yet been possible to achieve in a single thermonuclear device simultaneous fulfilment of all the conditions necessary for fusion to occur (high temperature, high particle density and a sufficient plasma retention time), further success in solving the very complex problems would probably be attained in the near future.

- Fifty years ago a new type of State had been born, the socialist State, which had achieved enormous social reforms and technical progress. Its people were firmly resolved to do everything necessary to make it an example to the whole of mankind. It needed peace, and the whole history of the Soviet State was a history of the fight for peace. One of the first decrees of the Soviet Government had been a decree about peace. The Soviet State had been one of the first to begin international collaboration in the peaceful use of the atomic energy, by concluding an agreement with the socialist and developing countries to grant scientific, technical and industrial assistance in the use of atomic energy for peaceful purposes. It had also taken the lead in arranging an exchange of information with other countries on controlled thermonuclear reactions.
- 61. Realizing that the construction and use of powerful modern accelerators required international collaboration, the Soviet Union had in 1956 given over the use of the Joint Institute for Nuclear Research, which brought together scientists from the socialist countries, the largest proton synchrotron available at that time, with an energy of 10000 MeV. Successful co-operation between Soviet scientists and those of the socialist countries was still continuing in the Institute, and had led in 1966 to the discovery of the 104th element, which had been named kurchatovium in honour of the outstanding Soviet scientist, Academician Kurchatov.
- 62. The Soviet Union had invited scientists from the socialist countries (the Joint Institute for Nuclear Research at Dubna), France and the European Organization for Nuclear Research (CERN) to participate in the work with the accelerator at Serpukhov, and agreements for collaboration had been concluded.
- 63. Together with scientists from the other socialist countries, Soviet scientists were successfully solving common problems within the standing committee on the use of atomic energy for peaceful purposes set up by the Council for Mutual Economic Assistance (COMECON). The use of atomic energy was becoming ever more important to the economies of those countries, especially for the production of electrical power. For that reason COMECON had developed and was carrying out an extensive programme to co-ordinate scientific and technical investigations in the field of nuclear power. Successful work was also being performed in other branches of nuclear science and technology.
- 64. Recently, the Soviet Union had concluded

- agreements with the German Democratic Republic, Bulgaria, Hungary and Czechoslovakia for the construction of nuclear power stations with a total capacity of about 4 million kW. It was still collaborating extensively with a number of developing countries and was giving technical assistance and help in the peaceful applications of atomic energy, through bilateral agreements. The Soviet Union was helping such countries to create national scientific centres and train indigenous experts. The equipment of two X-ray radiological centres in Morocco and Pakistan was nearing completion, as part of the Soviet Union's contribution to the Agency's technical assistance programme for developing countries.
- 65. The Soviet Union was active in many international bodies not least in the Agency, in whose scientific and technical conferences, symposia and other scientific activities Soviet scientists and experts were participating.
- The Soviet Union received scientists from many countries, placing at their disposal facilities for scientific and technical meetings of the type organized by the Agency. In 1966, a group of experts from developing countries which were Members of the Agency had visited the Soviet Union to study the industrial applications of radioisotopes and irradiation. Agreement had been reached to organize another study tour in the Soviet Union during 1968 on the subject of radiation protection, and also to organize a regional course on medical radiology for experts from developing countries, to be held in Moscow in June 1968. In May 1967 the International Nuclear Data Committee had met in the Soviet Union. During 1968 his country was also prepared to offer the Agency facilities for holding a regional meeting on the use of research reactors at Tbilisi as well as a symposium on plasma physics in Novosibirsk.
- Referring to the Board's annual report to the General Conference [GC(XI)/355 and Corr.1, 366], he said that the Agency had achieved certain positive results not only in activities on which it had been engaged since its inception but also in the preparation of new ones which by virtue of the Board's decision would start in 1968. He had in mind, particularly, the creation of an International Nuclear Information System (INIS). His delegation was in favour of the proposal that the Agency should become an international centre for the exchange of information on the peaceful uses of atomic energy, thereby better discharging one of its main functions under the Statute. The proposal, if implemented successfully, would benefit all Member States. Some thought should be given to the possibility of incorporating in the proposed system work on processing nuclear data. The Soviet Union intended to play its part in establishing the system.
- 68. The Governor from the Soviet Union had already stated in the Board that the funds needed

for new activities could be found by better distribution of available resources and by reducing certain appropriation sections, particularly that for laboratories. The Regular Budget submitted to the General Conference provided for an increase of 10.4%; the Soviet delegation regarded that figure as excessive and could not accept it unless it were modified.

- 69. It had already been rightly pointed out at meetings of Agency bodies that it should follow the practice of national finance ministries, which planned their budgets on the basis of the available resources, and if necessary cut the allocations for less important types of activity in favour of priority activities. That practice had unfortunately not yet become a guiding principle in drawing up the budgets of international organizations, and in particular that of the Agency.
- He appealed to the Director General and to the Secretariat as a whole for a more realistic approach to the new six-year programme, with regard both to policy decisions governing the Agency's activities and to the financial consequences of the programme. His delegation felt that with regard to the essence of the new long-term programme it would be possible to benefit considerably from the Review of the Agency's Activities [6] by suitably applying the recommendations contained therein. The value of that review was that it analysed almost all the basic activities of the Agency, with emphasis on the fact that they should correspond more closely to the needs and interests of the developing countries. It also emphasized that the Agency should, to an equal extent, carry out activities of interest to all Member States, both developing and developed. In particular, the Secretariat should pay more attention to problems of nuclear power in order to ensure that they occupied a prominent place in the new long-term programme.
- With regard to the Agency's success in training specialists in the use of atomic energy for peaceful purposes, especially for the developing countries, he felt that a new approach was required, since responsibility for training was at present dispersed throughout various departments, not to mention the International Centre for Theoretical Physics at Trieste, the Seibersdorf Laboratory, States offering fellowships and the organizers of various regional courses. There was no general plan or uniform policy, and the training programme inevitably suffered therefrom. He felt that the new sixyear programme might well find room for the development of a new approach. The Hungarian proposal for collaboration between laboratories in the developed and developing countries [7] was interesting and deserved attention, as also did that of the United Arab Republic for the joint training of groups of specialists for a specific country with a view to operating an atomic facility [8].
- [6] GC(XI)/362.
- [7] GC(XI)/OR.112 para. 99.
- [8] GC(XI)/362, Annex A, United Arab Republic, para. 9.

- On the subject of technical assistance, he felt that the funds available for the purpose should be more rationally used. In particular it was necessary to meet the desires of the developing countries by spending more on equipment and on fellowships for scientists rather than on paying the salaries of experts who were not always needed. His delegation was also unable to accept that the Agency, disregarding political circumstances and taking refuge in the legal subterfuge that it was a purely technical organization, provided aid to, for example, South Korea, which had sent 50 000 mercenaries to South Viet-Nam. Nor could he omit mention of the aid to the puppet regimes in South-Viet-Nam and Taiwan, which were pursuing the purely political aims of certain Powers.
- 73. The Soviet Union had always supported the provision of technical assistance to developing countries, financed on the basis of voluntary contributions. The voluntary contribution of 100 000 roubles made by the Soviet Union for that purpose in 1966 had achieved practical results. It was, however, impossible not to be dissatisfied with the fact that no use had yet been made of the 20 one-year fellowships at a value of approximately 80 000 roubles which had been offered at the same time, principally for the purpose of giving specialists and scientists from developing countries training in the Soviet Union. He hoped that the Director General would take the necessary measures to see that those fellowships were soon used.
- 74. Wishing to co-operate further in the Agency's technical assistance programme, the Soviet Union was again making a contribution of 100 000 roubles in national currency for the provision of technical assistance to developing countries. That sum could be used by the Agency to buy in the Soviet Union instruments, equipment and materials for technical assistance projects.
- 75. M. SALVETTI (Italy) said that the review of the Agency's activities, carried out by the Board and its Ad Hoc Committee of the Whole, had confirmed the sound foundation on which those activities had been based. Despite the numerous difficulties of all kinds which the Agency had continually faced, there could be no doubt that it had made a considerable contribution to the development of nuclear energy activities in the world.
- 76. The review of activities in the past year had shown that in addition to the rational development of existing programmes, new initiatives had been undertaken, and he particularly welcomed the proposal regarding INIS. That proposal merited full attention, since documentation constituted an ideal subject for co-operation and was of fundamental importance in the development of nuclear energy activities.
- 77. In view of the complexity of the technical and financial problems involved in the co-ordinated

use of the existing regional and national documentation centres, a pilot project on the lines of the one envisaged would be most valuable, as it should make it technically and financially possible to undertake a large-scale co-operation project.

- The activity to which the Agency had continued to devote its main efforts was technical assistance. It had been the subject of numerous discussions, analyses and studies at all levels in the search for better solutions to some of the main problems, one of which was how the rapid and impressive progress of nuclear energy activities could be accompanied by a corresponding increase in the Agency's technical assistance activity. So far, that had been impossible because the Agency's technical and financial resources had not substantially increased, whereas requests for assistance had multiplied. Thus, in the space of a few years the situation had changed from one where almost all requests for technical assistance had been met, to one where only 30% could be fully met.
- Although the technical assistance problem was becoming increasingly serious, it would be very difficult to solve it completely solely by better use of personnel or of the means available to the Agency. In addition, technical assistance for nuclear energy activities differed from assistance for other purposes in that the development of such activities presupposed the existence of a certain level of economic development. What contribution could nuclear energy make to the economic development of a country which was not in a position to exploit that source of energy? The greatest need was for educational and training courses, fellowships, etc., which could include theoretical research. Italy was not opposed to theoretical research - on the contrary, it believed that it could be of considerable importance to developing countries in building up a nucleus of research workers to form the cadres on which the sound development of nuclear science and technology would subsequently depend.
- 80. The results of the research and studies conducted in co-operation with FAO were of great value to all countries with an essentially or largely agricultural economy.
- 81. Italy was very interested in such research and in that connection was particularly pleased with the excellent and fruitful co-operation which had existed for some time with the Agency. The work carried out in co-operation with the Agency included the cost-free research contract of the National Committee for Nuclear Energy to study methods of increasing harvests by means of beneficial mutations, and the Committee's participation in the Near Eastern Barley Improvement and Production Project. Eradication of the fruit fly in Ischia and Capri by the sterile male technique was another valuable activity.
- 82. The Agency's congresses and symposia had

been of the highest value from the standpoints of subjects dealt with and scientific standard.

- 83. The Italian delegation also appreciated the authority granted by the Board to the Director General to conclude a new agreement with Italy for the International Centre for Theoretical Physics at Trieste and it was hoped that the final negotiations could be concluded shortly. He was certain that the Centre would continue to add lustre to the excellent reputation which it had already gained in the scientific world.
- 84. Italy would again place 20 fellowships, amounting to a total of 160 months of training, at the disposal of the Agency in 1968, through the National Committee for Nuclear Energy. In addition, its experts would be at the disposal of the Agency for panels and working or consultative groups.
- 85. Mr. BILLIG (Poland) said that the preceding year had been marked by further development of valuable international collaboration within the framework of the Agency and by great progress in many of its activities. That was sufficiently exemplified by the Review of the Agency's Activities undertaken with a view to increasing the assistance to developing countries, the strengthening and improvement of the safeguards and inspection system, by the action taken to organize INIS, by the proposed further development of the International Centre for Theoretical Physics in Trieste, by the progress made in the exchange of information on scientific and technical achievements, etc.
- 86. However, the preceding year had also seen an increase in international tension and a further intensification of the aggressive war conducted by the United States of America in Viet-Nam, poisoning the international atmosphere and involving the risk of extension of the conflict; also, as a result of Israeli aggression, a new theatre of war had been established and new tensions had worsened the international situation. That, of course, was bound to affect the Agency's activities.
- 87. Under those circumstances any step taken to ease international tension, reduce the risk of new conflicts and avert the atomic threat was of extreme importance. One such step which was now in the centre of attention of the world community, and was directly connected with the Agency's work, was the conclusion of an international treaty on the non-proliferation of atomic weapons.
- 88. In 1966 the Polish delegation had expressed its willingness to place Polish atomic installations under Agency safeguards if other countries, in particular the Federal Republic of Germany, would do the same. It had in that way expressed its conviction that the Agency was the most appropriate and indeed the only international body capable of applying safeguards and controls in order to ensure that the atom was used only for peace. His delegation thought the General Conference was the right forum

for considering the importance of that treaty in attaining the Agency's main goal, i.e. to ensure that nuclear energy was used only for peaceful purposes in the service of mankind.

- 89. However, as the Conference was aware, there were still people opposed to the conclusion of a non-proliferation treaty and to the implementation of safeguards and controls by the Agency. After the bitter experiences Poland had undergone in the not so distant past, it was particularly concerned by the present attitude adopted by the Federal Republic of Germany. For Poland as well as for other European countries, a guarantee that the Federal Republic would not have direct or even indirect access to atomic weapons was of prime importance.
- 90. He noted that the German Democratic Republic had immediately accepted the proposal to place its atomic installations under Agency safeguards and that recently it had unreservedly supported the proposal presented in Geneva for non-proliferation of atomic weapons. Unfortunately, the Federal Republic of Germany's position was the complete opposite.
- 91. Opponents of the treaty and provisions for control offered as the main argument in support of their views the fallacious idea that such a treaty would hold up the development of the peaceful uses of atomic energy. In point of fact, safeguards to ensure that fissile materials and nuclear facilities were used exclusively for peaceful purposes, as opposed to military ones, actually contributed to the development of atomic energy activities, as was clearly shown, albeit in microcosm, by the work of the Agency. Moreover, the Safeguards System had been approved unanimously even by those who now opposed it.
- 92. He cited as an example the experience of Poland, where, as was well known, nuclear energy was being utilized solely for peaceful purposes. In Poland the results obtained from the practical application of nuclear energy were more than sufficient to cover all expenditure on research and experimentation.
- In connection with the work of the Committee set up by U Thant, the Secretary-General of the United Nations, Poland had made hypothetical calculations of what roughly the consequences would have been for the Polish economy, had Poland chosen to acquire even the most elementary stockpile of nuclear weapons. The results obtained from the calculations were as follows: over the 10-years period needed to obtain the most elementary form of nuclear armament, Poland would have had to spend 150 000 million zlotys, i.e. 15 000 million zlotys per annum. Such an amount would have demanded from Poland a cut in per capita consumption of 4% or a drop in capital investment of 24%, or almost a quarter. That would have halted the growth of productivity, employment and, naturally, the national income, which was planned to increase

- by approximately 6% per annum. Figures of that kind were eloquent testimony to the fact that for even such an averagely developed country as Poland, let alone for developing countries, an attempt to acquire stock-piles of atomic weapons not only shackled and hampered the development of the peaceful uses of atomic energy but even undermined the whole economy.
- 94. It therefore followed that the conclusion of a treaty on non-proliferation of nuclear weapons and the application of safeguards and controls to ensure observance of such a treaty could not but have a favourable effect on the peaceful uses of atomic energy. In his opinion the signing of a non-proliferation treaty and the establishment of safeguards and controls on the use of fissile materials and nuclear facilities would contribute towards the development of international co-operation, and particularly international trade in such materials and facilities.
- 95. The Polish delegation considered that the Agency should prepare to carry out the functions of the body responsible for ensuring observance of the treaty. The Agency's Safeguards System ought to be extended and adapted to the new situation so that it would be capable of carrying out the new tasks it was faced with.
- 96. Accordingly, the Polish delegation wholeheartedly endorsed and supported the Soviet proposal to set up an ad hoc working group which would draw up proposals for extending and improving the Safeguards System with a view to obtaining maximum effectiveness, while causing the minimum possible inconvenience to the State under inspection and respecting its sovereignty.
- 97. In connection with the speech made by the Soviet delegate, who had noted the great achievements made by the Soviet Union in the 50 years since the October Revolution, he himself would like to acknowledge with gratitude that the development of nuclear energy in Poland owed much to Soviet assistance. Fraternal co-operation amongst the socialist countries was making a significant contribution to the development of their nuclear science and technology; that was also reflected in their collaboration in COMECON's standing committee on the use of atomic energy for peaceful purposes.
- 98. The Polish delegation considered that although at the present moment the Agency did not possess sufficient funds to set up new regional centres for training in the use of atomic energy, it should be possible, with modest resources, to use the centres, institutes and laboratories which already existed in different countries to help the developing countries. The Agency could sponsor such centres and send to them fellows, professors, experts and equipment so that they could serve many countries, particularly the countries of each region. Poland would be ready and willing to place at the Agency's

disposal for such a purpose one of its institutes engaged mainly in the use of isotopic and other nuclear techniques in industry.

99. Poland attached great importance to the Agency's activities in rendering aid to developing nations and would make a contribution of 150 000 zlotys to the General Fund. In addition, as in preceding years, it would place at the disposal of the Agency five fellowships for one year's study in Poland. Asistance given by the socialist countries through the Agency, in the form of radiological laboratories for diagnosis and treatment and experts sent out under Agency auspices to various projects, had proved extremely necessary and effective.

100. In line with the obligations they had taken upon themselves, Poland and Bulgaria were jointly prepared to dispatch another laboratory of that kind in accordance with the decision of the Board of Governors.

101. The Polish delegation fully realized that the 10.4% increase in the Budget for 1968 [9] over the previous year was chiefly due to the new spheres of activity undertaken by the Agency — for example, INIS —, to the necessity of extending work on safeguards, to the increased number of full-time inspectors and to rising costs, but nevertheless it considered that certain administrative expenditure could be cut down, over and above those economies already made by the Director General and approved by the Board, and that that should be taken into account in future.

102. Atomic energy, he recalled, that new sphere of science and technology on which mankind placed such high hopes, had been born in a small and primitive laboratory where that great scientist, Marie Sklodowska-Curie, and her husband Pierre Curie had done their epoch-making work.

103. Celebrations in connection with the centenary of Marie Sklodowska-Curie's birth had already begun. In a month's time the occasion would be officially celebrated. A museum would be opened in the house of her birth, and an international symposium on future prospects for nuclear physics and chemistry, physics of elementary particles and radiochemistry would take place. One hundred and seventy scientists from all over the world would take part in the symposium. Pursuant to the joint Polish-French resolution adopted at the previous session of the Conference with reference to the centenary celebrations [10], the Agency had given Poland great help in organizing the symposium, and in that connection he wanted to thank the Agency and in particular its Director General.

104. Mr. ERRERA (Belgium) said that the Agency's General Conferences every year gave Member States

[9] GC(XI)/360. [10] GC(X)/RES/216. an opportunity to examine their conscience and to determine whether the efforts made and the results obtained had been what they had intended. It also provided an opportunity for discussing events which had occurred during the period under review and which were certain to have an appreciable impact on the Agency's future activities.

105. In its annual report the Board emphasized the problems confronting the Agency in connection with the implementation of safeguards, as regards both the increase in the number of countries voluntarily placing their installations under safeguards and the extension of the Safeguards System itself. It also referred to the fact that the Treaty for the Prohibition of Nuclear Weapons in Latin America provided, among other things, for the application of Agency safeguards to all activities relating to atomic energy in the countries it covered. In the future, perhaps, still other international treaties might call on the Agency to implement the controls provided for.

106. To cope with such new responsibilities, both present and future, which were not all expressly provided for in the Statute, the Agency would have to set up a budget covering control expenditure, which would be altogether distinct from that covering all its other services. Moreover, in the face of what might be called a future inflation of expenditure for control services, there might be a temptation — as a means of remaining within acceptable budget limits to mask the real cost of safeguards by financing certain items of expenditure under other headings. He had in mind, for example, the proposal to create a post at the Seibersdorf Laboratory for a specialized analyst for safeguards work, or to use services of inspectors from other Departments on an ad hoc basis. Such expenditures should be carried on the safeguards budget; if they were not, other Agency activities were likely to be curtailed little by little, since some of the funds allocated to them would in fact be going to maintain safeguards.

107. As far as the establishment of INIS was concerned, Belgium would watch the Agency's plans with interest, but not without some misgivings. It was stated in the introduction to the annual report of the Board that the system it was proposed to establish would be co-ordinated and partially operated by the Agency. The Agency's Budget for 1968, however, although it recognized that good documentation systems already existed (including that developed by EURATOM), indicated that the Agency was proposing to start a pilot project of its own. He wondered whether the Agency intended to start its pilot project from scratch or whether it would be guided by one of the systems already developed.

108. The Agency could not embark on the pilot project unless certain conditions were fulfilled: (a) all the countries capable of making a useful contribution to the system, in the form of information, should agree to participate; (b) the project should not duplicate other, similar projects, in respect of

either documentation or information; (c) the standardization of indexing should first be studied and accepted by the participants before the project was put into operation; (d) the operating staff necessary should be recruited exclusively from among the holders of scientific diplomas in chemistry, physics, etc. The staff would obviously need to be trained for the new projects, as would also the nationals of the Member States who would represent for their respective countries the terminal points in the documentation and information network. Actually, hardly any industrial or scientific laboratories were at present capable of using the information in the form in which it was released. The Agency's project would be of real interest only if that were made possible.

- 109. Meanwhile, the Agency should be able to obtain certain data, such as the unit cost of the projected information, the cost of the reproductions, delivery times for the information, etc., which would give a good indication of the economic value of the project and the advisability of introducing it. The Agency should therefore, in any event, work with already established regional centres (EURATOM, United States Atomic Energy Commission, Saclay, National Lending Library) and should become a clearing-house of nuclear information, passing on information from all parts of the world.
- 110. He recalled that he had on several occasions already referred to Belgium's concern regarding duplication between the Agency's work and that of various specialized agencies. In that connection, whilst the Agency should be congratulated on the co-operation it had established with FAO, he found it difficult to understand the reason for the great difference in the financial support supplied by the Agency and by FAO to the Joint FAO/IAEA Division of Atomic Energy in Food and Agriculture: the Agency contributed three quarters of the funds and FAO one quarter. Since the atom was placed at the service of agriculture in the Joint Division, it was up to the Agency to see that the contribution ratio was reversed. Efforts were being made in that direction, but they were not adequate.
- 111. Regarding its present and future work on the utilization of nuclear power in the industrialized countries and in various developing countries, the Agency should try to destroy the taboos which had done much to divorce the problems connected with nuclear energy from those related to other sources of energy. The Agency had a role to play to ensure that the nuclear industry could develop in a healthy atmosphere of competition with other industrial sectors, so as to make available to energy users the cheapest sources of power in their particular regions. As far as its staffing and budgeting allowed, it should promote the development of well-tried reactor types, the development of breeder reactors, the study of fuel cycles, etc., by holding meetings at which it would be possible to evaluate the work devoted to those subjects throughout the world. The interest aroused by the Symposium on the Use

- of Plutonium as Nuclear Fuel which Belgium had had the honour of jointly sponsoring with the Agency showed the extent to which countries were now concerned with the technology of fabrication and chemical processing of nuclear fuels and the economic aspects of their utilization.
- 112. He wanted, once again, to draw the Agency's attention to the problem of special financing arrangements which the Agency would have to study, together with the competent organs of the United Nations, for countries with limited financial means which desired to purchase large nuclear facilities. New solutions should be thought out so that the future purchasers could obtain adequate guarantees and long-term loans necessary for carrying out their plans, which unfortunately called for particularly heavy outlay in the case of nuclear energy activities. If that major problem could be solved, the untrammelled economic development of many countries undergoing industrialization would be greatly facilitated.
- 113. Finally, he wanted to refer to problems associated with the Seibersdorf Laboratory. It was realized that steps had been taken to rationalize some of the Laboratory's activities and to go further towards sub-dividing the budget into categories corresponding to individual operations. If they were effective, all those steps should result in a budget reduction, assuming the same amount of work; that was not the case, however, since there was an increase of 11 % for that item.
- 114. No action had yet been taken to give effect to the Belgian proposal, repeated at intervals over a number of years, to establish a committee composed of administrators and industrialists to examine the Laboratory's proposals regarding its work from the industrial and budgetary standpoints and in the light of the Agency's general policy. Such a committee would certainly produce good results.
- 115. In conclusion, he was glad to say once more how much the Belgian authorities had appreciated the generous offer of the Austrian Government to provide a site and buildings for the Agency's permanent headquarters.
- 116. Mr. CONTRERAS CHAVEZ (El Salvador) said that, during the present year, El Salvador had been able to implement the project on medical applications of radioisotopes, worked out with the Agency's advice. The Agency's expert had stayed six months in El Salvador, and had worked in co-operation with the Department of Radioisotope Applications.
- 117. The radioisotopes section of the Rosales Hospital had reorganized its facilities and had received technical assistance equipment to the value of \$4000. The staff of the Rosales Hospital was

extremely satisfied with the hard and very efficient work of the expert, Dr. Farran.

- 118. The success obtained provided encouragement to continue in the same direction, and the Rosales Hospital had earmarked funds for fresh applications on the lines laid down by the expert; to speed up that activity it had requested that the Agency should continue its support by providing expert services for a further six months and equipment to the value of about \$2000. That assistance had been charged to the Operational Budget for 1967, but on technical or budgetary grounds it had been impossible to grant it in respect of the present year. For that reason it had been decided not to request technical assistance under the 1968 Operational Budget until the expert had arrived, after which the current project would be continued in agreement with him. The Government of El Salvador hoped that the expert and the equipment would be provided during the first half of 1968, as otherwise the development of the project would be prejudiced. In general, his delegation highly appreciated the technical assistance provided, particularly as regards its scientific effectiveness.
- 119. The Government of El Salvador welcomed the Agency's interest and co-operation in the General American regional project to eradicate the Mediterranean fruit fly using the sterile-male technique.
- 120. The six countries in Central America were endeavouring to create an integrated region so as to make more effective and rapid progress in various directions. In the economic field, a common market had been established, with free movement of manufactured goods and a notable increase in interregional trade. Similarly, integration was being pushed forward in the cultural and banking sectors, etc., and the Agency might investigate the possibility of arranging technical assistance on a regional basis as a contribution to such integration.
- 121. Mr. FAROLAN (Philippines) welcomed the latest Member of the Agency—Malaysia. The growth in membership was no doubt a manifestation of deepening faith in the Agency's effectiveness. He also welcomed the understanding shown with regard to the problems of the developing countries.
- 122. During the 1966 General Conference, his delegation had reported on the completion of the United Nations Special Fund pre-investment study of power, including nuclear power, in Luzon, the main island of the Philippine archipelago [11]. The results of the continued efforts of all concerned, with the Agency acting as executing agency, were distilled and crystallized in an eight-volume final report. There could hardly have been a more propitious time and setting for the formal presentation

- of the report to the Philippine Government by the Director General himself and the United Nations Development Programme Representative than when the technical representatives of developing countries in the region were gathered in Manila for the Study Group Meeting on Problems and Prospects of Nuclear Power Applications in Developing Countries.
- 123. He liked to think that apart from the intrinsic value of the findings, plans and recommendations arising from the pre-investment study, the final report served to focus well-deserved attention on the growing impact of nuclear power in developing States like the Philippines. In an unprecedented gesture bespeaking his personal concern for and cognizance of the important role that nuclear power was bound to play, the President of the Philippines had entertained the Director General and Mrs. Eklund and all the participants at luncheon, in order to meet them and exchange impressions with them.
- 124. The report had been used as one of the basic documents for electric power planning in the Philippines, and the implementation of some of its recommendations had been started. It had been assumed that nuclear power would be competitive in meeting power needs within ten years from the start of the study, and plans for the expansion of power production by the Manila Electric Company included nuclear power plants.
- 125. In furtherance of its policy of supporting regional undertakings, his Government had agreed to act as host to one study group meeting and two training courses during the past year. The Study Group Meeting on Problems and Prospects of Nuclear Power Applications in Developing Countries, held in Manila from 27 October to 2 November 1966, had attracted 50 participants from 12 countries and the Economic Commission for Asia and the Far East. Significantly, discussions during the meeting had shown that the prospects for nuclear power in the region were promising, despite critical financial problems and the lack of trained manpower.
- 126. In addition to the Director's General's visit, eight other officials of the Agency had visited Manila on official matters on seven occasions, and he believed that personal contacts through Agency missions and official visits made for closer understanding.
- 127. His country had also acted as host to the FAO/IAEA Inter-Regional Training Course on the Use of Radioisotopes in Soil and Plant Investigations, from 3 October to 23 November 1966. The course, which had been attended by 19 trainees fom nine Asian countries, had permitted profitable exchanges of information and experience between agricultural scientists of the region.
- 128. From 2 to 13 October 1967, the Philippine Government would be host to another Agency

regional training course, devoted to planning for the handling of radiation accidents, to be held within the Greater Manila area, mostly in the Philippine Atomic Research Centre. The course would be the first of its kind to be held under the auspices of the Agency.

- 129. The Philippines felt that, under Agency guidance, it was successfully developing a practical and effective pattern of regional co-operation and self-help, which might be well worth the attention of countries in a similar situation.
- 130. The India-Philippines-Agency training and research programme using a neutron crystal spectrometer [12], now in its third year of operation, had received additional Agency support in the form of a research contract. A fourth Indian scientist had arrived to serve as expert in nuclear physics and the fifth foreign participant had completed training. In line with the symbiotic nature of that five-year research and training programme, a second Philippine scientist had gone to the Bhabha Atomic Research Centre in Bombay to do advanced scientific work on neutron spectrometry. The Philippine Government sincerely appreciated India's interest in its atomic energy programme.
- 131. His delegation greatly appreciated the increasing importance attached to research contract projects by the Agency. The soundness of the philosophy of forging a formal, albeit temporary, partnership with established research institutions on a lumpsum, cost-sharing basis was perhaps exceeded only by its practicability and usefulness. He therefore welcomed with great pleasure and in a spirit of humility the four new research contracts drawn up between the Philippine Government and the Agency, in addition to the five old contracts which had been renewed, representing a total contribution by the Agency of \$37 850. The fact that four of those projects were part of the co-ordinated agricultural programmes reflected the earnest desire of the Agency to assist in resolving major problems afflicting developing countries as a whole and to encourage co-ordinated research efforts in particular — a practice which his Government wholeheartedly endorsed.
- 132. Previous Philippine delegations had repeatedly stressed the pressing need for continued if not increasing technical assistance for developing

- countries, where scientific projects often competed hopelessly for the meagre funds available with other projects more urgently required to meet basic national needs. At the same time, they had always been aware that the Agency was continuously handicapped by the inadequacy of its resources. It was with profound gratitute, therefore, that he acknowledged the various forms of assistance that his country had received from or through the Agency during the past year.
- 133. The first refuelling operations on the Philippine research reactor would take place late in 1967. The replacement fuel elements, in two batches of ten, had been made from enriched uranium supplied through the Agency under the United States Government's yearly gift offer, and he was most grateful for the assistance from the United States.
- 134. The Philippines would continue its voluntary contribution to the Agency's General Fund for 1968, to the full amount for which it was assessed under the Regular Budget.
- 135. Representing a typical developing country with barely enough time or resources to solve its acute and urgent problems, his delegation regretted the time spent on criticism and recriminations regarding political activities, which were of no concern to the Agency or the Conference. The Great Powers should set an example and sincerely endeavour to reach faster agreement and take action on long-pending proposals for the control and eventual elimination of nuclear armaments.

CLOSING DATE OF THE SESSION

- 136. The PRESIDENT recalled that under Rule 8 of the Rules of Procedure the General Conference had to fix a closing date for the session, on the recommendation of the General Committee.
- 137. The General Committee had considered the question the day before and had authorized him to recommend on its behalf that Monday, 2 October, be fixed as the closing date, subject to all business having been disposed of by then.
- 138. The General Committee's recommendation was accepted.

The meeting rose at 5.45 p.m.