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ONE HUNDRED AND THIRTY-SEVENTH PLENARY MEETING

Held at the Neue Hofburg, Vienna,
on Wednesday, 23 September 1970, at 3.15 p.m.

President: Mr. SARABHAI (India)

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**) GC(XIV)/442.

The composition of delegations attending the session is given in document GC(XIV)/INF/125/Rev.2.

GENERAL DEBATE AND REPORT OF THE BOARD OF GOVERNORS FOR 1969-70 (GC(XIV)/430, 440) (continued)

1. Mr. ALER (Sweden) said that before commenting on some of the constructive work carried out by the Agency during the last year, he would review very briefly recent developments in the nuclear field in Sweden.

2. Work was progressing on the five big commercial power reactors, whose total output would be more than 3000 MW, which were to be put into operation successively up to 1975. The first unit at Oskarshamn had been completed and was being tested. The joint planning organization for the Swedish power industry had published a new forecast for the next ten years. Recent trends showed that electricity demand was increasing faster than ever before and that trend was expected to last during the seventies. The forecast of the need for an installed nuclear capacity of 7000—8000 MW by 1980 was confirmed.

3. All the reactors ordered and planned for that large programme were of the light-water type. That fact and international market developments had led to a decision earlier that year to abandon the heavy-water reactor system, notably the Marvikon project, and to concentrate work on the further development of light-water technology. Work was also being started on fast-reactor technology in collaboration with other countries. In contrast to its policy for the thermal reactors, Sweden did not plan an independent development for the fast reactor type.

4. For the first time, the Swedish Parliament had that year decided on a five-year programme for reactor and fuel development by the Atomic Energy Company, the estimated cost of which was US $60 million. An increasing share of the development costs was expected to be borne by industry as commercial activities increased.

5. Since the last General Conference, the Treaty on the Non-Proliferation of Nuclear Weapons (NPT)[1] had come into force, and although that Treaty was only one stop on the road towards disarmament, his Government recognized its immense potential importance; the Treaty was the only means available for reducing the latent threat to world security created by the vast amount of fissile material that would be produced in many countries through expanding nuclear energy programmes.

6. Although many countries had now signed and ratified NPT, it was regrettable that very few of the so-called «threshold» countries, namely non-nuclear-weapon countries which technically and economically were capable of producing nuclear weapons, had so far ratified it. Sweden had done so in January that year and formal negotiations on a safeguards agreement had been initiated.

7. His Government had long ago declared its willingness to put all its source and special nuclear material under Agency safeguards and was trying to participate in the work of the Safeguards Committee (1970) as constructively as possible. Its aim was that safeguards agreements would be concluded which would make NPT into an effective peace instrument. It considered, however, that the agreements and the procedures should be worked out in such a way that the greatest possible number of States would find it in their interest to adhere to the Treaty. The report of the Safeguards Committee on its first session[2] provided a very useful basis for further work.

8. Turning to the question of how to deal with nuclear explosions for peaceful purposes, in connection with which Article V of NPT stipulated that negotiations should commence as soon as possible after the Treaty entered into force, he said that two aspects would have to be taken into account. The first was the technical aspect, which the Agency had already started to deal with in March that year. It was evident that IAEA would have a very important role to play in connection with the execution of nuclear explosion projects; it must therefore be equipped to observe and control the execution of a project to make sure that it was conducted in accordance with existing international rules.

9. The second aspect related to the form and content of the international agreement between the Parties to NPT through which they would fulfil the obligation they had accepted under the provisions of Article V. What was involved was mainly a political matter, and the most appropriate forum for its consideration was therefore the Geneva Disarmament Conference, which had negotiated NPT, the final decision resting with the General Assembly of the United Nations.

10. One problem facing the present Conference was the revision of Article VI of the Statute. The difference between the five different proposals before it[3] was not very great, and his delegation was convinced that a compromise solution could be found, given some more time. It had stressed in the Board of Governors and in its Committee that it was essential to preserve the spirit of consensus and co-operation, which had been characteristic of the Agency throughout its life. His delegation considered that spirit necessary for the Agency's future work. It recognized the wish of some countries to have a

1) Reproduced in INFCIRC/140.

2) GOV/1420.

3) See document GC(XIV)/437.

regular representation on the Board. That could be realized in different ways, either by increasing the number of designated seats or by making re-election for a seat on the Board possible. His delegation had indicated a preference for the second alternative, but it attached such importance to the preservation of a harmonious working climate in the Agency that it would put that consideration first. He hoped that a way of solving the problem which would gain wide support would be found during the next few days.

11. The Director General had asked for comments on the proposals made by the Panel on International Co-operation in Controlled Fusion Research and its Applications, which had met in June 1970. The report of that meeting had been studied with interest in Sweden. There might well be differing views on the efforts still required to make fusion power a practical reality, but his Government would support the idea that a permanent International Fusion Research Council under the auspices of the Agency be created to review progress and to discuss co-ordination of national programmes.

12. During the general debate the previous year, the possible effects of nuclear plant operations on the environment, or on public health, were mentioned by many speakers. That was an extremely important question, and he thought all agreed that the Agency should participate as actively as possible in the international co-operation which was now developing. The Symposium held in New York the previous month had been a valuable contribution to knowledge in that field. In that context, he stressed the importance of supporting the International Commission on Radiological Protection, so that a sound scientific basis should be established for national and international regulations.

13. One of the important tasks of the Agency was to provide technical assistance, and his delegation therefore welcomed the decision of the Board to raise the target for voluntary contributions. Sweden had increased its own contribution accordingly.

14. He had been gratified to hear the Director General's appreciative comments on the co-operation between the Agency and the Swedish International Development Authority in the provision of assistance to developing countries[4]. His Government attached great importance to that programme, which it felt had developed satisfactorily during the last year and of which it had high hopes for the future.

15. Finally, the Director General had drawn attention to the gradual imbalance of the Agency's budget, and hence of its activities, caused by inflation. His delegation pledged its support for the efforts the Director General was making to restore the balance and to retain the efficiency of the Agency.

16. Mr. WECKMANN-MUÑOZ (Mexico) said that the Director General's statement the previous day had clearly illustrated the problems facing the Agency. His delegation had noted with interest the desires expressed to reach agreement on the amendment of Article VI of the Statute to modify the composition of the Board of Governors.

17. The Agency's safeguards activities had increased. He hoped those activities would not detract from technical assistance, which was laid down as a specific task of the Agency in Articles I and II of the Statute, and that safeguards would not be a charge on the Regular Budget.

18. The holding of the Agency's General Conference in other geographical areas was of great importance for enabling the Agency to come into more direct contact with other peoples. It would also contribute to strengthening the universal character of an organization in which Mexico placed some of its highest hopes. The General Conference had met in Asia in 1965, thanks to the generous hospitality of the Japanese Government. It would now be desirable for it to meet in the American Continent, and particularly in the first de-nuclearized area of the world.

19. He was happy to inform the Conference that the Mexican Government was studying the possibility of inviting the General Conference to hold its 1972 session in the Mexican capital.

20. In taking that initiative, the Mexican Government wished also to pay tribute to the work of the Agency, which, under the guidance of the Director General, consistently strove to achieve the objectives laid down for it in its Statute.

21. The meeting of the General Conference in Mexico City would have the advantage of enabling delegations to assess on the spot the work being carried out in his country's capital, in which the Agency for the Prohibition of Nuclear Weapons in Latin America (OPANAL), whose relations with the Agency were very cordial, had its permanent headquarters.

22. If the new Administration's study of the matter next December led to positive conclusions, which he considered were desirable, the Mexican Government would transmit the appropriate official invitation to the Director General before the session of the Board of Governors planned for June 1971.

23. Mr. HAUNSCHILD (Federal Republic of Germany) said that the past year had been marked by an event which would have far-reaching con-

4) GC(XIV)/OR.135, para. 35.

sequences for the Agency: the entry into force of NPT, which the Federal Republic of Germany had signed on 28 November 1969, and which assigned to the Agency a new and important field of activity.

24. Although that activity — safeguarding the peaceful use of nuclear materials — had been provided for in the Agency's Statute, it had so far been limited mainly to transfers of material and equipment by a few supplier countries to other Member States. But individual safeguards were now to be supplanted by the application of general safeguards to all peaceful nuclear activities in a large number of States. The change implied not only a substantial extension of the Agency's staff but, more particularly, the necessity of developing safeguards procedures which would meet the requirements of the new situation.

25. His Government welcomed the Agency's timely recognition of the new requirements, which it had demonstrated by conducting a comprehensive systems analysis and convening numerous panels of experts whose work had brought about considerable progress in safeguards techniques; and also by setting up a Safeguards Committee which had done the essential groundwork for the safeguards agreements to be concluded under NPT. It was to be hoped that the Safeguards Committee (1970) would continue its deliberations on safeguards techniques and their financing in the same constructive spirit, and that its work would encourage those who had not yet signed or ratified the Treaty to do so. His Government wished to ratify NPT soon, and trusted that the outcome of the negotiations between the Director General of the Agency and representatives of the European Communities would enable it to do so.

26. The conclusion of safeguards agreements with the Agency must not of course end efforts to improve safeguards further in point of efficiency and simplicity. Hence, the Federal Republic approved the three priorities for the further development of safeguards which were set out in the Agency's programme for 1971 to 1976[5]: systems analysis, work on methods and techniques and field operations. The Agency's resolve to fulfil, in close co-operation with Member States, its growing responsibilities with the lowest possible increase in staff and budget also commanded his Government's support. The Symposium on Progress in Safeguards Techniques, held in Karlsruhe in July 1970, had demonstrated that efforts to make safeguards measures objective and automated were already bringing major advances — an encouraging prospect.

27. But the duties assigned to the Agency under NPT, important as they were, could not justify neglect of other tasks. The Federal Republic had long felt that technical assistance must continue to receive high priority, the more so as several Member States were reaching a stage where the scientific and economic benefits of nuclear research and engineering were beginning to have a palpable effect on the national economy. Thus the German delegation welcomed the proposed increase in the Agency's technical assistance programme, even while realizing that a considerable proportion of the additional funds would unfortunately be absorbed by rising prices. Given limited funds and the expected increase in requests for technical assistance, it appeared certain that in the long run the Agency's programme would have to be streamlined if it was to succeed. That could be achieved by concentrating on carefully selected scientific and technical topics, and by promoting regional programmes among groups of countries.

28. The main aim of the so-called Jackson report on the United Nations Development System[6] was to ascertain whether available resources were being effectively employed and whether a programme approximately twice the size of the current one could be carried out during the next five years. That study, which was to be evaluated in relation to the Pearson Report[7] entitled Partners in Development, came to the conclusion that the United Nations Development System had already reached the limits of its effectiveness and that it must be reorganized if the programme was to be expanded.

29. The Agency, too, would be faced with a number of problems if proposals for reform were accepted. In his annual report on the provision of technical assistance the Director General had announced that he would inform the Board of Governors of the decisions taken within the framework of the United Nations. The Federal Republic wished to suggest that the Director General report at the same time on the consequences which those decisions would have for the Agency, and whether measures would have to be taken to adapt the Agency's technical assistance programme to the changed situation. After review by the Board of Governors, the report should be submitted for discussion to the General Conference.

30. With regard to the exchange of information, his Government had declared its readiness to co-operate in the International Nuclear Information System (INIS) and was pleased by the close co-operation existing between the Agency and the European Atomic Energy Community in that field.

5) See document GC(XIV)/433.

6) *A Study of the Capacity of the United Nations Development System,* United Nations publication, Sales No. E. 70.I.10 (DP/5), Geneva, 1970.

7) Report of the Commission on International Development, *Partners in Development,* Pall Mall Press, London, 1969.

31. In June 1970, the Agency's Panel on International Co-operation in Controlled Fusion Research and its Applications had recommended that the Agency should increase its activities in fusion research. It certainly seemed wise that the Agency should devote more attention to a subject on which so many hopes for the future depended, and thus promote world-wide co-operation. In the equally important field of fast reactors the establishment of the Agency's International Working Group had proved worth while. The proposed International Fusion Research Council could be modelled on that example. EURATOM had for many years effectively co-ordinated nuclear fusion research in its member countries through a network of association contracts. For that reason co-operation with the European Commission would doubtless bring benefits for the Agency.

32. The Agency's budget for 1971 foresaw an increase in assessments of approximately 10% and the creation of 43 new posts. Although the increase was hardly negligible, his delegation would approve the budget in view of the Agency's growing responsibilities. In that connection the manpower utilization survey currently being conducted in the Secretariat was to be welcomed.

33. Turning to recent developments in nuclear science and technology in the Federal Republic, he pointed out that details were to be found in an information document distributed at the Conference[8]. In the Federal Republic approximately 25 000 persons were employed in nuclear research and engineering. Public expenditure in 1970 amounted to more than 1000 million marks. Installed power plant capacity was 900 MW(e), and a further 5000 MW(e) were under construction or on order, including 760 MW(e) for export. In July it had been decided to build a prototype nuclear power station with a 300 MW(e) thorium high-temperature reactor, in Westphalia.

34. An important trend was that the Federal Republic's nuclear energy programmes were being integrated more and more with those of its European neighbours. In particular, further progress had been made in the co-operation between Belgium, Luxembourg, the Netherlands and the Federal Republic of Germany aimed at the joint construction of a sodium-cooled breeder reactor prototype: Belgian, Dutch and German utilities had founded, late in 1969, a joint company, and at the beginning of 1970 the international industrial consortium had submitted an offer for construction of the 300 MW(e) plant.

35. In March 1970 an agreement on co-operation in the development and use of the gas-centrifuge technique for the production of enriched uranium for peaceful purposes had been signed by the Federal Republic, the Netherlands and the United Kingdom. That agreement constituted a major step towards meeting the future fuel requirements of nuclear power stations in Europe. The three countries were favourably considering the possibility of co-operating with other countries, talks had already begun with Belgium and Italy. Earlier that year, too, France, the United Kingdom and the Federal Republic had started discussing future co-operation in irradiated-fuel reprocessing, which could also be extended to include other countries.

36. The Federal Republic intended to continue its active support of the Agency's scientific and technical programmes. A great many German experts (about 300) had taken part in Agency symposia during the year, and German scientists had been sent to almost all the 80 panel and working group meetings. In July 1970, two symposia under Agency auspices had been held in the Federal Republic, on progress in safeguards techniques (Karlsruhe) and mammalian radiation genetics (Munich), respectively. Fifteen German research institutes were taking part in co-ordinated Agency research programmes which were listed in the annual report of the Board. In addition, German industrial enterprises were participating, along with Belgium, Sweden and the Soviet Union, in the co-ordinated research programme on medium-sized nuclear power stations — plants of particular interest to developing countries. In May 1970, a spectrophotometer had been presented to the Agency's Monaco Laboratory. Finally, Germany had given $127 000 in 1969 as a voluntary contribution to the General Fund. In 1969, the Agency had engaged the services of 16 German experts and had made use of 43 fellowship openings, 35 of which had been financed from German sources.

37. The Federal Republic had always held the view that the Agency should have sufficient funds at its disposal, in particular for its tasks in technical assistance; accordingly it approved the increase in the target for the General Fund to $2.5 million in 1971, and intended to make a voluntary contribution to the Fund corresponding to its percentage share of the Agency's Regular Budget. His Government would also offer an initially unlimited number of fellowships in 1971 covering all sectors of nuclear research and development. The Federal Republic was ready to continue nominating an increasing number of experts who would be available for technical assistance, on behalf of the Agency, to interested Member States. It intended to pursue its interest in Agency meetings, acting as host in April 1971 to the Fifth International Conference on Magnetohydrodynamic Electrical Power Generation to be held in Munich, in May 1971 to the IAEA-IMCO Symposium on Nuclear Ships (in Hamburg) and in July 1971 to the Symposium on Quick Methods for Monitoring Environmental Radioactivity

8) GC(XIV)/INF/124.

(again in Munich). Germany was eager to participate in the joint Agency/FAO/ENEA programme for food irradiation and was pleased that the project centre was to be established in Karlsruhe.

38. With regard to the joint Agency/FAO/Federal Republic programme in co-ordinated research to improve the protein content of crops through nuclear techniques, his Government intended to contribute more than $800 000 as well as the assistance of several German laboratories. Institutions in a large number of developing countries, particularly in Asia, were to participate in the five-year programme.

39. In other areas, too, the Federal Republic had begun to draw up integrated programmes with the Agency's Secretariat — for example a programme for the application of isotopes in hydrology in Nigeria. Plans had also been made to donate, through the Agency, a training reactor to the University of Mexico.

40. In conclusion, he wished to make a few comments on the review of the composition of the Board of Governors. There could be no doubt that a review was needed if the Agency was to continue its successful work in the future. The General Conference had debated the matter in 1968 and 1969. The Ad Hoc Committee of the Whole, in which about fifty Member States had been represented, had discussed every aspect of the problem in the course of numerous meetings. His Government regretted that the Board of Governors — despite two requests by the General Conference — had not been able to reach a consensus on a proposal.

41. The question was now ripe for decision by the General Conference — at its present session. Five proposals for amendment of the Statute had been submitted to the Conference. By far the largest number of Member States supported the proposal now sponsored by 21 countries. His delegation, too, was convinced that that proposal would best satisfy the criteria set out by the General Conference, namely technical progress, geographical distribution and preservation of the Board's ability to function efficiently. The proposal had been adapted several times as deliberations had progressed. It should therefore constitute a generally acceptable compromise solution.

42. Finally, he took pleasure in assuring the Conference that his Government would continue to support the Agency's activities fully in order to promote the peaceful applications of nuclear energy throughout the world.

43. Mr. MOROKHOV (Union of Soviet Socialist Republics) made the following statement*):

*) This statement is reproduced verbatim at the speaker's request under Rule 92(b) of the Conference's Rules of Procedure.

Translated from Russian

(1) "Mr. President, distinguished delegates: allow me, Mr. President, first of all to congratulate you on your election to this high office. The Soviet delegation is confident that your work as President will contribute to the success of the fourteenth session of the General Conference of the International Atomic Energy Agency.

(2) "The Soviet delegation has listened carefully to the statements made by the Director General and by other delegations. We note with satisfaction that both the Director General and numerous delegations have stressed the significance for the Agency's work of an important international event which occurred this year, namely the entry into force on 5 March of the Treaty on the Non-Proliferation of Nuclear Weapons. Indeed, in its very essence, in all its substance, the Treaty oriented towards the fulfilment of those aims which the International Atomic Energy Agency is called upon to serve, namely the strengthening of peace and international co-operation, and the promotion of the use of nuclear energy in the interests of progress and creativity. We would like to stress that by reducing the risk of nuclear war the Treaty also opens up new prospects for the peaceful uses of atomic energy. It is sufficient, in this connection, to recall the provisions of the Treaty, which include an obligation of the Parties to it to co-operate and participate in the exchange of equipment, materials and scientific and technological information on the peaceful uses of nuclear energy, and the duty to contribute, alone or together with other States or international organizations, to the further development of the applications of nuclear energy for peaceful purposes, especially in the territories of non-nuclear-weapon States Party to the Treaty, with due consideration for the needs of the developing areas of the world.

(3) "We have no doubt that the entry into force of the Treaty will have a beneficial effect on the entire field of activity of the International Atomic Energy Agency, an organization which was established especially for promoting the application of atomic energy for peace and progress.

(4) "In this connection, we endorse, as a whole, the Agency's draft programme of work for the next five years, which was approved by the Board of Governors and has now been submitted for consideration to the General Conference. In the opinion of our delegation, the programme gives quite enough weight to all the principal scientific and technical fields which are most important at present or thought likely to be of great interest in the future. Under this programme, the Agency's Member States, and in particular the developing countries, will receive substantial assistance in the peaceful uses of atomic energy.

(5) "Of the comparatively new scientific and technical activities to which the Agency has devoted a keen interest in recent years, I should like to mention especially the peaceful uses of nuclear explosions, the operation of the International Nuclear Information System (INIS) and work on thermonuclear fusion.

(6) "In the Agency's work on the peaceful uses of nuclear explosions an active part has been taken by leading experts from the Soviet Union, who have shared with others the fruit of experience gained in various projects of economic significance involving the use of nuclear explosions. And we intend to continue our active participation in the Agency's work on the peaceful uses of nuclear explosions. Soviet scientists are preparing for the panel meeting, to be held in January 1971, which will discuss practical aspects of the use of contained underground nuclear explosions for industrial purposes; and also for another Agency panel meeting which is to make a preliminary study of the problem of international supervision of peaceful nuclear explosions, in connection with the Treaty on the Non-Proliferation of Nuclear Weapons.

(7) "We all know that in April of this year, after a considerable amount of preparatory work had been successfully completed, the Agency put into operation an international system for the exchange of scientific and technical information — the International Nuclear Information System or INIS — which represents the first achievement of its kind. The Soviet Union, which has always attached great importance to a wide international exchange of scientific and technical information as a means of accelerating scientific, technical and economic progress and furthering mutual understanding and co-operation in the world, was one of the initiators of the International Nuclear Information System and took an active part in the preparatory work. Leading Soviet experts on nuclear information took part in the work of all those Agency bodies which were entrusted with the task of working out the organizational and technical principles of the system. The Soviet Union was pleased to make available a number of its own experts for the regular work of INIS in the Agency's Secretariat.

(8) "Every month, since March of this year, the Soviet Union has been feeding into INIS all national material on subjects embraced by the system. During this period, it has processed about 800 input pieces for INIS. Our country will continue, in future, to contribute to the successful operation of the International Nuclear Information System through its active participation, knowledge and experience.

(9) "I think we all know quite well that during the current year the Agency embarked upon a more thorough study of the role which it could play in co-ordinating research on the development of thermonuclear reactors. Our delegation is very much in favour of stimulating international co-operation in this sphere and welcomes in particular the proposal that an international council for thermonuclear research should be established under the auspices of the Agency.

(10) "While on the subject of the Agency's scientific programme — which on the whole is excellent — one cannot but draw attention to the fact that the growth of the budget, as in the past, is outstripping the expansion of the programme by a considerable margin. The Soviet delegation pointed that out at the last session of the General Conference, too. Unfortunately, we find ourselves obliged to return to the matter again. The Soviet delegation cannot support a 10.1% increase in the Agency's budget for 1971. We would consider an increase of not more than 8 - 9% to be justified. Let me express the hope that in the year to come appropriate action will be taken to ensure economic use of the Agency's limited resources.

(11) "Distinguished delegates, the extent of the contribution which Soviet scientists are making, through the Agency, to progress in the peaceful uses of atomic energy throughout the world, is directly related to the scientific and technical progress achieved in our own country in the recent past.

(12) "During the year that has elapsed since the last session of the General Conference, the Soviet Union has successfully continued research on a broad complex of scientific and technical problems connected with the peaceful utilization of atomic energy.

(13) "In the current year, a number of important theoretical and experimental investigations, including fundamental research on nuclear physics and high-temperature plasma, has been completed. Among these were studies carried out on the giant 70-GeV proton accelerator which led to the discovery of antihelium. Important results have been obtained by Soviet scientists at the V.I. Kurchatov Institute of Atomic Energy on devices of the TOKAMAK series. For the first time it proved possible to achieve stable plasma containment for a plasma energy lifetime of 0.02 sec with particle concentrations of 5×10^{13} cm^{-3}, an ion temperature of 5 million degrees and electron temperature of 10 million degrees. Neutron radiation of thermonuclear origin was recorded. These results have received wide international recognition.

(14) "In nuclear physics, Soviet scientists completed a cycle of experiments performed over many years in which radiation spectra arising from thermal-neutron capture by the nuclei of various elements

were studied. This work is of great importance for a thorough study of the physical processes which take place during irradiation of materials in reactor cores.

(15) "In regard to the development of nuclear power, we must mention the attainment of full design capacity by the first and second lines of the Beloyarsk nuclear power station, which use channel-type uranium-graphite reactors with nuclear steam superheat; start-up of the second unit of the Novo-Voronezh nuclear power station with a water-water reactor producing 375 MW(e); and start-up of the BOR-60 research fast reactor using sodium coolant and generating 60 MW(e).

(16) "The Soviet Union makes wide use of radioisotope devices in various sectors of its economy, and this has led to the development of a number of new and highly efficient instruments.

(17) "The large volume of construction going on in our country, and the availability of rich ore deposits in vast thinly populated territories offer a great deal of scope for the successful application of nuclear explosions for industrial purposes. Hence the Soviet Union has been carrying out for a number of years an extensive research programme on the applications of nuclear explosions in different branches of the economy.

(18) "I should like to mention the most interesting experimental-industrial explosions carried out to date in the Soviet Union. Some years ago, for the first time in the history of the oil industry, three contained underground nuclear explosions were carried out in one of the Soviet oil fields. As a result of these explosions, overall recovery from the oil deposit was 27-60% better than would otherwise have been anticipated on the basis of statistical calculations. Here it should be borne in mind that the explosions took place in a depleted field and that the increase in oil production from the wells was attained over the whole deposit, and not merely in the part where artificial fracturing was carried out. Successful exploitation of this field is therefore continuing, and there is reason to expect that the ultimate yield will be considerably increased. Special radiochemical analyses indicate that oil can even be extracted direct from the rock fracture zones without any contamination by radioactive products.

(19) "One of the interesting and promising industrial uses of contained underground explosions is the control of gas and oil blow-outs. Soviet scientists have examined this possibility theoretically and tested it in practice. A nuclear explosion with a yield of 30 kilotons at a depth of about 2500 m succeeded in stopping a gas blow-out which was consuming as much as 1-1.5 million m^3 per day after earlier attempts to control the blow-out by traditional methods had failed.

(20) "The creation of artificial water reservoirs for arid regions is an extremely promising sector for the application of nuclear explosions. To establish whether this was possible in practice, a nuclear explosion with a yield of more than 100 kilotons was detonated in the USSR. The explosion shifted large masses of soil and created two reservoirs, one in the crater of the explosion itself and the other outside the crater. The total volume of the two reservoirs is 16-18 million m .

(21) "The combination of scientific research and industrial tests carried out so far in the Soviet Union permits optimistic forecasts for the use of atomic explosions in the most varied branches of the national economy. It should be borne in mind, however, that the practical application of nuclear explosives still requires the solution of a number of serious and complex problems.

(22) "The Soviet delegation takes satisfaction in announcing to the Conference that it is giving the Agency scientific and technical documentation on some of the Soviet projects involving the use of nuclear explosions for peaceful purposes.

(23) "There is no need here, and indeed it would be impossible, to list all our recent scientific and technical achievements. I should only say that — as might have been expected — they have been of particular significance this year, when all progressive mankind is commemorating the centenary of the birth of Vladimir Ilich Lenin, founder and first leader of the Soviet State, a scientist and revolutionary of genius. Our delegation notes with profound satisfaction that the Agency, like other international organizations, has arranged independently or participated in a number of events dedicated to this great anniversary.

(24) "Distinguished delegates, the Soviet Union has traditionally taken a very active part in the implementation of the Agency's technical assistance programme. We attribute great significance to this side of the Agency's work, realizing how important it is to many Member States. I need hardly stress the fact that the importance of technical assistance in atomic energy has greatly increased with the entry into force of NPT.

(25) "During the past year the Department of Technical Assistance organized and, in association with the USSR State Committee on the Utilization of Atomic Energy and other Soviet organizations, successfully carried out two study tours for experts from developing countries. One of these tours was devoted to in vivo measurement techniques employing radioisotopes, the other to the applications of radioisotopes and radiation in agriculture.

(26) "Well-known Soviet scientists have worked as Agency experts in a number of developing countries. This form of technical assistance will continue to receive our support. So far, practical use has been made of all fellowships made available by the Soviet Government for the training of Agency fellows. We note with satisfaction that this form of technical assistance has proved extremely effective and believe that it should be continued.

(27) "Desirous of promoting the further development of international co-operation in the peaceful uses of atomic energy — to which NPT will make its own contribution — the Soviet Union wishes to make the following statement:

— The voluntary contribution of the USSR to the Agency's technical assistance fund for 1971 is being raised from 150 000 roubles to 250 000 roubles, in national currency, for the acquisition of equipment, instruments and materials and for the implementation in the USSR of conferences, study tours, seminars and courses for developing countries.

— In 1971 the USSR will make available to the Agency 25 fellowships for periods of up to a year to enable scientists and experts from developing countries to spend periods at scientific research centres in the USSR for training in various fields of science and technology. The aggregate value of these 25 fellowships will be approximately 140 000 roubles.

(28) "Thus in 1971 the Soviet Union will make a total contribution to the Agency's technical assistance fund of 390 000 roubles. The USSR also affirms its readiness to make available every year 10 fellowships for the training of experts from developing countries for work on installations built with Soviet aid or for carrying out joint scientific and technical work within the framework of bilateral agreements between the Soviet Union and the developing countries concerned.

(29) "The Soviet Union's contribution to the development of the peaceful applications of atomic energy is not limited to its participation in the Agency's activities. It is well known that the USSR also contributes extensively to this process through bilateral agreements. At the present time it has such agreements with socialist countries, with many developing countries and also with advanced capitalist countries. Under these bilateral agreements scientists and delegations are being exchanged; joint scientific and technical projects and studies are being undertaken, scientific equipment is being supplied and training is being carried out. The Soviet Union's co-operation with other countries in the field of nuclear power has been marked during this period by the conclusion of new contracts for the construction of atomic power stations, and also by the implementation of similar earlier agreements.

(30) "The safeguards required by NPT must now occupy an important place in the Agency's activities. During the past year considerable attention has been devoted to this matter within the IAEA. This is quite natural, for the Treaty has confronted the Agency with clear and urgent tasks in the form of the control functions specified in Article III. As we all know, the Agency must now negotiate and conclude safeguards agreements with non-nuclear-weapon States Parties to the Treaty.

(31) Some 60 States have so far become Parties to NPT by ratifying it. The Agency's main task now is to conclude safeguards agreements within the time limit set by the Treaty and to commence their practical application. As soon as possible it must complete its formulation of recommendations concerning the content of the safeguards agreement on the basis of which it will conduct its negotiations with non-nuclear-weapon States.

(32) "One must recall that when the Agency began preparations for carrying out its safeguards functions under NPT, it had a ready-made and practically-tested safeguards system at its disposal. This surely explains why Parties to NPT chose the Agency as the organization to apply safeguards under the Treaty.

(33) "A good basis for the work of the Safeguards Committee, which was entrusted by the Board of Governors with the task of preparing recommendations for the safeguards agreements, was provided by the Director General's report on the content of these agreements. In general we believe there is reason to be well satisfied with the work carried out in the summer of this year by the Safeguards Committee, which prepared recommendations on the content of Part I of the agreements in the light of the Statute, the safeguards and inspectors' documents and the requirements of NPT. The recommendations in question reflect the general, collective opinion of the members of the Safeguards Committee.

(34) "One positive result of this work was the authorization granted to the Director General by the Board of Governors to start negotiations for the conclusion of safeguards agreements on the basis of the recommendations of the Safeguards Committee concerning the content of Part I of the agreements. The Secretariat has accordingly taken the necessary steps, circulating the relevant information to all States which have ratified NPT, and also to States which have signed but not yet ratified the Treaty.

(35) "The scientific and technical aspects of safeguards problems have been examined by the Agency at a number of symposia and meetings of experts, attended by scientists from many countries. Believing such meetings to be useful in preparing the Agency for its duties under NPT, the Soviet Union has sent experts to attend them. These scientific and technical meetings on safeguards questions have examined the specific technical provisions of the safeguards system which are relevant to the requirements of NPT. This, in our view, should help the Agency to complete its recommendations on the content of safeguards agreements.

(36) "A number of States have already informed the Agency that they are prepared, in fulfilment of their obligations under NPT, to start negotiations on the conclusion of safeguards agreements. Some have approached the Secretariat with definite proposals for the commencement of such negotiations during the present session of the General Conference. This imposes an even greater responsibility on our organization, and makes it essential that the recommendations concerning Part II of the agreements should be completed as soon as possible. The views of the Director General on this question, as we all know, have already been published in an Agency document.

(37) "Rapid completion of the Safeguards Committee's work, as called for by the Board, is hence one of the Agency's important tasks. By accomplishing this task the Agency will do its part towards enabling the Treaty on the Non-Proliferation of Nuclear Weapons to be given practical effect within the period laid down in the Treaty itself. It is important — this is another point the Soviet delegation would like to stress — that the largest possible number of States should accede to the Treaty; and in particular, of course, we should like to see those States with the most highly developed nuclear industry join.

(38) "An important problem before the General Conference at its present session is the revision of Article VI of the Statute, which determines the composition of the Board of Governors. I hardly need say how important this question is, for it is directly linked with the work of a body whose powers, defined in the Statute, give it virtual control over the work of the Agency. On the correctness of our approach to the question of the Board's composition will depend to a large extent the Board's successful performance of its duties and the successful work of the Agency as a whole.

(39) "The principles on which the Soviet Union has approached this problem are reflected in a joint memorandum by the group of socialist countries, submitted in February of this year to the Ad Hoc Committee of the Whole to Review Article VI of the Statute and confirmed in a letter addressed to the Director General in June. Since this memorandum was presented after the last session of the General Conference, and since these principles govern the position of the Soviet Union in regard to this question, we would like to recall these principles here, before the General Conference, where all Members of the Agency are represented.

(40) "Firstly, the initial assumption in our approach to the review of Article VI is that no enlargement of the Board should be such as to upset that political balance between different groups of States which was taken as the basis of the Board's constitution at the time of the Agency's founding, and which still represents a most important element in its efficient functioning. This means that we must take into account the legitimate interests of all groups of countries participating in the work of the Agency.

(41) "We further believe that when any change is made in the composition of the Board of Governors, particular attention must be paid to those historical processes which have occurred since the Agency's Statute was written, and which have led to the liberation of peoples from the colonial yoke and the formation of new independent States desirous of using nuclear energy for peaceful purposes. We believe to be well founded the wish of the developing countries of Africa, Asia and Latin America to increase their representation on the Board of Governors and to play a more active part in the work of the Agency.

(42) "Lastly, the Soviet delegation would like to emphasize in the clearest possible terms that any amendment of Article VI must be such as to enable the Agency to perform its functions efficiently and to discharge those new responsibilities which it will assume under the Treaty on the Non-Proliferation of Nuclear Weapons. We would like to recall that this requirement was specifically mentioned in the resolution adopted at the twelfth session of the General Conference on the composition of the Board of Governors, which defined the main criteria for broadening the composition of the Board.

(43) "The proposal of the socialist countries, which in common with others has been brought forward for examination by the General Conference, represents in our view a good basis for a revision of Article VI. The authors of this draft amendment have neither sought nor obtained any particular advantages for themselves. The solution proposed by the socialist countries allows the different regions fair representation on the Board without granting a privileged position to any one of them.

(44) "The proposal put forward by Italy and some other countries does not conform to the above

principles which, in the view of the Soviet delegation, must guide any decision affecting the composition of the Board. This proposal cannot therefore provide a basis for a solution of the question.

(45) "At the same time, in bringing before the General Conference the proposal of the socialist countries, the Soviet delegation would like to indicate its readiness to continue the search for constructive solutions on any reasonable basis. We have studied with care the various proposals submitted for discussion and must say that, in the interests of obtaining a mutually acceptable solution, the Soviet delegation would be ready to support the draft proposal put forward by the delegate of Pakistan. We are also able to support some provisions of the proposal put forward by the Arab countries, which we feel ought to be given serious attention.

(46) "In making clear our position, let me stress that we are coming some way towards meeting the desires of other groups of countries. We hope that this spirit of compromise will be properly appreciated and that it will elicit an appropriate response from those other groups of countries — a response which might then lead to solutions that are not of a unilateral character but rather take into account the interests of all States Members of the Agency. The question of broadening the composition of the Board of Governors, which as we have already said touches upon one of the most important factors in the normal functioning of the Agency, requires, if it is to be solved, that all relevant circumstances be taken into account and comprehensively analysed; it requires, in fact, well-thought-out and carefully weighed decisions.

(47) "Attempts to impose one solution or the other which would not reflect the opinions of different groups of countries represent a serious risk for the Agency. They could weaken the very foundation on which the Agency rests and disrupt that spirit of co-operation without which our organization could never work normally. To disrupt that co-operation would be to threaten the work and even the very existence of the Agency, which would be particularly dangerous at the present time, when it is about to undertake its new responsibilities under NPT. In consequence, the Soviet delegation calls once more on all participants in the General Conference to approach this question with a full understanding of its seriousness and its importance for the Agency.

(48) "In the light of the review of the composition of the Board of Governors — one of the reasons for which, as was stressed in the resolution adopted at the twelfth session of the General Conference, is the large increase in the number of Members of the Agency and the desire to reflect a remarkable expansion in the peaceful uses of nuclear energy in many countries of the world — the matter of turning the Agency into a truly universal organization takes on particular urgency. Up to now such countries as the German Democratic Republic, the People's Republic of China and others have not been represented in the Agency, nor indeed in certain other international organizations.

(49) "Particularly unjustified in present circumstances is the absence, in the Agency, of a country like the German Democratic Republic which has great achievements to its credit in the peaceful utilization of nuclear energy, was one of the first to accede to the Treaty on the Non-Proliferation of Nuclear Weapons and is at present starting negotiations with the Agency on the safeguards agreement required by the Treaty. It is perfectly obvious that acceptance of a country like the German Democratic Republic for membership of the Agency would contribute very largely to the success of the organization's work in all its aspects.

(50) "Mr. President, the work of the Agency is very closely connected with the preservation of peace on earth. This explains the special responsibility we have, the importance of the tasks before us. On the Agency's success in handling these tasks its future activity, indeed its future as a whole, will depend. Let us hope that the present session of the General Conference will help the Agency to perform these tasks with success."

44. Mr. LAURILA (Finland) said that during the preceding year two of the Agency's activities had been of particular interest, namely, outlining a system of safeguards in connection with NPT and the review of Article VI of the Statute, the importance of which lay in their implication for the Agency's work in future.

45. It was to be noted that the Agency's other — traditional — activities had not lagged behind; and the Secretariat's efficiency was evident from its organization of the Second International Conference on Nuclear Data for Reactors, held in Helsinki in June 1970.

46. Finland was taking measures for the construction of her first complete nuclear power plant, which had been ordered from the Soviet Union. The question of locating the plant, which would have a capacity of 800 MW, and be based on two pressurized-water reactors, in Loviisa and of connecting it to the transmission system was now under discussion.

47. The bilateral agreements concluded with countries supplying enriched uranium or enrichment services provided for safeguarding of the material received under them to be exercised by the Agency,

in conformity with NPT. Considerable progress had been made in the consultations on the transfer to the Agency of the safeguards responsibilities under the bilateral agreements Finland had concluded with the United Kingdom, the Soviet Union, the United States and Sweden. The resumption of such consultations in the near future would depend on the outcome of the deliberations of the Safeguards Committee (1970). Finland had submitted to the Agency on 19 August 1970 a formal request for safeguards negotiations, in accordance with NPT.

48. He wished to point out that the consultations Finland had carried out with the Agency had been only in connection with its own obligations. It was worth mentioning that it had, even before starting bilateral negotiations with the four States, intended to submit its activities to Agency safeguards.

49. In regard to the review of Article VI of the Statute, recalling his country's stand at the thirteenth General Conference[9] and at the Ad Hoc Committee of the Whole to Review Article VI of the Statute, he emphasized that a durable and realistic solution could be based only on the broadest possible consensus, and the views expressed by the Swedish delegation in that connection deserved careful consideration.

50. Referring to the peaceful use of nuclear power he said that the plans for its application must be based on reality. Nuclear power would obviously play an important part in the power economy of the world, and its advantages were not confined only to the fact that it would enable the world's limited power resources to last longer. One of its primary advantages was that pollution would be easier to control than in the case of other forms of power production. The extent to which it would be used would depend ultimately on how the various problems involved in the trade in and the administration of nuclear power were solved. Any system devised in that connection must not be too cumbersome, since, as the problems associated with NPT safeguards showed, it might altogether stop trade in nuclear power or encourage such trade to take place outside international safeguards arrangements, as was now the case with the production of nuclear weapons. Technical development and continuous systems analysis would certainly free that trade from the multitude of restrictive provisions and enable the safeguards system to be simplified, for only such a system would make the countries safe from nuclear weapons.

51. Mr. URSU (Romania) said that the President of the State Council of the Socialist Republic of Romania, Mr. Nicolae Ceauşescu, at present on a state visit to Austria, hoped to be able to address the General Conference. That was an indication of Romania's interest in international co-operation in the nuclear field, especially within the Agency, and in its own development in that important branch of modern science, technology and industry. As from the beginning of 1970, the responsibilities of the Romanian State Committee for Nuclear Energy, under its new organizational structure, covered the whole spectrum of nuclear problems from fundamental research to the industrialization of atomic energy. Conditions for developing the technical basis and for training the necessary specialists for implementing the national nuclear programme had thus been created.

52. The first step was to create an institute of nuclear technology so that a complete network of research institutes could subsequently be set up. That institute, as well as undertaking fundamental and applied research, would deal with technological matters relating to power reactors and nuclear materials and would obtain the widespread participation of industry in implementing its tasks.

53. Measures had been taken to enable nuclear units throughout the country to intensify and diversify the applications of radioisotopes and nuclear radiations in industry, agriculture, medicine and other areas. A nuclear training centre had recently been established to extend the co-ordination of efforts in training nuclear specialists; specialists in different areas at various levels would thus be available to satisfy the needs of the economy. In view of the considerable importance of information and documentation, a specialized centre was in the process of being organized in Romania.

54. One of the main elements of the programme was international co-operation; that was why Romania was extending and intensifying its relations with other States, both bilaterally and through IAEA. In that connection, Romania attached particular importance to co-operation with the Agency, to its activities and to its future development.

55. The Agency's activity could not be examined outside the political context in which it took place. During the year that had passed since the last Conference, there had been encouraging developments in the spheres of détente, co-operation and mutual understanding between States. In Europe, for example, the idea of security and co-operation had lately gained ground and was becoming the main topic of the political dialogue between European States. It could be said that there was now a consensus in principle among European countries and other States concerned that a conference devoted to security and co-operation in Europe would be useful.

56. Unfortunately, however, complex and serious problems were still worrying mankind. Those prob-

9) See document GC(XIII)/OR.128, para. 73.

lems could only be settled by the elimination of war and the abolition for good of the use of force and of the threat to use force in relations between nations, which must be based on unanimously recognized principles of international ethics and legality.

57. The fundamental interests of peace and security demanded the immediate extinction of the sources of tension and conflict existing in various areas of the world, the cessation of aggression against the Viet-Nam, Laotian and Cambodian peoples and the securing of their rights to decide their own destiny, and the political settlement of the conflict in the Middle East on the basis of the Security Council resolution of November 1967[10]. The total liquidation of the anachronistic vestiges of colonialism as well as of any forms of racial oppression and discrimination were imperative requirements. It was also necessary to assist States in their efforts to achieve independent economic and social progress. Concrete steps to limit the arms race, and the adoption of efficient disarmament measures, first of all in the nuclear field, would contribute to an improvement in the international political climate.

58. Starting from the conviction that all States, large and small, bore considerable responsibility for the density of mankind and for peace, Romania actively promoted the cause of international security and co-operation.

59. The Agency, whose main task was to encourage international co-operation in the peaceful uses of atomic energy was an important link in the system created by the United Nations for ensuring peace and progress through mutual understanding and co-operation. It had many possibilities for contributing to the accomplishment of that noble cause.

60. In that connection, one problem whose settlement was becoming increasingly urgent because of the increasing role played by the Agency was the universality of the organization. He was referring to the re-establishment of the rights of the People's Republic of China, a nuclear power and a country with 700 million inhabitants, and also to the participation in the Agency's work of the German Democratic Republic, the People's Democratic Republic of Korea and the Democratic Republic of Viet-Nam.

61. The annual report of the Board of Governors for 1969—70 once more confirmed his delegation's positive opinion of the Agency's activities. In particular the way the Agency had so far accomplished the task it had been given in respect of nuclear power assured his delegation that the Agency would be able to play an active part in all aspects of atomic power industrialization and that it would further expand the range of interests and activities to the whole nuclear fuel cycle.

62. The Agency's activities in the application of isotopes and radiation in industry, agriculture, medicine, biology, hydrology, etc. had expanded and, at the same time, had become more selective.

63. A remarkable beginning had also been made in the field of peaceful uses of nuclear explosions. In that area, his delegation would like future activity to be extended to cover all technical and economic aspects.

64. His delegation considered that increased attention should be given to the training of national cadres in the field of peaceful uses of nuclear energy.

65. The Agency's skill in administering the limited funds at its disposal for technical assistance was increasing, and it was gratifying that it was being given more and more projects under the UNDP Special Fund. In his delegation's opinion that demonstrated the Agency's ability to manage important scientific, human and financial resources successfully.

66. His delegation welcomed the fact that the International Nuclear Information System had been put into operation. The Agency was to be congratulated on that worthy achievement. He was convinced that the activity of the system would contribute substantially to the development of research and to peaceful applications of atomic energy in Member States.

67. The past year had marked a step forward in the strengthening of co-operation with the other specialized agencies of the United Nations family. In addition to the fruitful co-operation established between the IAEA and FAO, there had been co-operation with WHO, UNIDO and UNESCO. The International Centre for Theoretical Physics, the high standard of whose activity his delegation could not but commend once more, had benefited from the co-operation with the latter.

68. With regard to the Agency's tasks in relation to safeguards under NPT, his delegation hoped that unanimously acceptable solutions would be found for the important problems not yet solved, such as the financing of safeguards and the Agency's responsibility for possible nuclear damage.

69. A problem of particular importance which had also been examined during the last year was that of amending Article VI of the Statute. The complexity of the problem was confirmed by the fact that after two years of negotiations, five proposals had been submitted to the General Conference. The Romanian delegation favoured the adoption of a solution which

10) 8/RES/242 (1967).

would simplify the Board's structure, without endangering its efficiency, and which would ensure an equitable geographical distribution. In its opinion, the elective seats on the Board should outnumber the others and, at the same time, a uniform rotation of those seats among States within each zone should be ensured. Because of the importance of the problem all efforts should be made, in a spirit of co-operation and mutual understanding, to obtain a final solution acceptable to all participants in the General Conference.

70. The draft programme of the Agency for the years 1971—1976 had been drawn up competently and with a sense of responsibility. Included in it were the various fields of international co-operation, from nuclear power through the various uses of isotopes and radiations to research. The draft reflected the desire to deal with the latest subjects in the field of the peaceful uses of atomic energy and to find appropriate forms for international co-operation through IAEA.

71. Reasonable stress was put on nuclear power, and the programmes relating to the uses of isotopes and radiation demonstrated the Agency's intention to follow future developments in the fields in which they were used so that it could pay attention to the efficiency of those uses on a continuous basis.

72. The problem of training national personnel was a major one, which required particular attention. In view of the considerable developments in the nuclear field, and especially in nuclear power, the Agency's training activities could also include the training of technical personnel. Co-operation with other organizations of the United Nations family for that purpose was possible. In the field of safeguards, the Agency could provide assistance to its Member States in the training of inspectors for national control systems. Such an activity would facilitate the Agency's tasks in the application of its safeguards system.

73. His delegation would make additional and more detailed comments on the draft programme and on the budget when they were discussed in the appropriate committee.

74. With regard to the future activity of the Agency, his delegation considered that a reasonable balance should be sought between the major tasks set forth in the Statute and its increased responsibilities in the domain of applying the safeguards system.

75. The need for such a balance also derived from NPT. The Treaty was, in essence, a positive instrument; on the one hand, it constituted a link in a chain of measures aimed at achieving nuclear disarmament and, on the other, it must not hinder, but rather encourage, development in the States Parties to it in the field of peaceful uses of nuclear energy as well as international co-operation. In his delegation's view IAEA should conceive its further activity as an effective contribution to the integral application of the letter and the spirit of NPT. Disarmament, development and co-operation in the nuclear field were the major purposes for which the Agency existed.

76. The desire for balance was at the basis of his delegation's position regarding the draft budget of the Agency. It noted that for the next year the draft budget provided small increases, both in absolute and in relative terms, for financing research activities, training of personnel, exchange of information, etc. It hoped, however, that a proper solution would be found in the future. His delegation would vote for the proposed Regular Budget.

77. His delegation also supported the draft Operational Budget. In that connection, he was able to announce the decision of his Government to contribute to the Operational Budget in 1971.

78. Mr. SERRANO (Chile) paid tribute to the memory of the late Dr. Pretsch, who had led the delegation of the Federal Republic of Germany at the thirteenth session of the General Conference.

79. Referring to the Director General's statement to the effect that it was either necessary to set up more international organizations or to reorganize the existing ones in such a way as would enable them to fulfil their objectives more efficiently and serve Member States more effectively[11], he said that it expressed the dilemma confronting the world community and now the Agency. Chile and other countries, in particular the developing and Latin American countries, in collaboration with some advanced countries, had been trying to carry through the necessary reforms which would enable the Agency to fulfil its objectives more efficiently and serve Member States more effectively, as the Director General had said. That was the sole purpose of the draft resolution submitted by 21 countries, including Chile, in connection with the review of Article VI of the Statute and the proposed enlargement of the Board of Governors.

80. Bearing in mind the urgent need to change the existing situation in the international organizations and to guide their efforts in the direction required by present-day realities, his country, together with other developing lands and some more advanced countries, had endeavoured to find a solution to the serious problem of financing safeguards in connection with NPT; the purpose was in fact to transform the internal financing mechanism of the Agency, within the limits laid down by its Statute, and thereby to ensure that the organization did not become solely an inter-

11) GC(XIV)/OR.135, para. 57.

national police force but could continue to serve developing countries, providing them with the technical assistance they needed so urgently.

81. The Director General had requested that the target for voluntary contributions be increased to $3 million, but one of $2.5 million only had been approved. Nevertheless, the cost of applying safeguards under NPT would rise by 50% in the coming year alone.

82. Unless Article VI was amended and the joint resolution — which was fair, moderate and rational — approved, many countries would lose interest in the Agency and give serious thought to establishing others, a possibility about which the Director General had already uttered words of caution. It was essential to find a fair and logical solution, in conformity with Article XIV.C of the Statute, to the problem of financing safeguards, without detriment to technical assistance to developing countries. If such a solution were not found, thought might be given, as he had said, to the establishment of a new organization; indeed, his country had mooted that possibility some time back in the United Nations General Assembly.

83. Referring to the practical participation of his country in the process of scientific and technical advance, he noted with satisfaction that the nuclear development policy followed by Chile conformed to many of the recommendations contained in the report submitted by the Secretary-General of the United Nations to the General Assembly in 1969[12]. That report, entitled "Contributions of nuclear technology to the economic and scientific advancement of the developing countries", stated among other things:

"The decision to embark on a nuclear power programme should only be taken by a developing country after making a comprehensive study of its long-term power needs and of the various ways of meeting them. This study should also take into account the prerequisite level of the scientific and technological infrastructure, as well as the indirect beneficial effects that will result from the introduction of the new technology."

84. Concerning the proposed nuclear study centres, the report added:

"Where there is an intention to have a nuclear power station operating within ten years, however, a local research reactor is desirable... It provides first-hand experience for reactor physicists, chemists and engineers, and forms a base for the embryo reactor-safety organization."

85. In the opinion of his delegation, economic development required an intelligent combination and concentration of natural and capital resources, which could not be achieved unless a high priority were attached to investment in human resources — to higher education and the establishment of a national scientific and technological base. For that purpose, his country had in recent years placed particular emphasis on the establishment of national institutes for basic and applied research. The Centro Nacional de Estudios Nucleares (National Centre for Nuclear Studies), which had started functioning in May 1970, was to have a 5-MW research reactor which would go into operation in 1971, as well as two subcritical piles, caesium and cobalt irradiation units and many other facilities for all-round development of the peaceful uses of atomic energy.

86. Furthermore, long-term studies of the national power problem had led to the preparation of a systematic plan for nuclear power plants in Chile, the first of which was expected to start operation in the northern (desert) zone of the country within five years. By the end of the 1980s several nuclear power plants with a total capacity of about a million kilowatts would be installed in the central part of Chile.

87. His country would welcome further action by the Agency to encourage the construction of low- and medium-power nuclear reactors. The manufacturers had thus far concentrated their efforts on developing large nuclear plants. Studies had been carried out in Chile with a view to determining the size at which small reactors would become economically attractive, but costs had generally been found to be too high owing to the rise in the price of nuclear plants in recent years.

88. An international meeting on low-power nuclear plants had already been held under the auspices of the Agency, and another was expected to be held later on. On the basis of the ideas put forward in those studies, his country had established contacts at the Latin American regional level to see whether it would be possible to stimulate a common interest in preparing joint requests for projects in a number of countries of the area. The Agency, through a mechanism of that type, could play a very valuable role in combining and standardizing existing projects in developing countries.

89. His delegation wished to stress the need for joint action by the potential users of low-power reactors. They should try to establish common bases and specifications in order to create a sufficiently attractive market so that industrialists of the advanced countries could, within the framework of a multinational project, which would bring into play the facilities of commercial exchange available between interregional markets, implement a single project involving much lower investment costs than those prevailing at present. That would permit the gen-

12) United Nations document A/7568.

eration of nuclear electric power in developing countries which otherwise had to import conventional fuel — and at a cost competitive with that of the power generated by such fuel. In other words, Chile wished to propose the establishment of a "club of small nuclear power users", and hoped that the Agency would give it due consideration.

90. In pursuing its national development plans, Chile did not subscribe to the criterion advocated by some financial organizations, namely that a country's first nuclear power plants should be evaluated on a strictly economic basis. There were, in fact, elements which were difficult to quantify but which, nevertheless, had a real and decisive impact on the social development of a country; the new technology acted as a catalyst in stimulating a general improvement of educational, scientific and technical standards, and made itself felt in industry, agriculture, administrative organization, and so on.

91. Development was basically the task of the peoples concerned. But the interests of peace among nations, and indeed the properly understood interests of the rich countries, made it important to help those who helped themselves. The Agency was a tool which could, and should, be used in furthering those high purposes. Holding that conviction as it did, his country highly appreciated the steady and timely technical help it received under the regular technical assistance programmes of the Agency.

92. Lastly, his delegation wished to propose that a regional officer, like the one for Asia and the Far East, be appointed for Latin America.

93. Mr. QUIHILLALT (Argentina) said that outside assistance had helped channel Argentina's own efforts, which were now reflected in a nuclear programme for the next decade, involving the massive application of nuclear energy to the development of the country. The implementation of that programme was possible thanks to the fact that the work done and the results obtained by the Argentine Atomic Energy Commission were indicative of a state of maturity sufficient to permit formulation of the following immediate objectives:

(1) The use of nuclear power — by means of the installation of a series of power reactors — in projects to meet the growing demand for electricity. Argentine industry was participating to the extent of 40% in the Atucha Nuclear Power Station, which would go into operation in 1973. Industry was expected to participate to the extent of 60% in a second nuclear power station, of 500 MW capacity; to be constructed in the Province of Córdoba and scheduled to go into operation in 1976. A further two stations, of even larger capacity, were planned for 1978 and 1980;

(2) The development of resources in the field of nuclear fuel, ranging from the design, testing and fabrication of fuel elements in an industrial plant to their reprocessing and the disposal of radioactive wastes;

(3) Promotion of the applications of radioisotopes and radiations;

(4) Development of the existing scientific and technological infrastructure;

(5) The introduction of ever more advanced safety measures to protect the population against radiation hazards.

94. A vital feature of that programme consisted of the progressive transfer of its component items to the various activities constituting the Argentine economy, beginning with the primary sector and continuing via agricultural and stockbreeding applications to support for industry, which was being invited to participate in implementation of the programme.

95. The progress which had been made in Argentina in the nuclear field over the past five years and which showed an average annual expansion of 40%, made it possible to look forward with optimism to the future. A programme of that kind was closely bound up with effective support at international level, and valuable co-operation was awaited from IAEA.

96. An analysis of the annual report of the Board of Governors and of the Agency's budget for 1971, which his delegation fully accepted, revealed various satisfactory trends as regards the organization's co-operation with Member States.

97. His delegation wished to express its satisfaction at the progress made in the co-ordinated research programmes in the fields of food and agriculture, which represented activities of vital importance for the developing countries and therefore ought to receive preferential attention in the future.

98. The programme on nuclear power and reactors and on health and safety, which constituted a source of advice for the developing countries, likewise deserved full support.

99. His delegation wished to stress its interest in the full success of the INIS programme and hoped that the system would extend its field of action to cover the maximum volume of information available in the world on the subject.

100. The continuing lack of proportion between the funds allocated to technical assistance and the volume of the requests submitted to the Agency by Governments continued to be a subject of great

concern. The extent to which available resources had increased up to the present time scarcely compensated for the rise in costs and did not meet the needs which arose from the expansion of nuclear activities in the developing countries. His delegation also shared the concern of the group of Latin American countries at the fact that funds earmarked for that region had been decreasing. It was hoped that that situation would be corrected in the future.

101. Regarding the application of safeguards, he considered that it was one of the basic activities of the Agency to ensure that nuclear materials were devoted to peaceful uses and accordingly Argentina had agreed that its first nuclear power station should be voluntarily placed under the safeguards system.

102. He noted that the funds allocated for safeguards activities were rapidly increasing, while on the other hand it had not been possible to provide for an adequate expansion of technical assistance activities.

103. Argentina recognized and appreciated the efforts of the Director General to find solutions for any difficulties which had arisen, and considered it of the greatest importance that the Agency should redouble its efforts to develop procedures and systems for the efficient and economic application of safeguards.

104. He was pleased to inform the Conference that his Government had authorized him to state that Argentina would maintain its voluntary contribution at the same rate as hitherto, furnishing the sum of $21 000.

105. On the subject of the Argentine attitude to the amendment of Article VI of the Statute, as defined at the February series of meetings of the Ad Hoc Committee of the Whole, at which his delegation had presented the proposal now before the Conference in document GC(XIV)/437, section A.5, he wished in conclusion to recall what had been said on that occasion:

"Although not ideal, our proposal nevertheless presents a compromise formula which best reconciles the need of the Board of Governors for an improvement in its organization with the interests of Member States. It is in this spirit that we are submitting it, as an imperfect human achievement, but the best which can be offered under the present circumstances."

106. Mr. YANG (China) said that it was a great honour and privilege for him to report to the fourteenth regular session of the General Conference on the present position of the Republic of China in the field of nuclear research and to put forward his country's views on some pertinent problems relevant to that field.

107. The year now ending was the first year following ratification of NPT. That Treaty was, of course, a great landmark in the history of the development and peaceful use of nuclear energy, and the Republic of China lent whole-hearted support both to NPT and to the Agency's programme thereunder. The year now ending had seen the Agency adopt an even more important and more complex role on the world stage: on the one hand it had promoted even more vigorously the peaceful applications of nuclear energy, and on the other, it had assumed the duty of preventing the proliferation of nuclear weapons.

108. In 1969 his delegation had reported to the Conference China's plans for the construction of a nuclear power plant, which would be the first of a series [13]. Considerable progress had been made towards completing that plant, and the plans for the entire series had now crystallized to a large extent. The first BWR-type nuclear power plant of 604 MW(e) had already been contracted for, and it was planned to have that unit in commercial operation in 1975. The second unit, a duplication of the first, was expected to go into operation in 1976, and the third plant, of 800 MW(e) capacity, was scheduled for operation in 1980. His Government wished to express its gratitude to the Agency for sending a team of experts to assist in the site selection for those projects and for its offer of assistance in the evaluation of the safety analysis of the proposed plant.

109. Another project that had first been reported in 1969 had been the erection of a materials testing reactor of heavy-water type. Construction work was now under way and the reactor was scheduled for completion in 1973. In conjunction with that facility, a 10-kW pool-type reactor using spent fuel of the existing Tsing Hua Open-pool (THOR) Reactor was also under construction.

110. All the reactors to which he had referred would naturally require the application of Agency safeguards, and in due course China would submit a request to the Agency for that purpose.

111. Increasing difficulties faced the Agency in the safeguards field. The two most important problems were probably the shortage of qualified personnel and the provision of financial support. One possible way of coping with the first problem would be to encourage Member States to establish their own national nuclear materials management systems in harmony with Agency requirements, a move which might well decrease manpower requirements. The second problem — that of financial support — was also a serious one, which had to be solved in such a way that the financial burden would not be beyond the capacity of the developing countries.

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13) See document GC(XIII)/OR.131, para. 65.

112. His delegation also wished to express its appreciation of the immense contribution made by regional and interregional co-operation in the field of nuclear science under the Agency's auspices. Since regional co-operation was one of the most effective and economical ways of promoting nuclear research in developing countries, it was his earnest hope that a solid and realistic programme could be formulated in that department.

113. Apart from the services of a capable staff, the Agency needed the direction of its policies and programmes by a Board of Governors which reflected the views of the entire membership. If the provisions of the Statute concerning the composition of the Board of Governors were to be amended and a re-apportionment of regional representation carried out, it was his delegation's hope that the result would be a well-balanced representation in which the claims of no section were overlooked. He would point out that there were many rapidly-developing and densely-populated regions of the world, including the region in which China was situated, which were well deserving of increased representation.

114. Among the programmes which had merited his Government's support and appreciation, special mention should be made of those which had contributed so much to the exchange of information. Those programmes involved fellowships, visiting professors, technical experts and various conferences and symposia on a number of important topics. China hoped that all those programmes, and others such as the research contracts programme, would be expanded and developed in the years ahead.

115. In closing, he wished to express his appreciation of the admirable work done by the Secretariat in preparing a sound programme for the period 1971—76 and a well-balanced budget for the coming year. His Government was happy to support the programme and the budget which would finance it. Following its customary policy and in response to the Agency's request, China would place at the Agency's disposal a cash contribution of US $10 000, together with some domestically manufactured nuclear equipment. His country was indeed happy to have the opportunity to give some token of its devotion to the great work which the Agency was performing and its appreciation of the contribution it had made to China's own welfare.

VISIT OF H.E. PRESIDENT NICOLAE CEAUŞESCU TO THE AGENCY

116. The PRESIDENT informed the Conference that His Excellency Mr. Nicolae Ceauşescu, President of the State Council of Romania, was to visit the Agency on Friday, 25 September 1970, and had expressed a wish to address the General Conference.

117. He was sure he would be expressing the views of all in saying that delegations would feel honoured to be addressed by His Excellency at the beginning of the plenary meeting that morning.

The meeting rose at 5.55 p.m.