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President: Mr. COLOMBO (Italy)

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ADDRESS BY MR. GOLDSCHMIDT ON THE OCCASION OF THE AGENCY'S THIRTIETH ANNIVERSARY

1. The PRESIDENT said that the Agency's thirtieth anniversary gave Member States the opportunity to recall the ideals which had inspired the organization's founding fathers, to reflect on the major events of the past 30 years and to look ahead to the future. No one, perhaps, was better qualified to help the General Conference to do that than

Mr. Bertrand Goldschmidt, who had for a long time been one of the most distinguished members of the Agency's Board of Governors, who had been a member of the Scientific Advisory Committee and who had been Chairman of the Board at the beginning of the 1980s. Since Mr. Goldschmidt had agreed to address the General Conference, it was a pleasure to give him the floor.

2. Mr. GOLDSCHMIDT said that his links with the Agency were indeed of long standing and in fact even stretched back to the time before its establishment, since he had been the first expert appointed to take part in the international negotiations leading to its creation. When the American, British, French and Soviet ministers of foreign affairs had met in Berlin in 1953, Paris had decided to send him as an expert in the French delegation. Regrettably, the problems concerning the future of Germany and Austria, the armistice in Korea and the war in Indochina had left little opportunity to discuss the proposed international agency and the real negotiations had only taken place much later.

3. Two missions had been given to the Agency by its founding fathers, to "accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world" and to "ensure, so far as it is able, that assistance provided by it or at its request or under its supervision or control is not used in such a way as to further any military purpose". There was no doubt that the Agency's success in that second mission was the brightest jewel in its crown. Although some countries, desirous of maintaining their independence, were reluctant to place all their activities under Agency safeguards, no State disputed the quality of the safeguards system; yet the creation of that system had been a long and difficult process.

4. Two earlier proposals for the establishment of an international organization responsible for monitoring nuclear activities had been made - one

American and one Soviet - between 1946 and 1948, during the work of the United Nations Atomic Energy Commission; both had resulted in deadlock. The American proposal of 1946, based on the philosophy of the Lilienthal-Acheson report, had totally ignored control and inspection. It proposed that all stages which were dangerous from the standpoint of their potential for the manufacture of weapons should be made the responsibility of an international authority which would possess all the fissionable material in the world and exploit it for the benefit of all nations. That revolutionary concept would of course have led to a loss of national sovereignty which many countries, including one of the main ones, had not been prepared to accept. The Soviet proposal of June 1947, on the other hand, had focussed entirely on control and inspection. It had been based on the prerequisite of rejecting and prohibiting weapons, and backed up by a system of regular international inspections to verify the peaceful nature of nuclear facilities - which would continue to be the sole responsibility of the State concerned; that proposal had been surprisingly similar to the future Non-Proliferation Treaty, which was to come only 20 years later. However, it had been rejected by a majority of Member States on the Commission, who were hostile to inspection and favourable to international management. Having participated personally in the preparation of the expert report which had rejected the Soviet proposal, he had often wondered since that time whether an opportunity of slowing down, if not halting, the arms race had not after all been missed: as matters stood, only very recent meetings had given any grounds to hope that the arms race would slow down.

5. The proposal made in 1953 by President Eisenhower had aimed at modifying the nuclear arms race to some extent, proposing that States owning fissionable materials should give up increasingly large quantities of them and hand them over to an international organization responsible for managing a store, for protecting the store or bank against any surprise attack, and for redistributing the materials throughout the world so that they could be used to benefit the whole of mankind. The agency which it had been proposed to set up was to have the important task of developing methods to ensure peaceful utilization of the fissionable materials which it distributed. That peaceful utilization clause had been completely original at the time and contained the seeds of the safeguards system later to emerge. The preparation of the

Agency's Statute had lasted from 1954 to 1956, and those three years had been a favourable period for nuclear energy, characterized by renunciation of the secret policy pursued since the war by the United States, Canada and the United Kingdom; by a resumption of the exchange of knowledge, nuclear materials and equipment; by the entry into service, in the United States, of the first nuclear powered submarine and, in the USSR, of the first nuclear power plant; and finally by the great success of the First Geneva Conference, held in August 1955, which had marked the lifting of the shroud of secrecy and followed by only a few months the announcement by the United Kingdom of the first nuclear power programme.

6. The conference held in New York in 1956 to adopt the Agency's Statute had been characterized above all by differences of opinion regarding the extent of the control powers which should be given to the new organization. The French delegation (which he had led) had been instructed to give greater emphasis to the Agency's mission of promoting nuclear energy as opposed to its mission of control. It had been able to accept the principle of controls on enriched uranium and plutonium, products involving a considerable national effort which could easily be used for military purposes, but it had been opposed to controls on natural uranium, particularly because of the discriminatory nature of such controls, which would place countries with uranium mines on their own territory, or countries which had already signed contracts for the long-term purchase of uranium with no clause governing its peaceful use, in a more favourable position. Many developing countries, including India, had supported that view. Initially he had defended it himself - and, more generally, the reasonable application of controls and of "follow-up rights" - but had later come to the realization that there were no sound technical grounds for excluding controls on uranium; so, in the end, no distinction had been made between natural uranium and enriched uranium in the article on safeguards.

7. The opposition had been led by the Indian delegate, the great physicist Homi Bhabha, who had presided at the First Geneva Conference and enjoyed considerable personal prestige. Bhabha had wanted, above all, to keep out of the Statute a clause which would have given the Agency, for any facility placed under its control, the right to fix the quantity of produced plutonium

which the country involved could keep for itself. That clause, according to its opponents, would have given the Agency too much power over the economy of any country which based its electricity supply on nuclear power. On 19 October 1956, the day fixed for the closing of the Conference, the result of the vote on Article XII, concerning safeguards, had still been uncertain after two weeks of discussions as had the fate of the Agency itself. The Swiss delegation and the French delegation had submitted a conciliation amendment giving countries the right to keep as much of the plutonium produced by them as was needed for their research programmes and for the refuelling of existing reactors or reactors under construction. Thereupon the United States delegation had asked for time to consider the proposal, and the Conference had been extended. The Americans, and then the Indians, had finally accepted the compromise; but failure of the Conference had been only narrowly averted. That clause, which had been discussed so much yet never applied in practice, was to become topical 25 years later as the basis for certain solutions proposed in the discussion on international plutonium storage - on which consensus seemed to be a long way off.

8. The first years of the Agency's existence, under the direction of Sterling Cole, had been difficult. Subject to the vagaries of the cold war, it had never been able to play the role of banker of fissionable materials as envisaged by President Eisenhower. The advanced countries had undertaken a policy of construction and transfer of reactors through bilateral agreements; there could be no question for them of accepting Agency controls - indeed, it was proving impossible to set them up in any case, and the methods of applying them were the subject of interminable meetings and discussions in the Board of Governors. With such a bleak outlook, the Agency had been forced to concentrate its activities in those early years on problems of technical assistance, questions of safety and international regulations and the organization of international conferences and seminars.

9. The outlook had suddenly become brighter following the Cuba affair in the autumn of 1962. After having apparently come to the brink of a nuclear conflict, the world had then embarked on a process of détente which had led, in August 1963, to the signing in Moscow of the Partial Test Ban Treaty and had been marked by the disappearance, in the Board of Governors, of obstacles

to the establishment of an international safeguards system. The decision of the United States, in the middle of the 1960s, to give the Agency responsibility for monitoring its bilateral agreements, followed by the signing in 1968 of the Non-Proliferation Treaty and finally the acceptance, in 1975, by France of a common policy for supplier countries regarding non-proliferation, had all been events which were to culminate in the maturity of the Agency's safeguards system. It was true that such a system could not altogether prevent illicit diversions or violations of the rules, but it acted as a deterrent because of the possibility of early detection of any failure to observe peaceful utilization commitments. It had conferred upon the Agency, so to speak, its patent of nobility; it had brought about the disappearance of bilateral controls and replaced the controls applied by the OECD - though not yet those of EURATOM. All that had been accomplished during the 20 years in which Mr. Eklund had calmly, skillfully and energetically guided the organization to its maturity.

10. Those years had seen the introduction of a vast programme of technical assistance and training of experts, of research programmes involving co-operation between several countries, assistance missions, exchanges of information through the INIS system and, finally, the establishment of the famous International Centre at Trieste.

11. However, while the nuclear power programmes of advanced countries or countries in the process of rapid industrialization had been successful, the development of medium-sized reactors had lagged behind - a particularly regrettable thing, since those were precisely the power plants needed by developing countries, whose grids and electricity demand could not accommodate the more powerful units. That would have been an ideal area for the Agency to exercise its promotional mission.

12. Thus, the Agency had gradually been divided between countries which produced nuclear power and those which heard it being talked about but had no hope of profiting from it in the near future. Those countries, primarily the members of the Group of 77, already frustrated at not being able to participate more fully in the high echelons of the Agency and in the Board of Governors (one need only consider the famous, indeed interminable negotiations on Article VI of the Statute), also resented having to share, to however small

an extent, the financing of the increasingly costly safeguards system. The safeguards budget at present accounted for more than a third of the overall budget, and he felt that that ceiling should not be exceeded even if the system had to be reviewed and made more flexible in order to maintain its effectiveness.

13. The gap which had thus formed between those two categories of Member States during the 1970s had, fortunately, gradually been filled in the past few years through the diplomatic and administrative talent of the present Director General, Mr. Blix (a talent which had also enabled him to apply the Agency's technical potential quickly and effectively at the time of the Chernobyl accident and to draw all the appropriate consequences in the vital area of reactor safety).

14. Nevertheless, discussions within the Agency had become clearly politicized during recent years, focussing sometimes on problems which, while undoubtedly serious, had nothing to do with the nuclear field and therefore belonged in international fora other than the Board of Governors or the General Conference. Similarly, a certain tendency to proscribe countries which had decided not to subject all their activities to Agency safeguards was somewhat disturbing: although their decision might be regrettable, it nevertheless lay within their sovereignty, and there was accordingly no justification for discrimination against them. If there were to be any discrimination within the Agency - which was after all wholly undesirable - it should rather be between countries which clearly favoured the mission of promoting nuclear energy - as mentioned in Article II of the Statute - and those which disapproved of that mission and emphasized their disapproval by banning the construction of power plants on their own territory and often by seeking to stop such programmes in other countries. However, the Agency, which tried to convince countries that they should accept full-scope safeguards, had not so far made any attempt to persuade those Members who rejected nuclear power to reverse their decision.

15. It was, moreover, rather paradoxical that the Agency should have its headquarters in a country which, having completed its first nuclear power plant, had then decided not to put it into operation but instead to dismantle it. Similarly, it was paradoxical that the Agency's Director General should

be the citizen of a country which, although among the most advanced in the nuclear field, had recently witnessed a decision of its Parliament to ban that form of energy on its territory by the beginning of the twenty-first century: whereas a candidate from a country which had kept the military option open could probably not aspire to the post of Director General.

16. The modern world was thus full of contradictions, and the Agency would no doubt have to continue to develop with a disparate membership including nuclear-weapon States, States which had rejected such weapons, others which were keeping their options open, countries with nuclear power programmes, others opposed to such programmes, and yet others that wished to benefit from the new form of energy but were not yet technically and financially ready to adopt it; and that membership would have to co-exist without discrimination. For the good of the Agency, every effort should be made to remove politics from its discussions as far as possible and to recall that its main assets were its technical capital, represented by its engineers, research workers and laboratories as well as its safeguards system, which, in the event of nuclear disarmament, might well be used to verify stocks of explosives transferred to civil use, as had been envisaged by Eisenhower. However, it should not be forgotten that the Agency's future was basically linked to that of the overall development of power production from fission.

17. He was personally convinced of the absolute necessity for civilization to continue to develop that form of energy in a world where the population was going to double rapidly. Taking up once more the famous formula of Homi Bhabha, he felt sure that there could be no form of energy more dangerous to peace, health and security than the absence of energy. The Agency should therefore pursue its dual mission by continuing to minimize the risks of proliferation and by laying due stress on its promotional mission - whatever the difficulties, and whatever its opponents might say.

STATEMENT BY THE DIRECTOR GENERAL

18. The DIRECTOR GENERAL said that in the year that had passed, the Agency's thirtieth year, the world of nuclear energy had been dominated by actions and reactions springing from the Chernobyl accident. There had been sorrow and shock, but not paralysis. On the contrary, the accident had

stimulated powerful efforts to prevent any repetition of such a misfortune and to ensure that if, despite all the precautions taken, a serious accident were to happen again, its consequences would be minimized. A particularly important point was that the accident had shown that collective action at the international level was essential to bring about much of the analysis, assessment and action that governments believed to be necessary.

19. The fact that full use had been made of the Agency showed that Members had confidence in the Agency as a common forum and instrument for action. That confidence in the mechanisms and traditions of the Agency, and in its Secretariat, was an asset which had been gradually built up during three decades of fruitful co-operation. It was something that the governments of Member States and the Secretariat could alike be proud of. Properly used, the value of that asset would continuously increase as the Agency moved into its fourth decade. However, it was equally important to be aware - particularly at the General Conference - that that vital instrument of co-operation could be jeopardized or seriously damaged if the demands placed on it were too heavy. Co-operation was not enhanced but rather damaged when matters were settled by means of controversial votes. There was in fact a serious danger, because in the peaceful utilization of nuclear energy, as in many other areas of endeavour in the contemporary world, international co-operation was a necessity and not a luxury.

20. The general debate which was about to open would not lead to any common conclusions or decisions, but it provided governments with a good opportunity to benefit from each other's experience and knowledge. Indeed, decision-makers throughout the world were faced with the same fundamental questions, namely what increases in the demand for energy could be expected and how they could be met. Many were wondering, in particular, what role should be played by nuclear power. Although answers to that question varied, there was no doubt that an examination of the facts and arguments at international level could be useful to Member States. In the past year, attention and discussions had been focussed on the risks associated with the operation of nuclear power plants. As governments considered their energy policies for the decade to come, they would be well advised to place those risks in the proper perspective and assess them dispassionately, together with all other relevant factors.

21. There was general agreement that, while in most industrialized countries primary energy demand seemed unlikely to increase significantly in the near future, an increased demand for electricity and the need to replace more old power plants with modern ones should be expected. In many of those countries, decisions regarding new power production capacity would have to be taken soon if the requirements of the 1990s were to be met. Developing countries were faced with similar problems, but in their case primary energy demand and electricity demand were increasing more rapidly and the resources available for investment were often inadequate.

22. Similarly, there was broad agreement that electricity production should be increased in a way that was not only economic but also environmentally acceptable. There was, however, less agreement as to what was economic and what was environmentally acceptable.

23. In its report entitled "Our Common Future", published in the spring of 1987, the World Commission on Environment and Development, also called the "Brundtland Commission", had put forward convincing arguments in favour not only of a renewal of economic growth, but also of a significant increase in the use of primary energy by developing countries. It pointed out quite rightly that the global distribution of primary energy consumption was extremely unequal, being more than 80 times greater in countries with market economies than in sub-Saharan Africa. The Commission indicated that if per capita energy consumption were to become uniform throughout the world at the current level of industrial countries, a world population of 8.2 billion in the year 2025 would require about 55 TW. That represented an increase of more than a factor of five by comparison with 1980 consumption levels. Even if less ambitious targets for consumption were set, an enormous increase in energy production would be necessary.

24. The Commission stressed that every source of energy had its own economic, health and environmental costs, benefits and risks. It noted that the use of fossil fuels to supply the necessary additional energy would lead to a danger of global warming (greenhouse effect) and acidification. It recognized the limitations of so-called "renewable" energy sources, which also had environmental consequences. However, although the report of the Commission pointed to what were felt to be problems associated with the use of

nuclear power, it conspicuously failed to mention the important fact that an increased use of nuclear energy would not add to the environmental risks of global warming, acidification or urban industrial air pollution. It recommended neither fossil fuels nor nuclear fuels. Instead, it advocated a rational use of energy and the development of renewable sources following a scenario of low-energy consumption in order to sustain mankind's progress. There was reason to wonder whether that advice was not simply a means of avoiding difficult choices. Even if energy-efficient practices and the development of renewable energy sources were vigorously promoted, it was unlikely that the world's energy requirements could be met by following that scenario. For the majority of countries, the real choice for power production lay probably between coal and nuclear fuel - or hydroelectric power, where that was available. China's Vice-Premier, Mr. Li Peng, had stated more realistically at the opening of the Sixth Pacific Basin Nuclear Conference at Beijing, two weeks ago: "As China is very rich in coal and water resources, its electric power supplies will mainly rely, for a relatively long period of time, on coal-fired and hydro-powered plants, with nuclear power as a supplement". Furthermore, the additional total electricity production planned in China until the year 2000 was some 100 000 MW(e), of which 70% would be provided by coal according to current predictions.

25. More generally, it was likely that in the short term increasing use would be made of all sources of energy - more importance being given to safety and environmental protection techniques than in the past; but the process would be accompanied by an uneasy awareness that the use of fossil fuels would have to be gradually restricted. As far as one could judge at present, that could not be done without using nuclear power. Although one could welcome the fact that a promising co-operation project for the development of a fusion reactor for energy production had been started during the past year by four major partners, under the auspices of the Agency, it would be illusory to expect fusion processes to provide large quantities of energy for many decades to come. Thus any reference to nuclear power in the context of the world's energy supply during the next few decades was inevitably a reference to fission power.

26. Since Chernobyl, several governments had had occasion to review the nuclear option. A few countries, such as Austria, had decided against it. Some, such as the Netherlands and Finland, had postponed their decisions, but several others had reaffirmed their commitment to nuclear power; that was the case of the United States in its report on "Energy Security", of the United Kingdom in the decision regarding Sizewell, of the Federal Republic of Germany in the "Energy Report of the Government" of September 1986, and of the USSR in several policy statements. France had continued its very ambitious programme of nuclear power plant construction and Japan planned to increase its installed capacity from 25 800 MW(e) to 60 000 MW(e) by the year 2000. India had drawn up a programme which aimed to achieve nuclear capacity of 10 000 MW(e) by the year 2000, and China had set out on its long path towards establishing a sizeable nuclear power programme.

27. Those decisions showed that nuclear power was still regarded as an energy source of growing importance, and they could be expected to increase the share of nuclear power in the world's electricity supply from 15% to 20% by the year 2000. They had been based on several considerations. The first factor was economic experience with nuclear power plants in all industrialized countries and in some developing countries. It was true that some power plants - whether nuclear or non-nuclear - had turned out to be very costly, but the OECD had calculated that nuclear power would be cheaper than coal-generated power in all OECD countries except for a few locations near coal-mines, as in Canada and the United States. Those calculations were based on reasonable construction times. A second consideration was the reliability of nuclear power plants: during the past three years, nuclear power plants in Europe had shown better performance characteristics than their oil- and coal-fired counterparts in all power ranges. The third factor was energy independence: even if nuclear fuel had to be imported, it was easy (and relatively cheap) to store it for several years. Finally, environmental considerations had been taken into account. In normal operation, nuclear power plants were environmentally benign generators of electricity. In several countries, nuclear programmes had clearly helped to avoid releases of pollutants which would have resulted from other fuels.

28. If nuclear power was to be generally accepted by governments and public opinion, three concerns felt by many - and mentioned in the Brundtland Commission Report - would have to be allayed: the possibility of accidental releases of radioactivity (in other words, nuclear safety) was one source of concern; another was waste disposal; and the third was the threat of a proliferation of nuclear weapons. Each of those problems had important international dimensions which would form a substantial part of the Agency's agenda for the coming decade. But before dealing with them, he wished to examine the future role of nuclear power in developing countries.

29. In those countries, as in many industrial countries, nuclear power often gave rise to hesitations and a certain amount of opposition. A group of 20 high-level experts had met the previous year at the Agency to examine the problems and prospects of nuclear power in developing countries. The group's report took as its point of departure the premise that all forms of energy would be needed for economic growth and for improving the quality of life in developing countries and that it would be essential to produce electricity on a large scale. While believing that nuclear power would probably have an increasingly important role to play, the group of experts noted that there were some serious constraints on the introduction of nuclear power programmes in developing countries. Some of those - such as the training of staff - had already been taken into consideration in the Agency's assistance programme, but the report urged the Agency to propose an integrated, comprehensive assistance package such that the nuclear option could be evaluated as part of the overall energy and economic development planning in each interested Member State. It also advocated giving more attention to regional co-operation in energy and nuclear power planning studies.

30. Furthermore, the group of experts invited the Agency to improve its ability to advise and assist developing Member States in the financing of nuclear power projects. A comprehensive understanding of the matter was of course, essential for the future development of nuclear energy in developing countries, and it would perhaps be necessary for the Agency to strengthen its programme in that area - naturally without being involved itself in the financing. New concepts such as the "Build-Operate-Transfer" (BOT) formula should be examined, not only at the bilateral level but also within a wider

group of interested participants. However, it was important to stress, as the group had done, that technological, human and organizational infrastructure requirements were just as important for the success of a nuclear power programme as the financial resources. The decision to launch a nuclear power programme was necessarily the responsibility of the State concerned, whether a developing or industrialized country. It emerged from the report that the Agency should have the capacity not only to offer assistance in energy planning techniques, but also, if so requested, to provide continuous support and advice for each individual developing country which decided to embark upon a nuclear power programme.

31. With regard to the question of public acceptance, the expert group and several other advisory bodies had recommended that the Agency play a more active role in producing factual information on questions which often gave rise to discussion in Member States. The Agency had a great deal of information and data on all aspects of nuclear power. Part of that information had already been published, but it could be made available in a more concise form to assist governments if they so wished. Of course, that would inevitably involve some expense, and it would be interesting to know whether governments would attach high priority to it.

32. With regard to the crucial question of safety, one might expect that years of profitable and safe operation of nuclear power plants throughout the world would be needed to dispel fears rooted in the public's unfamiliarity with radiation - fears that had naturally been reinforced by the accidents which had occurred. Unfortunately, it would not be enough to explain that all industrial activity - particularly energy production - involved some risk. Although the world had now gained practical experience with a worst possible accident and was no longer confined to theoretical scenarios, the slight risk of such an accident occurring was unacceptable to many people. That was a problem of which the nuclear industry was well aware, and it was taken into account very carefully in the programmes of industrial and governmental authorities.

33. Fortunately, safety and good economic performance went hand in hand, and good management and operation practices were reflected in a higher level of safety and a reduced number of shutdowns. That fact, and the considerable

gap between the best and poorest performances of nuclear power plants, would be at the centre of the work of the three conferences which were to be held in the near future, two of which would be under the Agency's auspices.

34. The first Agency conference was to open in Vienna the following week and had the name "Nuclear Power Performance and Safety", which betrayed its main focus: it would examine the results at present being obtained and the measures which could be taken to improve performance and safety still further. The average load factor of nuclear power plants was at present 70%, but many utilities were obtaining availability rates of more than 80% year after year, by giving careful attention to safety and quality of operation and maintenance. That showed that there were lessons to be shared.

35. The second Agency conference, on the specific subject of the man-machine interface, was to be held in Tokyo at the beginning of 1988. It was sometimes argued that the problem with nuclear power was that the machines assumed perfect human operators. That was not the case, but good relations between operators and machines nevertheless remained very important for good performance and safety. Operators should be masters of their information, not submerged by it, and they needed to be well trained and to follow good manuals. Such were the matters to be discussed at the Tokyo conference.

36. The third conference, to be organized the following month in Paris by UNIPEDE and INPO, would bring together power utility executives to study the best ways of co-operating directly to improve safety and performance. At the intergovernmental level, there was every reason to welcome that initiative. Good experience did not necessarily require government reprocessing.

37. As far as the Agency's expanded nuclear safety programme was concerned, it should be noted that the Early Notification Convention and the Emergency Assistance Convention, adopted in 1986, had entered into force. They had been signed by 69 and 67 countries and ratified by 16 and 12 countries, respectively. A number of measures had been taken to make them operative and steps were also being taken to create within the Agency's Secretariat the emergency response capability required by the conventions. In that respect, he was grateful for the assistance provided by other international organizations, such as WMO.

38. Secondly, revision of the Agency's nuclear safety standards had begun, starting with the five Codes of Practice which it was hoped could be submitted to the Board for approval in June 1988. During the special session of the General Conference in 1986, several delegates had expressed the opinion that the Codes could serve as binding international nuclear safety standards. Discussions had shown that for various reasons that was not realistic. However, the Codes did constitute commonly accepted standards, and that fact could be brought home to public opinion if Member States indicated their acceptance of them through individual communications to the Agency. Without infringing the sovereign responsibility of States to promulgate their own safety standards and regulations, such a procedure would help to show that there existed a set of widely accepted international standards; and that demonstration, in turn, would contribute to the rebuilding of public confidence, by enabling the public to see that good safety standards were applied everywhere.

39. Working groups of government experts were at present meeting under the Agency's auspices to exchange ideas and experience derived from their respective programmes on new power reactors, particularly those new models which might have a higher level of intrinsic safety. In the Agency's work to improve safety, however, it should not be forgotten that 60 to 70% of the power reactors which would be in service in the year 2000 were already in service. It would therefore be necessary to focus on operational safety and improvements in those reactors.

40. One contribution made by the Agency in that area was to be found in the work of the operational safety review teams (OSARTs), whose experienced experts reviewed the operation of a nuclear power plant over a period of several weeks. That service was usually provided in response to a request from the regulatory authority of the Member State concerned. The report, which was confidential, was given to the authority that had requested the review. During the past twelve months, eleven missions had been carried out in both advanced and developing countries. In several cases the authorities had decided to publish the OSART report - obviously to demonstrate openness and thereby to strengthen public confidence in the plant's operation. In one case, the Agency had been invited to send a follow-up mission to review the

measures which had been taken following comments made by the first mission. There was a steady demand for OSART missions, which would undoubtedly continue to be part of the Agency's programme for some time. Their usefulness would depend on the competence and operational experience which could be mobilized and made available.

41. The International Nuclear Safety Advisory Group (INSAG) had played a very important role during the past year. Following the Post-Accident Review Meeting in 1986, it had submitted a consensus report which had had a worldwide impact. It had made a strong statement on the importance of quality assurance and, what was perhaps more important, was at present preparing a document on safety principles for nuclear power plants addressed to designers and operators. That work would play a decisive role in establishing safety objectives. There was no doubt that the mandate of INSAG, established in January 1985 for an initial period of three years, should be renewed.

42. Although important elements of the supplementary safety programme were being implemented, as his survey showed, others would still require a certain amount of time. A typical case was that of the harmonization of contamination levels in foodstuffs at which governments should take action to protect the public. In view of the widely differing decisions taken by different authorities following the Chernobyl accident, that was obviously an area where governments should co-operate within international organizations to achieve some degree of harmony, so that public confidence in the good sense of their actions would not be undermined. The Agency had proposed a generally accepted methodology for defining those levels. The organizations primarily concerned were WHO and FAO and, through them, the Codex Alimentarius Commission.

43. Many developing countries had found in 1986 that they were not equipped to monitor environmental radioactivity or to measure contamination of imported food. That was one aspect of the broader problem of organizing radiation protection at the national level. Although the exceptional consequences of the Chernobyl accident had emphasized the need to be able to monitor the environment and foodstuffs, there had not always been as clear an awareness of the need for regulation and monitoring of the daily use of radiation in medicine and industry. The many radiation protection advisory teams (RAPATs)

sent out by the Agency since 1984 had discovered that the basic radiation protection infrastructure was deficient in many countries. The Agency should be ready to assist those countries, upon request, in training staff and in setting up simple regulatory rules and structures. Indeed, any assistance provided by the Agency in the nuclear field should include radiation protection and safety measures if they did not already exist.

44. Finally, it should be noted that the Convention on the Physical Protection of Nuclear Material had entered into force. Since the number of international shipments of nuclear materials was increasing steadily, it was important that the common standards of the Convention should be applied; that being so, States which had not yet done so were invited to sign and ratify the Convention without further delay. The Convention did not establish common standards for the physical protection of power plants or other nuclear facilities on the territory of States party to it, and so it did not really deal with the question of protection against terrorism. If governments wished to take multilateral measures or to formulate common principles in that area, new initiatives would be necessary.

45. In resolution GC(XXIX)/RES/444, the General Conference had asked to be kept informed of work in other bodies on the question of the prohibition of attacks against nuclear facilities. The Conference on Disarmament had continued its work in 1987 and possible elements of such a prohibition had been proposed, with several alternative texts. Those discussions would continue in 1988.

46. If safety had been the main public concern relating to nuclear power during the past year, it was evident that a second concern had been waste disposal. The claim that that problem had not been resolved was, however, only true to the extent that no high-level nuclear waste had yet been finally deposited in deep geological formations. There existed techniques for the safe disposal of high-level nuclear waste, but what was needed in many countries was a determined effort to make those techniques and their safety features more widely understood. An educational effort of that kind might be more difficult than the engineering effort itself. Perhaps only the actual establishment of disposal facilities - for different types of waste - would calm the debate. Fortunately, several countries were moving towards that stage.

47. The convergence of views among world experts on the subject of waste disposal was the fruit of years of discussion and exchange of knowledge and experience at the international level. That consensus or near-consensus should also be translated into generally accepted international standards for the safe disposal of waste. There was already a standard covering low-level waste, but work should progress on high-level waste as well. The question of dangerous wastes, whether nuclear or not, like that of nuclear power plant safety, was a matter of concern to everyone.

48. In that connection, a number of developing countries were experiencing great difficulties in arranging for proper disposal of used radiation sources, which were sometimes stored under inadequate control; and, as a consequence, there been accidents. Various solutions could be envisaged - for example, regional co-operation to establish waste disposal facilities, or return of spent sources to the supplier countries, where they would make only a minimal addition to existing waste disposal operations. Member States should be encouraged to tackle that problem and to co-operate in finding practical solutions to it.

49. To prevent the spread of nuclear weapons and to achieve nuclear disarmament were goals to which all governments subscribed. Success in those aims, both of which were embodied in the Non-Proliferation Treaty (NPT), was of course vital to world security and development. It was also of importance for the public's attitude to nuclear power. An effective non-proliferation regime, strengthened by substantial nuclear disarmament measures, would help to overcome certain existing reservations. Recent developments in international negotiations on arms reduction had given new hope that the long-desired results might be forthcoming.

50. The Agency was not a forum for negotiating arms control agreements but, as the institution responsible for applying safeguards, it fulfilled a vital function by creating confidence that non-proliferation commitments would be respected. In doing so, it helped to allay some of the fears that a more extensive use of nuclear power would increase the risk of proliferation. The Agency's safeguards activities had expanded considerably over the years, as more and more States adhered to NPT and to the Tlatelolco Treaty, and as more and more facilities and nuclear material were placed under safeguards. At the

end of 1986, in addition to 9 facilities subject to safeguards in nuclear-weapon States, there had been 485 facilities containing safeguarded nuclear material and 414 other locations containing small amounts of safeguarded material in non-nuclear-weapon States.

51. However, 46 of the 131 non-nuclear-weapon States which were party to NPT had still not complied with their obligation under the Treaty to conclude a safeguards agreement with the Agency. Even though most of those States did not at present have much activity that could be regarded as significant from the point of view of safeguards, the agreements should be concluded, and he respectfully urged the governments concerned to take the requisite action.

52. As far as South Africa was concerned, the facility attachment for the hot cell laboratory at Valindaba had been completed and had entered into force, and South Africa had also adhered to the two conventions adopted in September 1986. However, there had not been any significant progress in other discussions with South Africa on the subject of safeguards.

53. Furthermore, agreement had been reached in principle on the content of a safeguards agreement to be concluded pursuant to China's voluntary offer to place some of its civilian nuclear facilities under Agency safeguards. When that agreement took effect, all five nuclear-weapon States would have submitted all or some of their peaceful nuclear activities to Agency safeguards. That not only underscored the global acceptance of safeguards but also enabled nuclear-weapon States and the international community to acquire direct experience of on-site verification, which had long been regarded as a critical element in arms control agreements.

54. The objective of Agency safeguards, to create confidence, would not be achieved unless the safeguards administered by the Agency were credible. In order to ensure their credibility, sufficient independent verification activities had to be carried out; but, even so, the Agency could not fulfil its responsibilities effectively without the active co-operation of States. Although, on the whole, States were co-operative, there were still difficulties on certain points, for example the need to conclude facility attachments more rapidly, to solve problems of liability in the field of safeguards and to secure timely acceptance of the designation of a sufficient number of inspectors.

55. The adequacy of the resources available to the Agency for safeguards activities was a problem he felt bound to mention explicitly. Although it was encouraging to note that goal attainment at safeguarded facilities in 1986 had improved still further, with a zero-growth budget the prospects for the future were disturbing. The very substantial assistance which a number of States provided voluntarily under various safeguards support programmes and arrangements was gratifying and compensated in large measure for the absence of an internal research and development programme for the improvement of safeguards techniques; it did not, however, directly help the Agency to cope with its increased verification responsibilities associated with the continuously increasing numbers of facilities and quantities of material to be safeguarded in non-nuclear-weapon States. Nor had any new resources become available which would enable the Agency to take advantage of the increase in the numbers and types of facilities included in the voluntary offers of the Soviet Union and China. The Third NPT Review Conference had recommended that the Agency should take greater advantage of the voluntary offers made by nuclear-weapon States, but in the present financial situation that was not possible.

56. The Agency could not permit the slightest deterioration in the credibility of its safeguards. Moreover, since at present the construction of a simple nuclear power plant cost about US \$2000 million, additional charges of about \$40 million per year could hardly be regarded as a heavy burden for governments to bear when the aim was to gain assurance that 95% of nuclear facilities in non-nuclear-weapon States were being used exclusively for peaceful purposes, and, furthermore, to acquire experience in the increasingly important area of international verification.

57. Public concern over nuclear power did not extend to other applications of nuclear energy. At the United Nations Conference for the Promotion of International Co-operation in the Peaceful Uses of Nuclear Energy (UNCPICPUNE), held at Geneva in the spring of 1987, the importance of those applications (and indeed of nuclear power too) had been stressed, and the central and constructive role of the Agency had been recognized. That view of UNCPICPUNE was both gratifying and challenging.

58. However, there had been a setback - probably only temporary - in one area, namely food irradiation and disinfestation on a commercial scale. The techniques involved were thoroughly tested and very promising, but tough opposition had arisen in certain countries after the Chernobyl accident. International co-operation in that area was nevertheless continuing under the auspices of the Agency, and the intrinsic merits of the technique, together with its evident superiority over others (in some cases, at least), would undoubtedly gain full acceptance for it in due course.

59. Most developing Member States profited from their membership of the Agency through programmes in areas other than nuclear power, such as the use of radiation and isotope techniques in agriculture, medicine, biology, industry and hydrology. The Agency had a responsibility to those Member States which were not yet interested in nuclear power to implement programmes which would enable them to derive maximum benefit from applications of nuclear energy likely to contribute to their development: but its ability to do that effectively was closely dependent on resources voluntarily contributed. The increase in those resources during the past few years had fortunately enabled the Agency to provide more assistance to its developing Member States.

60. As to the present and future implementation of those activities, it was gratifying to note that 1986 had brought not only assistance of improved quality but also a marked increase in the resource utilization rate. It was therefore particularly regrettable that late payment of pledged contributions had led to delays in the launching of new projects, and hence to a technical co-operation programme delivery lower than planned for 1987.

61. With regard to the target for the Technical Assistance and Co-operation Fund for 1988, he advocated a substantial increase in, and timely payment of, contributions. He was aware of the difficult budgetary situation in most States; however, a substantial percentage increase in contributions to the Fund would not mean very large amounts in absolute terms, since the existing base was fairly low; and, on the other hand, the programmes had generally been of excellent quality. In that respect, regional co-operative arrangements such as RCA and ARCAL provided an excellent framework for co-operation between developing countries and allowed effective use to be made of local resources, expertise and facilities. The resulting networks of co-operating research

centres, educational institutions and industrial enterprises promised effective utilization of resources and strengthening of the self-reliance of participating developing States.

62. During the past five years, in the areas of nuclear safety, safeguards and technical co-operation, the Agency had been given new tasks and had undertaken an increased volume of activity within the framework of a zero-growth regular budget. A minimal increase in the budget was planned for 1988 as a consequence of exceptional circumstances. Those five lean years had been used to increase productivity and streamline procedures; but he was not advocating that the lean years be extended to seven.

63. The Agency was more and more regarded in Member States as a common instrument to help strengthen nuclear safety, maintain non-proliferation and transfer technology for the purposes of development. In order to carry out the increasingly important tasks entrusted to it, it needed to have sufficient financial and human resources and to be assured that contributions would be paid in full and on time; only then could it be sure of being able to implement the programmes and to pay salaries. Unfortunately, the Agency was far from having that certainty at present. In fact, if the regular contributions due since the beginning of the year were not paid forthwith, there would not be enough money to meet commitments to staff and suppliers during the next few months. No organization, international or national, public or private, could maintain its efficiency and credibility under such circumstances. The Board was convinced that consultations between major contributors were urgently needed in order to find solutions to those financial problems. An end should be put to the habit of paying late or not paying at all, which was incompatible with established regulations and obligations.

64. Governments should also review the common system as a whole and attempt to adjust it. At present, it operated in a way that had an adverse impact on morale. Professional staff had already suffered not only a regular decrease in take-home pay but also reductions in pensionable remuneration. Several of the Agency's best qualified staff had left early after long years of service. If the Agency was to be of increasing use to its Members, conditions of employment should not be allowed to deteriorate: otherwise, it would become impossible to attract high-calibre staff from all countries.

65. The General Conference had traditionally taken an interest in ensuring that the Agency was served by a high-quality, well-balanced international staff. In particular, questions of geographical distribution and representation of women on the staff had been referred to in General Conference resolutions. On those two points, the Agency's staffing structure had improved during the past five years. In the category of Professional staff subject to geographical distribution, the number of staff members from developing countries had increased by 97% since 1981, whereas the total staff increase in that category had been only 23%. The fraction of Professional posts occupied by women had also increased, but much more slowly - from 10.45% to 12.20%. Much more had to be done along that path.

66. As to the future, a point had been reached where resources - particularly human resources - were being stretched very thin to accommodate a larger volume of work within a zero-growth budget. But there should be limits to zero growth. If, in the future, governments wanted to make even greater use of the Agency in certain fields, there would either have to be reductions in other areas of co-operation - which would be difficult - or some increase in resources. Certain organizational changes might also be necessary to adapt the Agency's structures better to the activities carried out at present and to bring about improvements in efficiency.

67. The authors of the Agency's Statute had given the organization an effective and viable framework. Over a period of 30 years, an institution had been built up which served its Members competently and efficiently. To give just a few examples, the Agency was now applying international safeguards to some 500 nuclear facilities in more than 90 Member States; it was managing 10 specialized information systems, of which the most important was the International Nuclear Information System (INIS), handling about 90 000 items per year; it had developed a set of regulations for the transport of radioactive materials - regulations now generally accepted as the basis for national and international transport regulations and covering some 10 million shipments of radioactive materials each year; it implemented a technical assistance programme which made it possible to train about 650 fellows, send 1200 experts into the field, provide US \$25 million worth of equipment and organize 70 courses every year; it was the world's largest editor in the

nuclear field, with more than 200 volumes published each year; and it provided a forum for more than 8500 nuclear scientists who met for conferences, symposia, seminars and expert groups.

68. The messages received on the occasion of the Agency's anniversary bore witness to the value which Member States attached to the Agency and were very encouraging at a time when international organizations were the subject of so much criticism. The Agency's reputation as a technical, practical and responsible institution had to be preserved; patience and care had to be shown in dealing with difficult questions, and attention had to be focussed on areas where it was possible to make effective contributions to the peaceful uses of nuclear energy. If it succeeded, the Agency could be proud of its work.

69. He paid tribute to his predecessor, Mr. Eklund, who had guided the Agency wisely and competently for 20 years, and wished also to honour the memory of the Agency's first Director General, Mr. Sterling Cole, who had died earlier in the year.

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70. Mr. HERRINGTON (United States of America) read out the following message from the President of the United States, Mr. Ronald Reagan:

"On behalf of the American people, I extend to the delegates and staff of the International Atomic Energy Agency good wishes for a productive, successful meeting.

"This is a special moment in the life of a unique organization now thirty years old. The nuclear era brought unprecedented fears and hopes about a little-known technology that offered the prospect of devastation and the promise of major contributions to human welfare. Defining ways to harness this awesome technology to serve human needs preoccupied many of the world's finest minds in the 1950s. The institution known as the IAEA was the product of their inspiration and dedication.

"The IAEA has stood the test of time, and the ideals and principles embodied in the IAEA Statute are as valid today as they were thirty years ago. Promoting international co-operation, under effective safeguards, to share the many benefits of the atom in a way that reinforces international peace and security is both the major challenge before the IAEA and a summary of its achievements.

"This is an occasion for looking back, but also ahead. It is a time of hope and expectation: that all IAEA Members will seek to preserve the integrity of the Agency as an organization dedicated to serious, technical work; that all States will take steps to accept - as an important confidence-building measure - the application of IAEA safeguards to all of their peaceful nuclear facilities; that more States will be able to realize, through IAEA technical co-operation, the benefits of the atom to improve life; and, finally, that co-operation and understanding among States which share a common interest in peace will be enhanced as we work together in support of this important organization.

"I offer to you congratulations and reaffirm continued U.S. support for the vital work of the Agency."

71. He (Mr. Herrington) wished to join the President in congratulating the Agency on its thirtieth anniversary. During the last three decades, many important steps had been taken to promote the peaceful uses of the atom. There was every reason to be proud of the results of the Agency's efforts, which had contributed to the creation of a safer and a more prosperous world.

72. And yet, as the 1990s and the twenty-first century approached, a great deal remained to be done, and many obstacles still had to be overcome before the enormous potential of the atom could be fully harnessed. Nuclear safety in particular was a source of great difficulties and concerns. It was incumbent upon the Agency's Member States now to renew their dedication to nuclear safety, to international co-operation and to non-proliferation.

73. The events which had taken place in the world during the last two years had highlighted the importance of the Agency's mission in the area of energy security. The effect of the sharp decline in oil prices was still being reflected in oil imports and energy consumption levels, and in domestic energy production. In many countries, the concern aroused by Chernobyl was continuing to affect nuclear energy. Other questions relating to environmental concerns and energy trade were still lingering, particularly in the area of coal. Given those concerns and those challenges, it was clearly important to continue diversifying sources of energy. Incontestably, nuclear energy must remain a key factor in such efforts and a key element in energy security for the future. Nuclear energy was clean, its safety record was good, and its resources were virtually inexhaustible.

74. In the United States, nuclear power was the second most important source of electricity, and the energy source which was developing most rapidly. Throughout the world, with more than 390 installations now operating, nuclear power provided the energy equivalent of more than 7 million barrels of oil per day. During the last 10 years, electricity generation by nuclear plants had increased at an annual rate of more than 14%. Nuclear power was certain to remain the fastest growing source of electricity up until the end of the 1980s. More than 100 nuclear power plants had been ordered over the world during the last decade, and according to forecasts about 500 nuclear power plants would be operational by 1990.

75. Clearly, nuclear power could and must play a greater role in meeting the energy needs of the future. Countries poor in fossil fuel resources had already opted for nuclear power, the only technology capable of producing power in large amounts and, accordingly, of providing an alternative to fossil fuels. Most countries which had undertaken to replace oil by nuclear power for electricity generation would have completed their conversion by the 1990s. But increases in demand for electricity and the necessity of replacing obsolete plant would continue to stimulate the construction of nuclear power into the 21st century. It was to be expected that the use of nuclear power would grow parallel with the consumption of electricity throughout the world. Increases in national productivity, enhanced competitiveness in world trade and improved standards of living were closely linked with a continuous growth in the consumption of electricity and hence in the utilization of nuclear power. That was a reality which no one could ignore.

76. Despite the great promise it held out, nuclear power was still meeting with hesitations rooted in considerations of safety. The legacy of Chernobyl could not be overcome in a short time. Despite the progress that had been made, public opinion continued to harbour fears about the safety of nuclear energy, and nuclear power would never realize its full potential until governments jointly undertook to put those fears aside. It hardly mattered how safe and efficient nuclear power plants were: if public opinion was against them, no new plants would be ordered. The concerns of the public and the problems that stemmed from them could not be allayed overnight, and in

most countries it would require a combination of public education, technological progress and continued safe operation of existing plants to bring about a change of heart in the public and among investors.

77. To a large extent that task was in the hands of the Agency's Member States. Only a year ago the Agency had found itself confronting a great challenge - that of responding to the Chernobyl disaster and its consequences for the peaceful utilization of nuclear power. At its special session and its regular session in 1986, the General Conference had dealt with many important problems: in particular, it had adopted the two new international conventions on early notification and emergency assistance; it had launched an enhanced nuclear safety programme; and it had firmly rejected certain efforts to dictate extraneous political actions that would have undermined the Agency's goals. Since then, prudent programmes had been implemented which responded to the increased interest of Members in nuclear safety and radiation protection. The Agency had, of course, provided information on Chernobyl, but it would be useful to receive from the Soviet Union more detailed information on the accident; and in fact his delegation believed it was incumbent upon that country to provide such information. Meetings to be held in the weeks to come would provide it with an excellent opportunity to do so.

78. The Agency should also continue to play a role in promoting worldwide nuclear safety and sound practices. An important step in that direction had been taken in 1986 with the signature of the two new conventions, which guaranteed better international co-operation in the event of an emergency or an accident. Ratification procedures had not yet been completed, but the United States nevertheless reconfirmed the commitment it had given the previous year concerning voluntary notification.

79. The Agency should now concentrate on the priority tasks it had been given under its nuclear safety mandate. It should ensure that the tools at its disposal were well adapted and adequate to the task. The United States would be happy to contribute to implementing that objective. The Agency had a mandate and a responsibility to work for a stronger programme of international co-operation in nuclear safety. A step in the right direction had been taken in 1986, but it was important to continue to move forward. Ensuring public

safety was an important mission of the Agency's and one which should continue to have first priority among its concerns. There should be no compromise on that issue.

80. The Agency's system of international safeguards was another critical area of concern. Safeguards were imperative and constituted a key factor in building confidence among nations. The United States had always been convinced of the viability of the Agency's safeguards system and had demonstrated its confidence by making sizeable financial contributions and by providing the services of experts. In practice, the United States pursued in international nuclear commerce a policy completely consistent with Agency safeguards. Safeguards were in the interest of all Member States, and the Agency had the means to implement them efficiently. It should continue to ensure that inspectors in the field had access, in good time, to the equipment and instruments they needed.

81. The Agency's safeguards programme was one of the pillars upholding the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). As had been said at the recent NPT Review Conference, those safeguards were a fundamental element of the Treaty and played a key role in preventing the proliferation of nuclear weapons and other nuclear explosive devices. For its part, the United States continued to believe in the viability of the NPT and, in particular, supported the efforts of the President to achieve a reduction in nuclear arms. There was every reason to be optimistic about the progress that had been made on the question of intermediate-range and short-range missiles - progress that had been announced by President Reagan the preceding Friday. The agreement between General Secretary Gorbachev and President Reagan to sign such a treaty in the course of the autumn would mark a historic moment in the world's efforts to reduce the risk of nuclear war.

82. In a few days' time, the General Conference would once more debate the question whether a Member State of the Agency should be excluded for political reasons. Participants in the General Conference should be forever on their guard against those who sought to impart a political character to the Agency's discussions. During the first session of the General Conference, in 1957, President Eisenhower had expressed the hope that "the fission of the atom, under the wise administration of the International Atomic Energy Agency, will

one day make it possible to unite a divided world". The intrusion of politics would destroy that vision, because it would divide an organization whose goals were practical and not political.

83. If the General Conference voted to exclude any Member State of the Agency for political reasons, it would be voting at the same time against nuclear safety and world peace. Chernobyl had shown clearly that nuclear safety was not, and could never be, a purely national concern. It was an international problem, and all participants at the General Conference must seek solutions to it - must meet the challenge both individually and collectively. The General Conference should reject any effort which tended to compromise that effort and to harm the integrity of the organization.

84. The Agency's future would perhaps depend on the manner in which it responded to those who wished to put politics before the important issues confronting the organization. The Agency was one of the few international bodies that had retained its technical character, and political questions were not its task. The United States felt that the present session of the General Conference would be of decisive importance for the credibility of the Agency. The existence of the Agency would no doubt cease to be justified if it became another political tribune.

85. Mr. MITSUBAYASHI (Japan) read out the following message from Prime Minister Nakasone of Japan:

"On the occasion of its thirtieth anniversary, I have the honour to extend my heartfelt congratulations to the International Atomic Energy Agency on the outstanding achievements the Agency has successfully made in the peaceful uses of nuclear energy.

"As a strong advocate of Japan's nuclear programme, and deeply involved in its development since its inception, I firmly believe that multilateral efforts should be pursued vigorously for the extensive application of the atom to peaceful activities for the benefit of mankind.

"It is most gratifying, therefore, to note that the Agency has made appreciable progress in such areas as safeguards, nuclear safety, radioisotopes and technical co-operation.

"Japan, for its part, is determined to further pursue active international co-operation, thereby contributing universally to the peaceful use of nuclear energy and nuclear non-proliferation.

"The Agency, whose active contribution to the cause of peaceful atomic development and nuclear non-proliferation has won universal praise and recognition, has an important mission to fulfil in promoting, through its future programmes, the peaceful pursuit for greater nuclear application.

"May I express Japan's increasing support for the Agency's multiple activities and wish the Agency every success in the days ahead."

86. Japan had begun to use nuclear energy on a large scale for peaceful purposes at about the time the Agency's Statute had been adopted. In the ensuing 30 years, great progress had been made in the establishment of nuclear power generation systems and in creating a viable nuclear fuel cycle programme. On the basis of the results thus obtained, the Atomic Energy Commission had adopted, in June 1987, a new long-term development programme for the utilization of nuclear energy in which the latter was treated as a "key energy source" and its development accordingly given first priority.

87. Installed nuclear power in Japan was at present 28 GW(e), or 28% of total electricity generation; that meant that nuclear power generation had already overtaken oil-fired stations. Under the new programme, nuclear power in Japan was expected to reach at least 53 GW(e) by the year 2000 and 100 GW(e) in 2030 - in other words, about 40% and 60%, respectively, of total electricity generation. With that end in mind, Japan was planning the construction of a commercial uranium enrichment plant and a facility for shallow burial of low-level radioactive wastes, both to be operational around 1991. Japan had undertaken to apply what was called a "reprocess and recycle" policy, in other words to use the plutonium and uranium obtained through the reprocessing of irradiated fuel in order to make the most efficient use of uranium resources and to guarantee stable nuclear power generation. In that connection, the construction of the first privately financed reprocessing plant, to begin operation around the middle of the 1990s, was foreseen. The programme also provided for the construction - in the second half of the 1990s - of a demonstration breeder reactor on the model of the Monju prototype breeder which was at present under construction and was to go into operation in 1992.

88. Another basic objective of the programme was to promote research and development on new uses of nuclear energy - at the "frontiers" of nuclear science, so to speak. It was hoped that by thus encouraging research, Japan would contribute to technological innovations all over the world.

89. Another of the fundamental points of the programme was Japan's resolve to make an active contribution towards international co-operation in the peaceful uses of the atom for the benefit of all mankind by placing special emphasis on non-proliferation and on safety. It was in that spirit that Japan had recently participated in the work of the quadripartite committee set up to consider a conceptual study for an international experimental thermonuclear reactor. Japan would continue to strengthen its participation in the Agency's activities by making as much use of the Agency as possible when promoting international co-operation.

90. Japan would continue to assist countries where the peaceful uses of nuclear energy were still in their infancy. In doing so, it would continue to lay emphasis on multilateral co-operation, particularly at the regional level. In the past, Japan had made generous contributions to the Technical Assistance and Co-operation Fund, and it had participated actively in the regional co-operative agreement for research, development and training in nuclear science and technology (RCA) by making its own special contribution thereto. Within the framework of that agreement, Japan envisaged a new project designed to strengthen radiation protection, as part of its contribution to promoting co-operation in the region of Asia and the Pacific. It hoped that that example of regional co-operation would be followed in other regions as well.

91. Nuclear safety was an essential condition for the success of nuclear technology. For that reason, Japan's Nuclear Safety Commission played an important role and its directives were regularly applied by ministries and by industry. That being so, safety standards were very strict, as could be seen from the very small number of incidents and the high operational availability of plants. As the Commission had indicated in its report published in May, which ventured a comparison of the situation in Japan with the accident at Chernobyl, it was important to continue concerted efforts to improve nuclear

safety in design, operational control and in human safety consciousness. The new long-term programme likewise provided that the ministries, research establishments and industrial undertakings should continue to guarantee safety by optimizing their safety measures and by promoting research programmes on the subject.

92. International co-operation was of the greatest importance. Japan appreciated the role the Agency had played in the activities following Chernobyl, such as its post-accident analysis and the preparation of the two conventions. It hoped that the Agency, having drawn appropriate lessons from the accident, would continue to play an active role in the exchange of information and research results; Japan would, for its own part, participate fully in such work. Thus, Japan's Nuclear Safety Commission expected to host, in December 1987, an international symposium entitled "Nuclear safety: water reactor regulation and safety"; and the Japanese Government, in collaboration with the Agency, planned to host, in February 1988, an international conference entitled "Man-machine interface in the nuclear industry". Moreover, Japan had recently requested the Agency to send an OSART mission. In June it had acceded to the conventions on early notification and emergency assistance, and invited countries which had not yet done so to accede to those conventions without delay.

93. As the Director General had indicated, physical protection was an important element in promoting the peaceful uses of nuclear energy. That being so, the Japanese delegation was happy to note that the Convention on the Physical Protection of Nuclear Material had entered into force in February. Japan had taken care to adopt the essential measures of physical protection, in conformity with the Agency's standards. Conscious of its international responsibility in matters of physical protection - particularly in view of the fact that nuclear material transports were bound to increase - Japan intended to accede to the Convention as soon as possible: at present, it was taking the necessary steps for that purpose.

94. Obviously, it was not necessary to dwell on the principle that the peaceful use of nuclear energy was linked with non-proliferation. Having incorporated those principles in its Basic Law on Atomic Energy in 1956,

Japan, as a party to the Non-Proliferation Treaty (NPT), had actively contributed to maintaining and strengthening the international non-proliferation regime. It was a matter for satisfaction that new States had become parties to NPT in 1986, and in particular that Spain had announced its decision to accede to the Treaty in February - all of which enhanced the universality of the Treaty, for the application of which the Agency's safeguards programme constituted an essential mechanism. The fact that no case of a diversion of materials for military purposes had been discovered during the past year was evidence of the efficiency of that programme. However, the number of facilities under Agency safeguards was progressively increasing, and one might legitimately wonder how it would be possible to maintain and strengthen a rational and effective implementation of safeguards in view of the present financial situation. In that connection, Japan had contributed to the development of inspection techniques through its JASPAS programme. Given the recent evolution of safeguards-related technology, it was now a matter of urgency to devise "a new approach to safeguards" which would be more rational and more efficient, and his delegation hoped that the debate in SAGSI would continue with that objective in view.

95. The Agency was basically a technical organization whose mission was to promote the peaceful utilization of nuclear energy while preventing nuclear weapons proliferation. That being so, it was important not to introduce into the debates of the Agency's policy-making organs extraneous political considerations which might divert the Agency from its true objectives. Political questions should indeed be thoroughly debated, but that debate should take place in the appropriate forum; above all, it was vital not to alter the character of the Agency, which was an international organization with a technical vocation. His delegation hoped that other delegations would take that consideration into account during the debates of the General Conference.

96. The Agency had the reputation of being one of the best international organizations; even so, it must not forget that, during the last few years, questions of administrative and budgetary reform had taken on a priority importance in many other organizations. The Agency should make a resolute and realistic effort to adopt measures which would further enhance its efficiency and which would enable it to maintain zero real growth.

97. As the principle international organization in the nuclear sphere, the Agency had made a vast contribution to peace and to the welfare of humanity through its various co-operation activities and by successfully discharging its obligation to prevent nuclear proliferation. It had succeeded thanks in part to the wisdom of Member States, and with the purpose of bringing to the world the benefits of the atom. Aware as it was of the importance of the Agency's role, Japan was firmly resolved to support the Agency to the greatest possible extent in all its activities.

98. Mr. HAYDEN (Australia) recalled that the Agency had been created after a decade of momentous upheavals marked by the collapse of the existing world order, the first self-sustaining nuclear chain reaction and - less than three years later - the testing and use of nuclear weapons. It was against that background that the nations of the world had sought to inaugurate a new international order of peace and security based on co-operation between States. Within the newly formed United Nations, they quickly focussed on ways of ensuring that the potential benefits of nuclear technology could be effectively harnessed through international co-operation - and strictly limited to peaceful uses. In 1946, the United States of America, the only country then in possession of nuclear weapons, had put forward far-reaching proposals (known as the Baruch plan) aimed at the establishment of an organization to which all phases of the development and use of atomic energy could be entrusted. In 1953, President Eisenhower had proposed the establishment of an international atomic energy agency which would take the necessary steps to ensure that fissionable materials were used for peaceful purposes in the service of humanity. Three years later, in October 1956, the Statute of the International Atomic Energy Agency had been opened for signature, and it had entered into force on 29th July 1957. Australia was proud to have been among the drafters of the text and took pride likewise in the vitality, relevance and professionalism consistently shown by the Agency.

99. Only a short time after the founding of the Agency, negotiations had begun on the creation of a nuclear safeguards system which would make it possible to detect any diversion of safeguarded nuclear material for military purposes. It had been generally felt that such a system was essential: without it the Agency would not be able to fulfil its mandate and there would be no hope of slowing down the proliferation of nuclear weapons. That was why

the Agency had from the start had a dual mission: on the one hand to promote the contribution of atomic energy to peace, health and prosperity throughout the world; and on the other hand to verify, through the application of international safeguards, that nuclear facilities and nuclear materials were used exclusively for peaceful purposes. That responsibility had taken on a new focus, and an increasingly universal dimension, in 1970 with the entry into force of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), which itself had led to the development of the Agency's NPT safeguards system.

100. The development and application of safeguards were highly complex but nevertheless essential activities of the Agency which required a constant renewal of systems, structures and equipment as well as close co-operation with the Board of Governors to settle quickly any difficulties that might arise, to foresee problems and to ensure that all necessary steps were taken. Thanks to the goodwill and co-operation of its Member States, the Agency had shown itself equal to the task and had been able to give the assurances which the international community had expected of it - namely that no nuclear material was being diverted for military purposes or for the production of explosive devices.

101. It was up to Member States to ensure that the Agency had the human and financial resources required to discharge its international legal obligations in the field of safeguards. Inevitably, the cost of applying safeguards would increase as new materials and facilities were submitted to the system and as new methods and techniques were adopted to deal with innovations in the design of power plants and equipment. Nevertheless, those costs were negligible compared with the price humanity would have to pay if the Agency's safeguards did not exist. The Agency likewise needed the co-operation of Member States for the day-to-day operation of the safeguards system, and in particular to settle problems relating to implementation and the designation of inspectors.

102. The assurance that no material subject to safeguards had ever been diverted for military purposes or for the production of explosive devices was a matter of the first importance for all countries, whether Members of the Agency or not, and whether or not they had adhered to NPT or had nuclear programmes of their own. Thus, everyone bore a part of the responsibility for supporting the safeguards system by every possible means.

103. At the time of acceding to NPT, Australia had possessed the skills needed to produce a nuclear weapon; but it had rejected that path. As a major exporter of uranium, Australia had a special interest in the safeguards system. It remained convinced that the best way for a country to conduct a responsible nuclear policy was to accept the international obligations inherent in NPT, as 136 countries (soon to be joined by Spain) had already done.

104. Australia had long advocated that States not party to NPT should at least submit all their nuclear activities to full-scope safeguards, and that acceptance of such safeguards should also be a condition for the supply of nuclear materials to non-nuclear-weapon States. It was extremely concerned by the fact that a small minority of non-nuclear-weapon States had so far preferred not to undertake any binding international legal commitment in the matter of non-proliferation, and was especially worried by the increasing risk of proliferation in South Asia, as it had had occasion to say to the countries concerned.

105. The authors of the Agency's Statute had been motivated essentially by the need to take account of the destructive potential of nuclear technology, even while promoting its use for peaceful purposes. The creation of an international body with a mandate to verify by on-site inspections that States were respecting their obligations under the Treaty was an unprecedented enterprise, assuming as it did that States would surrender a part of their sovereignty. The Agency's safeguards system had been and still was an unqualified success, and it was hardly surprising that the guiding principles of safeguards should be under consideration for application in other areas of arms control.

106. In keeping with its Statute, the Agency was also playing an increasingly important role in the area of nuclear safety. Some months ago, at the time of the first anniversary of the Chernobyl accident, the world had had occasion to recall the importance of nuclear safety and the seriousness of the threat which attended any underestimation of nuclear safety. His delegation welcomed the rapid conclusion of the two new conventions, and also the stress laid by the Agency on safety review teams and on safety standards. Australia had signed the two conventions in question during the special session of the General Conference in 1986 and would be depositing its

instruments of ratification in the course of the present session. It had likewise decided to co-sponsor, with the Agency, a conference on Radiation Protection in Nuclear Energy, to be held in Sydney in April 1988, and to ratify the Convention on the Physical Protection of Nuclear Material. That convention, drafted pursuant to a recommendation of the First NPT Review Conference, had entered into force during 1987 and would guarantee additional protection against diversion of nuclear materials and against the possibility of terrorist attacks, involving nuclear materials.

107. In technical assistance and co-operation, the Agency had consistently obtained impressive results. The transfer of peaceful nuclear technology through the Agency's programmes had contributed to advances in electricity generation, industrial development, medicine, agriculture and so on. Apart from its contributions to the Technical Assistance and Co-operation Fund, Australia was continuing to make extrabudgetary funds available for projects under the Regional Co-operative Agreement for Asia and the Pacific (RCA). In June it had signed the third agreement on the extension of the RCA, which had proven itself to be an exceptionally fine mechanism for regional co-operation in the nuclear field.

108. During the past year, Australia had modified the legislative basis of its nuclear activities. In the course of that modification it had promulgated a Nuclear Non-Proliferation (Safeguards) Act, which gave effect to Australia's international obligations under NPT and the Treaty of Rarotonga, and which established stringent controls over the possession and transfer of nuclear materials. Australia had also submitted its own national nuclear research programme to a rigorous review. The former Australian Atomic Energy Commission had given way to the Australian Nuclear Science and Technology Organisation (ANSTO). That body would be focussing its attention on the practical applications of nuclear technology relevant to the economic and social development of the country. The law by which ANSTO had been set up expressly prohibited any research and development aimed at the design or production of nuclear weapons or any other nuclear explosive device. Research and development work on SYNROC, a promising method for the management of second generation nuclear waste, was being continued. Australia hoped soon to sign bilateral co-operation agreements with Italy on research and development. ANSTO had recently given a successful demonstration - in a

non-radioactive plant - of the fabrication of commercial-scale SYNROC storage cylinders. Uranium production had continued to make progress, and Australia was proud of its reputation as a responsible and reliable supplier.

109. The Agency could take just pride in the results it had obtained during the 30 years of its existence and in the fine reputation it had won. In the future, too, it would continue to bear heavy responsibilities, and would have to confront its challenges in a climate of extreme budgetary stringency. It would have to take difficult decisions in establishing its priorities. Safeguards, safety and technical assistance would remain the key activities, but others such as the treatment and utilization of plutonium could not be neglected either.

110. The Agency was not, any more than the other international organizations, exempt from political disputes among its Members. Whatever the political ideas of each Member might be - and as far as South Africa was concerned, it was a familiar fact that Australia vigorously condemned apartheid - it would be contrary to the common interests of the Agency's Members to allow political problems to compromise the organization's activities. If countries had reason to be proud of the Agency's successes, that was unquestionably because of the respect in which the principles and the rules laid down in its Statute had consistently been held; that must continue to be so, if the Agency was to contribute further to world peace and security.

111. Mr. LUKMAN (Nigeria) conveyed the warm congratulations of the Government and people of Nigeria to the International Atomic Energy Agency, its Director General and its staff on the occasion of the organization's thirtieth anniversary. The Agency had become a true symbol of multilateral co-operation in the peaceful uses of atomic energy. It had every reason to be proud of the accomplishments of its 30 years, for it had in fact, to a large extent, realized the objectives assigned to it by its founders. In 1953, the creation of such an agency had seemed a distant and impossible dream, in view of the controversies then raging over the "atom". But the dream of voluntary sharing of knowledge concerning the peaceful uses of atomic energy, under the control and with the appropriate safeguards of an international authority, had become reality, and the Agency was today one of the most efficient and respected bodies of the United Nations family.

112. His delegation had read the Agency's Annual Report for 1986 with interest, but could only regret that, of the 397 power reactors at present operating, none was to be found in Africa - unless the South African nuclear installations were taken into account - and that of the 23 plants which had gone into operation in 1986 none, apart from the one in the Republic of Korea, was in a developing country. Although the main objective of the Agency was to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world, the developing countries were still not receiving their full share of those advantages.

113. Africa, for example, seemed to be a passive observer which had not yet been able fully to benefit from nuclear technology. There were many reasons for that, particularly the lack of adequate financial resources, of a suitable infrastructure, the dearth of high-level specialists, limited access to raw materials, to nuclear equipment and technology, and the low level of assistance to research and development. The Agency should continue its help towards solving the problems of developing countries in general, and of those of Africa in particular. In that connection his delegation noted with satisfaction the work of the high-level expert group on the promotion of nuclear power in developing countries, and hoped that the Agency would do its utmost to expedite that work.

114. Nigeria appreciated the importance of nuclear energy as a complementary or replacement source of energy. It was likewise aware of the numerous applications of nuclear energy in food and agriculture, energy, medicine, the physical sciences and technology in general. As far as technical assistance was concerned, it could be seen from a perusal of the annual report that the share of assistance provided to Africa in 1986 had dropped by comparison with 1985. The Agency should try to increase its technical assistance to Africa, not just in relative terms but in absolute terms, since 26 of the 36 least developed countries were African. The training courses and study fellowships provided by the Agency, notably those arranged in collaboration with FAO, held great interest for Nigeria, which hoped to benefit from those programmes more and more in the future. It was also reassuring to see that the programme for Africa laid stress on agriculture: a generalized application of nuclear techniques in agriculture would stimulate production

and make it easier to attain the goals of Africa's economic recovery programme. Nigeria was furthermore satisfied with the technical assistance it had received towards elimination of the tsetse fly by the sterile insect technique under the BICOT project, and hoped that the second phase of the project would be implemented without delay.

115. A number of questions were of particular interest to his delegation -- among them nuclear safety and radiation protection. The Director General and the Secretariat were to be congratulated on the work that had been done in that area, and in particular on the preparation for the two conventions and the elaboration of the expanded nuclear safety programme. The efforts that had been deployed in that direction for more than a year would certainly help to restore public confidence in nuclear power. In that connection, his delegation wished to urge the necessity of providing developing countries with training in nuclear safety and radiation protection. Similarly, all Member States should seek agreement on other questions relating to safety, notably the sharing of safety-related information, the creation of an emergency assistance fund to aid the developing countries in the event of a nuclear accident, and the preparation of a convention on State liability for nuclear damage.

116. Another question of concern to the Nigerian delegation was the amendment of Article VI.A.2 of the Statute. The gross under-representation of the regions of Africa and of the Middle East and South Asia was a problem that had gone too long without a solution: the question had been on the agenda of the General Conference for nine years and still, unfortunately, seemed no nearer to a solution. Africa was the region with the largest number of Member States, but still had only five seats on the Board. It was in the interest of the Agency that the regions with the largest numbers of Member States should be represented equitably in the policy-making organs, and his delegation hoped that the General Conference would make definite proposals on the subject at its present session.

117. He wished to reaffirm his country's dedication to the objectives and the Statute of the Agency. Nigeria had been one of the first Member States to accede to the Treaty on the Non-Proliferation of Nuclear Weapons. Eager as it was to use the peaceful applications of nuclear energy to accelerate its own

economic and social development, Nigeria had decided to negotiate and sign a safeguards agreement with the Agency. It hoped that that agreement, which would strengthen co-operation between Nigeria and the Agency in the peaceful uses of atomic energy, could be rapidly concluded.

118. His delegation believed that, although the Agency's aims were essentially technical, it could not stick its head in the sand like an ostrich and fail to take account of political events which were having a considerable impact on the Agency's work. With regard to the nuclear capability of South Africa, his delegation and the African group as a whole wanted to express their gratitude to the Board of Governors for the courage it had displayed in June when it had recommended the General Conference to deprive the racist régime of South Africa of its rights and privileges as a Member of the Agency, under Article XIX.B. of the Statute. Nigeria trusted that all delegations which respected the dignity and freedom of man and attached importance to the Agency's credibility would support that carefully considered recommendation of the Board. The Board had adopted that recommendation because South Africa had bluntly refused to comply with the various resolutions in which the General Conference had asked it to submit all its nuclear facilities to the Agency's safeguards, and also because South Africa had refused to behave in accordance with the aims and principles of the United Nations Charter and to abolish its inhuman and hateful system of apartheid. South Africa would like to enjoy the rights and privileges of membership of the Agency and other international organizations, whereas through its own institutions it was depriving 90% of its population of human rights and individual liberties.

119. Very-well-informed sources corroborated the fact that the apartheid régime had set up a testing ground in the Kalahari in 1977, had tested a nuclear device on the coast in 1979, and was now building a nuclear missile testing centre on the island of Marion. As had been said on many occasions, the nuclear capability of South Africa represented a very serious danger to peace and international security. It was a threat in particular to the security of African states and enhanced the danger of nuclear-weapons proliferation. In the hands of a régime which sought to preserve its racial supremacy at all costs, nuclear weapons were a source of tremendous concern and danger. Was it not true, after all, that very highly placed members of the South African régime had asserted they were prepared to defend apartheid by any and all means?

120. The General Assembly of the United Nations had, in its resolution 41/35B, expressed once more its indignation over the evils of apartheid and had asked the Security Council to apply obligatory sanctions against the racist régime of South Africa in conformity with Chapter VII of the United Nations Charter. It had likewise requested Member States to exclude South Africa from all organizations of the United Nations system of which it was still a member. It was time that the Agency took that step in conformity with the recommendation of its own Board of Governors. For years South Africa had taken no notice of the Agency's resolutions and was adopting, in its negotiations with the Agency, an attitude of contempt and disdain, thereby seriously compromising the operation of the Agency's safeguards.

121. Certain countries were opposed to the exclusion of South Africa, notably in the name of what they chose to call the principle of universality. However, everyone knew that the racist régime of South Africa did not practise universality within its own borders, and that it denied the universal principles of the rights of man, of human dignity and of self-determination. Those same countries claimed that the Agency would lose control of safeguards in South Africa if the latter were excluded from membership. But one could only lose what one in fact possessed, and his delegation wondered what control the Agency was today able to exercise over South Africa. South Africa had developed its nuclear weapons capability at a time when it was a Member of the Agency, and the situation could hardly get worse. The exclusion of South Africa would not prevent the Agency from fulfilling its safeguards functions, since, as the African group had stressed in its aide memoire on the subject, there were already cases in which the Agency was performing safeguards functions in States not Members of the Agency. Another argument often put forward was that the Agency was a technical organization and that it should not concern itself with political questions. The distinction between technical and political questions was, however, artificial and tendentious. At all events, South Africa had already been excluded from a number of specialized institutions and international bodies belonging to the United Nations system as a consequence of its odious policies.

122. Trying at all costs to avoid exclusion, South Africa had recently made certain symbolic gestures: a month earlier, for example, it had hastily

signed and ratified the two conventions on early notification and emergency assistance, in order to give an illusory impression of "progress". Yet it had not applied the resolutions of the General Assembly or of the Agency's General Conference in which it had been asked to submit all its nuclear facilities to Agency safeguards, and the security of African States was still threatened by South Africa's nuclear weapons capability. His delegation accordingly urged the General Conference in the strongest terms to support the recommendation of the Board that South Africa should be suspended from membership.

123. Mr. BRADY ROCHE (Chile) read out the following message of congratulations from the Minister of Foreign Affairs of Chile to the Director General on the occasion of the Agency's thirtieth anniversary:

"Sir,

"I have the honour to address you in the name of the Government of Chile, and also on my own behalf, to express our most sincere congratulations on the occasion of the Agency's thirtieth anniversary. I hope that the Agency will continue to promote the peaceful uses of nuclear energy for the well-being and prosperity of all the world's peoples and, in particular, on behalf of the populations of the developing countries.

"I take this occasion to thank the IAEA for the assistance it has given to Chile in developing the peaceful applications of nuclear energy.

"Accept, Sir, the assurances of my highest esteem.

Ricardo Garcia"

124. Describing Chile's activities in the nuclear sphere over the past year, he said that a great deal of progress had been made in connection with nuclear materials, particularly in developing the infrastructure required for research on the treatment of radioactive ores and the construction of a fuel element fabrication plant for research reactor fuel.

125. Efforts to promote the use of radioisotopes and radiations in various sectors of production and research and development had continued. The support given by the Agency's technical co-operation programme for the adaptation and use of these techniques in areas of direct relevance for the socio-economic development of Chile - such as agriculture, medicine, hydrology and industry - deserved special mention.

126. With regard to nuclear safety and radiation protection, following the unfortunate accident that had occurred in a nuclear power plant a year and a half earlier, intensified controls had been applied to imported foodstuffs, and indicators of environmental activity had been continuously checked throughout the country's territory. Chile had, moreover, co-operated with other countries of the region in monitoring doses of food contaminants. It had also continued to work out regulations and standards and to train personnel in such a way that nuclear development could be pursued in complete safety.

127. The Chilean Government considered the regional co-operative arrangements for the promotion of nuclear science and technology in Latin America (ARCAL) to be an efficient tool for improving standards of living in the countries of the region, and a helpful way of advancing towards integrated technical co-operation in the nuclear sphere. Chile therefore gave unreserved support to that regional initiative: it was participating actively in all ARCAL projects, was contributing to them through the services of its experts and was receiving fellows from the region in its own facilities; accordingly, it welcomed the support that the Director General was giving that programme. Chile had hosted the fourth technical co-ordination and planning session of ARCAL, and intended to submit the document established during those meetings for the approval of Latin American delegates within a few days.

128. A course for librarians and nuclear information specialists, organized in July 1987 in Chile within the framework of the ARCAL programme, also deserved mention. The Government of Chile had welcomed the suggestion that Chile should serve as a pilot centre for the project on nuclear information. He was convinced that the common efforts of Member States and efficient management by the Agency would enable the programme to serve as an effective spearhead for the development of nuclear technology in Latin America, just as the regional co-operative agreement for South East Asia and the Pacific had done in that region.

129. Chile, as he had already said, was prepared to put its facilities and the experience of its professional workers at the service of the Agency's technical co-operation activities. His Government felt that a country possessing sufficient energy resources (water, coal and so forth) might

perhaps not have a vast nuclear power programme, but at the same time might be very advanced in other applications of nuclear technology, such as those to be found in medicine, agriculture and so on.

130. His delegation wished to express its gratitude to the People's Republic of China, since the sale by the latter of 20%-enriched uranium hexafluoride for the fabrication of fuel elements for one of Chile's research reactors would contribute meaningfully to the country's nuclear development. It also thanked the Agency's Secretariat for the expeditious manner in which it had drafted the final text of the relevant safeguards agreement.

131. With regard to the Technical Assistance and Co-operation Fund for 1988, Chile's familiar attitude was that technical co-operation activities should be financed from reliable and predictable sources, such as the Regular Budget. In fact, Chile was convinced that all the Agency's activities should be treated in the same way and that none should be given priority over others. However, even though it could not agree with the present system, Chile had announced that it would contribute for the next year the full amount corresponding to its share of the assessed budget. It wished to appeal to other Member States to make the contributions requested of them and to do so in good time. Otherwise, the technical assistance and co-operation programme would continue to suffer from a dearth of funds, and that would bear prejudice to the developing countries in particular.

132. With regard to nuclear safety, Chile, which had signed the Conventions on Early Notification of a Nuclear Accident and on Emergency Assistance in the Case of a Nuclear Accident or Radiological Emergency a year ago, was convinced that those instruments would help to strengthen international co-operation in nuclear safety and to rebuild confidence among the general public. In that connection, Chile applauded the Agency's efforts to enhance nuclear safety through supplementary programmes carried out with a very small additional budget.

133. It would be very important to continue studies on the establishment of a legal regime embodying the liability of States for trans-frontier damage resulting from a nuclear accident, and to include in that new regime the concepts of nuclear damage, genetic damage to persons and environmental damage, which were not clearly defined by the international conventions at

present in force. Furthermore, if claims submitted under a regime of State liability were to be honoured properly, there would have to be some harmonization of international standards on radionuclide concentrations and levels of radioactive contamination in the event of accidents.

134. With regard to the question of strengthening co-operation between large international organizations, his delegation approved of efforts aimed at framing an agreement to regulate relations between the Agency and UNIDO so that their actions could be better co-ordinated.

135. Two questions had been debated at great length and so far in vain: the amendment of Article VI of the Statute as a whole, and the amendment of Article VI.A.2 of the Statute. The Government of Chile felt that the very nature of the subject meant that highly divergent interests must be involved; but until Member States had realized how important it was to display more flexibility in their positions, and to leave their own parochial interests aside as far as possible, the solution awaited for so long would remain out of reach.

136. With regard to the draft budget for 1988, he welcomed the Agency's efforts to use its financial resources to the best advantage by making economies and transferring appropriations between different programmes. In that way its objectives would, as far as possible, be attained even without departing from the principle of zero growth. At the same time, however, he feared that the zero-growth policy was bound to affect the Agency's promotional activities.

137. The Agency was to be congratulated on the activities carried out during the past year which were described in the annual report for 1986. Activities involving the applications of nuclear techniques throughout the world had had a considerable impact on agricultural production, food supplies and health - all sectors which had a direct influence on development, particularly in the developing countries themselves. For that reason Chile welcomed the fact that technical co-operation activities had become more efficient - in particular as a result of the evaluation programme.

138. On the occasion of the thirtieth anniversary, he wished to honour in particular the Agency's former Director Generals, Sterling Cole and

Sigvard Eklund, as well as the present Director General, Hans Blix. His gratitude went likewise to all employees of the Agency, who had given and were still giving of their best. Member States could be proud of the expansion that had taken place in the 30 years of the Agency's existence, because the projects supported by the Agency were actively contributing to the progress of humanity.

ELECTION OF OFFICERS AND APPOINTMENT OF THE GENERAL COMMITTEE (resumed)

139. The PRESIDENT invited the General Conference to return to the question of appointment of the General Committee. The Middle East and South Asia group had now informed him of the names of their candidates for the General Committee: they were the delegate of the Syrian Arab Republic, for the post of vice-president, and the delegate of Iraq. He suggested that the General Conference elect those two delegates.

140. The General Conference accepted the President's proposal.

141. The PRESIDENT noted that one candidate was still outstanding, namely the delegate to be selected by the Far East group, and expressed the hope that consultations would be concluded rapidly so that the General Committee could be duly appointed the following morning.

ARRANGEMENTS FOR THE CONFERENCE

(a) ADOPTION OF THE AGENDA AND ALLOCATION OF ITEMS FOR INITIAL DISCUSSION

142. The PRESIDENT proposed that the General Conference, in order to gain time, should once again depart from the provisions of Article 42(a) of its Rules of Procedure and ask the Chairman of the Committee of the Whole, who had been elected at the preceding meeting, to convene the first meeting of that Committee for the following morning: in that way the Committee could begin its debate on the questions which the Secretariat, in the provisional agenda (GC(XXXI)/799), had suggested allocating to it for initial discussion, as specified by the Statute, or those questions on which the General Conference itself had, the previous year, requested that reports be submitted at the present session. The agenda items in question were:

Item 9 (Measures to strengthen international co-operation in nuclear safety and radiological protection)

Item 10 (The Agency's budget for 1988)

Item 13 (The financing of technical assistance)

Item 14 (Staffing of the Agency's Secretariat)

Item 15 (Amendment of Article VI.A.2 of the Statute)

Item 16 (Revision of Article VI of the Statute as a whole).

143. Noting that there were no objections to his proposal, he assumed that it was acceptable to the Conference. The Committee of the Whole would accordingly begin its work the following morning.

The meeting rose at 6.10 p.m.

