

International Atomic Energy Agency



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Statement to the 39th Session of the General Conference
of the International Atomic Energy Agency
18 September 1995

Statement to the 50th Session of the United Nations
General Assembly
1 November 1995

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Director General
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The machinery of the IAEA has been working at full steam—even with some overpressure—since the General Conference met in 1994 and we can register considerable movement forward in many areas. I shall report to you about activities in the past year and about plans for the future.

The NPT Conference

In May this year the Review and Extension Conference decided to extend the Non-Proliferation Treaty indefinitely. This decision, testifying to the solid and broad commitment to nuclear non-proliferation, was greeted with relief and enthusiasm in many capitals. We should not close our eyes, however, to the reality that the decision was received with mixed feelings in a number of other capitals, where it was a matter of concern that the extension meant also an indefinite recognition of the nuclear-weapon status of five States parties. I submit that a forward-looking interpretation of the extension decision, and the principles and objectives which were also adopted, would be that they constitute a collective commitment to bring us to a world in which nuclear energy is used for positive, peaceful purposes and in which no single nation possesses nuclear weapons; that is a commitment by non-nuclear-weapon States not to acquire these weapons and a commitment by the five declared nuclear-weapon States to effective and accelerated nuclear disarmament.

The outcome of the NPT Conference has far-reaching implications for the future work of the IAEA. A continued role was envisaged for the Agency in the peaceful uses of nuclear energy and an expanded role was foreseen for it in verification. The IAEA was expressly recognized as the competent authority responsible for verifying and assuring compliance with safeguards agreements. The Conference further stated that parties to the NPT that have concerns regarding non-compliance with the safeguards agreements should direct such concerns, along with supporting evidence and information, to the IAEA for it to consider, investigate, draw conclusions and decide on necessary actions in accordance with its mandate. I read this provision as an endorsement of the Agency's verification role as it has evolved in recent years. The Conference also called for support for the Agency's ongoing actions to strengthen safeguards, and to increase its capability to detect any undeclared nuclear activities. It was

further recommended that nuclear material released from military use should be placed under IAEA safeguards as soon as practicable and the universal application of safeguards was envisaged once the elimination of nuclear weapons had been achieved.

The NPT Conference set 1996 as the target date for the conclusion of a comprehensive test ban agreement—a step which is widely viewed as a vital complement to non-proliferation and a symbol of progress towards nuclear disarmament. It further called for the early conclusion of an agreement to end the production of nuclear material for use in weapons—a cut-off agreement—and it endorsed the creation of additional nuclear-weapon-free zones. The assumption underlying current discussions on the cut-off agreement is that IAEA safeguards would be an essential element of the verification mechanism. It may also be assumed—if existing models are an indication—that the Agency would have a verification role in any new nuclear-weapon-free zone. In relation to a comprehensive test ban it is relevant to note, as I have done before, that such a ban in reality already exists for all the non-nuclear-weapon States parties to the NPT and is verified under comprehensive IAEA safeguards agreements. What roles the Agency might be asked to assume under a specific comprehensive test ban treaty are yet to be determined by the States negotiating this treaty.

The French Nuclear Tests

Before I leave the question of nuclear weapon testing, let me report to you, as I did to the Board of Governors last week, that I have recently received a letter from the Foreign Minister of France in which reference is made to the irreversible commitment of France to conclude a comprehensive nuclear test ban treaty in 1996 and its intention to undertake a final series of nuclear tests before that time. The Minister asked whether the IAEA would be willing to conduct a scientific mission to assess the radiological impact of these tests. Such assessment would have to be complemented by an assessment of the geological situation of the test site. In reply I have indicated that for the Agency to take a decision on the matter, a number of preliminary questions would need to be carefully considered—including the objective and the scope of the mission, its modalities and the composition of a team. I added that the

Secretariat wanted to consult with the French authorities as well as with others on these issues. Consultations with French experts are scheduled for this week.

As you are aware, the Agency provides numerous services to its Member States in the field of nuclear safety and radiological protection and has established radiation safety standards. The French inquiry is being considered in that context. You may also be aware that a mission was sent by the Agency to Kazakhstan last year to assess the radiological situation at the Semipalatinsk test site, and that a similar mission is being planned for the Marshall Islands. Also, our Monaco Laboratory has co-ordinated two inter-laboratory calibration exercises using various samples taken in 1991 and 1994 from the area of the French Pacific test sites. We therefore have some first hand experience in this field.

Strengthened IAEA Safeguards

Credible IAEA verification that nuclear materials and related items remain in peaceful activities is an increasingly important factor in nuclear disarmament and global security planning. At the same time the magnitude and complexity of the safeguards task continues to increase. In 1994 the IAEA inspection effort rose by more than 12% over the previous year. The increasing importance and volume of the safeguards effort impels us to develop and implement a strengthened and more cost-effective system. A full report on the actions that have been taken under the so-called Programme 93+2 is given in document GC(39)/17 and corrigendum.

Increased access to information about nuclear programmes and broader inspector access to sites within the State are fundamental prerequisites for strengthened safeguards. To obtain this has been the main thrust of the 93+2 Programme which the Board of Governors is considering. While some of the desired measures will require additional authority which must be sought, other measures can be implemented under the authority of existing comprehensive safeguards agreements. I welcome that the Board has taken note of the Secretariat's intention to achieve such implementation at an early date, after consultations and clarifications to dispel any remaining concerns of Member States. By making their nuclear activities as transparent as possible to the Agency, States can help provide the basis for more effective and efficient safeguards. They will have to decide whether they are prepared—as I think is in

their interest—to routinely provide greater access to information and locations than is presently required under safeguards agreements. Needless to say, the new arrangements must be both practical and cost-effective and make use of state-of-the-art verification techniques. The experience gained in trial arrangements made with several States suggests that in practice the cost to States of, say, granting multiple visas for inspectors and wider access within installations, is not great. It is really only a matter of a somewhat more co-operative attitude to facilitate strengthened and more efficient inspection. We believe that after a start-up period the new measures will be cost-neutral to the Agency. However, any significant increase in the number of countries accepting full-scope safeguards, or in the number of facilities and amount of material under safeguards, will inevitably involve additional costs.

Large increases in the verification effort may also result if nuclear materials removed from the military sphere of nuclear-weapon States are placed under safeguards—as was urged by the NPT Conference. Verification of such material started just one year ago and the present arrangements foresee funding through extrabudgetary contributions. An expansion of the IAEA verification that such nuclear material remains in the peaceful sphere to which it has been transferred requires special arrangements which are reliable and cover the full costs of this inspection effort.

Safeguards Implementation in the DPRK

Last year I reported that the Democratic People's Republic of Korea was not in full compliance with its safeguards agreement pursuant to the NPT. Document GC(39)/18 summarizes the many developments of the past year. Important among these is the framework which was agreed between the DPRK and the USA and which provides for a freeze and the eventual dismantling of the DPRK's graphite moderated reactors and related facilities and states the intention of the DPRK to come into full compliance with the safeguards agreement. On 4 November last year, the Security Council confirmed that the safeguards agreement remained in force and binding and requested the Agency to take the necessary steps to monitor the freeze. With the authorization of the Board, we have been doing this through the continuous presence of inspectors in the DPRK and I can confirm that the freeze has been put into effect and is maintained.

However, to come into full compliance with the safeguards agreement, the DPRK will have to do something it has not yet been willing to do, namely enable the Agency effectively to verify the accuracy and completeness of the DPRK's initial report of nuclear material subject to the agreement. In the absence of the required compliance, it is essential that all necessary steps be taken to preserve any information that is relevant to this verification.

Technical discussions have been held with the DPRK with respect to the activities to be carried out pursuant to the safeguards agreement at the DPRK's nuclear facilities, irrespective of their status under the freeze. Since the first of these discussions in November last year, arrangements have been in place enabling the Agency to meet many of its objectives. However, a number of issues remain, including the verification of the spent fuel of the 5 MW(e) reactor, the installation of monitoring equipment in the waste tanks of the reprocessing plant and the preservation, intact, of information relevant to the verification of the accuracy and completeness of the initial declaration. In the last few days a new round of IAEA-DPRK discussions has taken place at technical meetings in the DPRK. Limited progress was made on some issues. However, a substantial paper of technical proposals transmitted by the Agency was accepted only for study—not for discussion.

Agency Verification in Iraq under Security Council Resolutions

As I reported to the UN General Assembly in October last year, it is the Secretariat's conclusion that the essential components of Iraq's clandestine nuclear weapons programme have been identified and destroyed, removed or rendered harmless. This assessment was not based on faith in Iraqi statements, but on data gathered during inspections, on information provided by suppliers and Member States and, to a great extent, on analysis of the large number of original documents which were obtained in Iraq by the teams of the sixth and seventh IAEA inspection missions.

Since August 1994 IAEA inspectors are continuously present in Iraq to perform ongoing monitoring and verification of Iraq's compliance with relevant Security Council resolutions. This does not exclude renewed inspections for the purpose of investigations, if such should be called for to verify any new information.

Recently the IAEA has received additional information on Iraq's former nuclear weapons programme by way of new statements made and numerous documents and materials transmitted to the IAEA and to UNSCOM by Iraq following the departure to Amman of General Hussein Kamel, the former Iraqi Minister of Industry and Military Industrialization (GC(39)/10, Add.1). Of the new information which has been reviewed to date nothing suggests that a change is warranted in the Agency's conclusion which I have referred to. What we have been told is that as of August/September 1990, Iraqi authorities had the intention to take the safeguarded highly enriched research reactor uranium fuel at Tuwaitha (the nuclear research centre), extract the pure uranium by the spring of 1991, transform it into weapons-grade uranium metal and then use it to make a nuclear weapon. It is uncertain whether they would have been able to overcome the considerable technical difficulties involved in this plan. As it was, the plan was made impossible by damage inflicted on Tuwaitha through bombings in January 1991.

Let me note that the new Iraqi statements and all the documents and materials to which I have referred will have to be carefully examined for any new data. That they have been withheld for so long is clearly a breach of Iraq's obligations under Security Council resolutions.

What I further think should be noted in this affair is that *prima facie* it shows that the Iraqi authorities would not have hesitated to take nuclear material under safeguards and to time the operation in such a way as to make maximum use of the period before the next scheduled IAEA inspection, at which time the violation of the safeguards agreement would have become known. While taking the fuel would not have needed much time, processing and transforming it into bomb grade material would have taken more time. As I said, the effort was thwarted by bombing.

Some other lessons may also be drawn from this affair. One is that the replacement of high enriched uranium fuel by low enriched fuel in research reactors can, indeed, reduce the risk of proliferation. A second is that the change introduced in the safeguards system post Iraq in favour of more frequent inspections to ensure the timely detection of a diversion of a significant quantity of safeguarded material is prudent. A third is that real-time remote transmission of data, when it becomes readily available, will provide a useful tool for achieving immediate detection of diversion.

I turn now to developments in some regional arrangements.

Tlatelolco Treaty

I am pleased to be able to report further positive developments in relation to the Treaty of Tlatelolco. Since the last General Conference two States have become Party to the Treaty, two States have ratified it and one, Cuba, has signed it. This brings us closer to the date when the Treaty will enter into force for the entire zone of application and makes it essential that the required safeguards agreements be in force with all the States parties to the Treaty.

At its June meeting, the Board of Governors authorized the Secretariat to take action to obtain the prompt conclusion of all safeguards agreements outstanding pursuant to the Tlatelolco Treaty. The Secretariat is very actively engaged in ensuring that the required safeguards agreements are concluded. I appeal to the States concerned to fulfil their obligation under the Treaty to ensure that there is no delay in its entry into force for the entire zone of application.

Nuclear-Weapon-Free Zone in Africa

As requested by the General Conference last year, the Agency has continued to assist the African States in their efforts to establish an African nuclear-weapon-free zone, in particular in the elaboration of the verification regime. A draft Treaty text which, *inter alia*, entrusts the Agency with the task of verification, was considered and endorsed by the OAU Council of Ministers and the African Heads of State in Addis Ababa last June and it is expected that the draft Treaty will be considered by this year's General Assembly of the United Nations and that Africa will soon become yet another nuclear-weapon-free zone.

Nuclear-Weapon-Free Zone in the Middle East

In resolution GC(XXXVIII)/RES/21, the General Conference last year called upon all parties directly concerned to consider taking the practical and appropriate steps required to establish a mutually and effectively verifiable nuclear-weapon-free zone in the Middle East region. The resolution also requested the Director General to continue consultations with the States of the

Middle East to facilitate the early application of full-scope Agency safeguards to all nuclear activities in the region and the preparation of model verification agreements as a step towards the establishment of such a zone. As I have reported to previous General Conferences, model verification agreements cannot easily be prepared until the States concerned have clarified their views on the main issues of substance. This is not yet the case. Meanwhile the Agency is participating in some discussions on these issues within the peace process. I intend to continue my visits to and consultations with States in the region in order further to explore the verification questions and the material obligations which may be agreed upon and may call for verification.

Trafficking

A year ago, the international community expressed alarm at the number of incidents of illicit trafficking in radioactive materials that had been reported in 1994 and the General Conference invited me to take a number of actions to supplement the measures taken by governments. In 1995 there have been further seizures of illicitly held radioactive materials and it is clear that more efforts are needed and that States must exercise greater prudence in the use and storage of all radioactive materials.

In responding to the problems of nuclear trafficking, nuclear, customs and enforcement authorities of many countries and a number of international organizations are seeking to strengthen and co-ordinate their efforts to control and protect radioactive materials. Only last week the IAEA hosted a large interagency meeting which reached a number of useful joint conclusions. Within the IAEA, an Action Programme has been approved by the Board of Governors. We are already conducting training courses in the operation of State systems of accounting for and controlling nuclear materials. In addition, with the help of experts from Member States, courses are being arranged on physical protection methods and technology. Activities are further underway to help States address the radiation hazards connected with illicit trafficking. For 1997 a conference is planned to further facilitate the exchange of information and expertise on physical protection. Meanwhile, the Agency is establishing a database of trafficking incidents to provide factual information to member governments and the public. In July the UN Security Council expressed its full support to the Agency and other international bodies for their work in

this field. A full report on the Agency's actions is before you (document GC(39)/19).

Strengthening Technical Co-operation

Let me turn now to the Technical Co-operation Programme of the Agency, and in particular the initiatives taken to strengthen it and to improve delivery. (Detailed information on measures taken in the past year are set out in document GC(39)/13). Our technical co-operation with Member States must reflect their priorities for scientific, technological as well as economic and social development. However, a careful study of the programmes actually requested shows that they have often covered a wide range of areas, not all of them clearly related to national development goals.

Several initiatives have been taken to make the technical co-operation programme more effective and more relevant to the sustainable development of Member States. In the latter regard I commend to your attention a recent document (GOV/INF/773 of 8 September 1995) describing the Agency's considerable contribution to "Agenda 21 on the Environment and Sustainable Development".

Following the recommendations of the Fourth Policy Review Seminar last year, the Secretariat, working together with Member States, has started preparing "Country Programme Frameworks" which will help focus the programmes on key areas of government priority to maximize the impact. Another initiative aims at having fewer but better focused projects. I urge governments to help by submitting somewhat fewer projects—and to ensure that they are in line with their development needs and have the full backing of the national authorities.

Another measure planned is the promotion of technical co-operation among developing countries, or TCDC. One new idea is to subcontract institutions in developing countries which are recognized as centres of excellence in a particular field to implement selected technical co-operation projects for given countries.

I am pleased to inform the Conference that the technical co-operation programme delivery as of 30 August 1995 is the highest ever in the history of

the Agency. This is largely due to improved management practices, better design and support of projects and a careful overprogramming introduced this year with the Board's approval. As a consequence, not only will developing Member States receive more assistance in 1995, but also the carryover of unused financial resources will be greatly reduced. At the NPT Review and Extension Conference all participants acknowledged the importance of the work of the Agency as the principal agent for the transfer of nuclear technology to developing countries and welcomed the successful operation of the Agency's technical assistance and co-operation programmes. It was also recognized that the success of these programmes depends on the availability of predictable resources. I appeal, therefore, to all Member States to make full voluntary contributions to the Technical Co-operation Fund.

Technology Development and Transfer

Successive General Conferences have drawn attention to various areas of nuclear research and development of particular interest to developing countries. In response to such requests, you have before you special reports on isotope hydrology and the use of nuclear energy for potable water production. Let me briefly highlight some issues of particular interest at this time.

Sea Water Desalination Using Nuclear Energy

The availability of potable water is a growing problem in many Member States. Considerable progress was made last year as regards the evaluation of the technical and economic feasibility of seawater desalination using nuclear energy. The North African regional feasibility study has been completed, showing that the use of nuclear power plants for desalination is technically feasible and the costs competitive with that of fossil plants in the region. A similar feasibility study for Saudi Arabia is still under way.

Studies have also continued on practical options for nuclear desalination demonstration projects. However, the success of this programme is very much dependent on the availability of sufficient extrabudgetary contributions from interested Member States. I appeal for further support for it.

Irradiated Sewage Sludge

The Agency's Programme and Budget for 1995-96 contains a new multi-disciplinary project on the use of nuclear techniques for the management of liquid wastes—one of the major environmental problems identified in Agenda 21 of the Rio Summit on Environment and Development.

A new Co-ordinated Research Programme (CRP) was initiated on "The Use of Irradiated Sewage Sludge to Increase Soil Fertility, Crop Yields and to Preserve the Environment". The aim is to find ways by which solid and liquid wastes from households and industry could be utilized as a source of organic matter and nutrients for increasing crop production. This would reduce the needs for chemical fertilizers, and also the environmental pollution of other sewage treatment processes. The use of gamma and electron beam irradiators to eliminate disease-producing microbial pathogens is a promising technique that would permit the safe utilization of sludges as a biofertilizer.

25 Years of the International Nuclear Information System (INIS)

In May of this year the International Nuclear Information System (INIS) celebrated its 25th anniversary. INIS plays a key role in providing access to nuclear information to support activities worldwide in many diverse areas, e.g. nuclear power, safeguards, and nuclear techniques in food and agriculture. The INIS database now includes over 1.8 million references of nuclear literature and is growing at the rate of about 85 000 records per year.

New areas are introduced in the database as new demands arise in Member States. Thus, in 1992 references on environmental, health and economic aspects of non-nuclear energy sources were introduced in addition to those concerning nuclear energy.

INIS is by far the largest of the electronic databases created by the IAEA in co-operation with its Member States, and its continuing success reflects the active support and participation of those Member States. INIS maintains its non-commercial character and continues to facilitate the availability of nuclear information to users in all participating countries irrespective of their levels of development.

Nuclear Safety and Safe Radioactive Waste Management

Document GC(39)/INF/8 reports in a comprehensive manner the various measures which have been taken by the Agency to strengthen international co-operation in nuclear safety, radiological protection and radioactive waste management. I will therefore limit my remarks to some developments of particular importance.

Agency Management of Safety Issues

With a view to consolidating all the Agency's safety-related activities into one organizational structure, the Department of Nuclear Energy and Safety will be divided into two distinct Departments—the Department of Nuclear Energy, and the Department of Nuclear Safety. The latter will cover the three major safety disciplines—nuclear safety, radiation safety and radioactive waste safety. One change connected with the division is the development of a modified and streamlined process for the preparation of all Agency safety standards. The objective is to ensure uniformity and consistency in the preparation and review process of the documents covering the three interrelated safety disciplines.

Convention on Nuclear Safety

A major accomplishment in the nuclear safety area was the adoption in June last year of the Convention on Nuclear Safety. So far the Convention has been signed by 59 States and ratified or accepted by nine. A number of States are very close to ratification and I believe we can look forward to the Convention entering into force next year. Representatives of signatories of the Convention and other interested States will meet for the second time in November to continue discussions on the implementation process. The Agency is ready to assist States in meeting their obligations through, for example, its wide range of safety services.

Convention on Radioactive Waste Safety

The preamble of the Convention on Nuclear Safety urges the preparation of a Convention on the safe management of radioactive waste. In this regard significant progress has been made. At the end of its first meeting, in July, the

open-ended group of legal and technical experts entrusted its chairman, Professor Baer from Switzerland, with the preparation of a draft of the Convention. This draft will be considered at the second meeting of the group in December. The progress made so far is encouraging and if the pace is maintained a final draft could perhaps be ready some time next year.

Liability

Since the last session of the General Conference the Standing Committee on Liability for Nuclear Damage has recommended, albeit with some reservations, that a diplomatic conference be convened in 1996 to revise the Vienna Convention and to adopt a system of supplementary funding. However, some fundamental issues remain to be resolved. As work on revision of the Vienna Convention is nearing completion but cannot progress further without concomitant results on the issue of supplementary funding, the Standing Committee has devoted much effort to elaborate an instrument on supplementary funding. There will be an informal meeting next week and I hope that the efforts made will facilitate the emergence of a broadly acceptable draft convention—and thereby provide the necessary basis for a successful Diplomatic Conference and a viable international instrument on liability.

While work continues on the strengthening of international nuclear liability arrangements, I should like to mention that the number of States that have ratified the Vienna Convention and Joint Protocol has grown, especially among States in Eastern and Central Europe, and now stands at 26 and 20 respectively.

Nuclear Safety in the Former Soviet Union and Eastern Europe

The Agency's work on the safety assessment of nuclear power plants in Eastern Europe and countries of the former Soviet Union has continued and an international consensus now exists, identifying the major safety issues and their significance for each of the various reactor types. The emphasis is now shifting to a review of the status of implementation of the proposed safety improvements and to the collection of up-to-date information on the upgrading situation at each of the reactors involved. These results of our

work provide input into bilateral and multilateral assistance projects co-ordinated by the G-24 mechanism in Brussels.

Following the decision by the Armenian Government to restart Medzamor Unit 2 reactor, an Agency mission visited Armenia in April 1995. Its report pointed to a difficult safety situation, including a number of unresolved technical issues. I conveyed these results to the Armenian Government and stressed the need to solve the safety issues before plant restart. I also stressed the need for highly competent and well trained operating staff. Armenia has had considerable co-operation from Russia and the Agency has responded to requests for assistance on several safety related issues, e.g. evaluation of the seismic situation and of the condition of the pressure vessel as well as on emergency planning. Responsibility for all steps which are needed before start-up and for safety upgrades thereafter rests, of course, with the Government.

I must again draw your attention to the fact that we continue to rely on extrabudgetary resources for the major part of our assistance efforts in the former Soviet Union and Eastern Europe.

Chernobyl Conference

The tenth anniversary of the tragic accident at the Chernobyl NPP, in April 1986, will provide an occasion for different authorities and international organizations to arrange meetings at which various consequences of this accident will be assessed. These events will culminate here in Vienna on 8-12 April 1996 in an international conference that will seek to sum up the accumulated knowledge. The Conference is jointly sponsored by the WHO, the EU and the Agency and it is organized in co-operation with several other organizations. It will consider the findings of the prior meetings on the health consequences of the accident, its associated environmental, social, economic and political impacts, the remedial measures taken to improve the safety of Chernobyl-type reactors and the reliability of the containment structure (sarcophagus) of the destroyed reactor. The April Conference is intended to seek a common and conclusive understanding of the nature and magnitude of the consequences of the accident.

Radioactive Waste Management in the Russian Federation

In the context of measures taken by the Agency to resolve international waste management issues, the Agency organized in May this year, at the request of the Nordic Council of Ministers and with the co-operation of the Russian Federation, a *Seminar on International Co-operation on Nuclear Waste Management in the Russian Federation*. A comprehensive picture was provided of the present waste management programmes, structures and problems in Russia and an overview was obtained of the co-operation with Russia in the field of nuclear waste management. A *Contact Expert Group* will be established under the auspices of the IAEA for the purpose of organizing and following up co-operative activities between Russia and other States. A first meeting of this Group is being organized by the IAEA in Stockholm later this week.

Nuclear Energy and the Environment: the DECADES (Databases and Methodologies for Comparative Assessment of Different Energy Sources for Electricity Generation) Programme

One of the major future challenges in the energy field will be to ensure sustainability. This will require both enhanced management of natural resources and a reduction of emissions which are dangerous to health and the environment. Especially the threat of global climate change due to such emissions is high on the agenda of governments. The first Conference of Parties to the Framework Convention on Climate Change, held in Berlin at the end of March, has shown that reaching an international consensus on these matters will take some time.

Three years after the Rio "Earth Summit" the progress made, for example in reducing greenhouse gas emissions, is extremely small. Carbon dioxide emissions have slowed only marginally in industrialized countries, and have continued to increase significantly in most developing countries, owing to energy demand growth and increasing use of fossil fuels which are the most readily available energy source.

The medium-term outlook is not better and if measures are not taken soon to reduce the share of fossil fuels, especially coal, in electricity generation the substantial growth in energy and electricity consumption in many developing countries will lead to a serious increase of greenhouse gas emissions. According

to a number of recent studies, carbon dioxide emissions will grow also in Western Europe after the turn of the century. The commissioning of new gas-fired or coal-fired power plants is the main cause of this trend.

In Europe, the case of France, where more than 75% of electricity is produced by nuclear power, clearly demonstrates that nuclear power can play a major role in reducing carbon dioxide, nitrogen and sulphur oxide emissions. From this point of view it is to be welcomed that in Asia, with its rapidly expanding economies, both Japan and the Republic of Korea are pursuing dynamic nuclear power programmes, and China is in the early phase of a planned large nuclear power programme. In Japan, a study commissioned by the Science and Technology Agency has concluded that in order to curb carbon dioxide emissions to the 1990 levels, Japan will need about 80 GW(e) of nuclear power by the year 2020 and about 100 GW(e) by 2030. At present, Japan has 39 GW(e) of nuclear power installed capacity.

In this context, it is necessary to assess and compare all the available energy supply options, taking into account their technical and economic performance as well as their potential for alleviating damaging impacts on health and environments. This is the focus of the Agency's programme on the comparative assessment of energy sources.

The findings from the so-called DECADES project, carried out by the IAEA in co-operation with several other international organizations, already provide documented data, methodologies and analyses on the comparative economic, social, health and environmental aspects of different energy sources for electricity generation. Let me mention that detailed studies on the emissions and residuals from nuclear, fossil and renewable energy chains show that nuclear power in normal operation is one of the most environment friendly ways of generating electricity. Some 20 case studies have been undertaken by national institutes in the framework of a Co-ordinated Research Programme to assess and compare alternative electricity system expansion strategies in different countries. The preliminary results indicate that incorporating health and environmental aspects in the comparison of alternative strategies point, in a number of cases, to the introduction of nuclear power being the optimum strategy. Such findings must, of course, be supplemented by considerations concerning industrial infrastructure, manpower, availability of capital, acceptability, etc.

The International Symposium on Electricity, Health and the Environment, which will be held next month in Vienna, will provide a forum for senior planners and analysts to review recent progress in the comparative assessment of different energy sources.

Nuclear power alone cannot solve all of the problems involved in achieving a secure and sustainable energy supply worldwide but—together with renewable sources and energy conservation—it could play a very significant role in stable and sustainable energy strategies for the world. The Agency must continue to make available the data that are relevant in this regard and factual information about the central issues of nuclear safety, waste disposal and non-proliferation, which are at the root of many people's concern about nuclear power.

The Outlook for 1996 and Beyond

The fiftieth anniversary of the United Nations has encouraged wide public scrutiny of the UN system. It is to be welcomed that shortcomings are identified and improvements and reforms proposed. Rejecting multilateralism, however, will only take us backward. We must recognize that multilateral organizations, for a variety of purposes, are indispensable and that in the future ever more will be expected of them.

For the Agency it is clear that co-ordination and co-operation amongst international organizations remains one of the goals towards which we must all strive. This was a major theme of a meeting hosted by the IAEA here in Vienna last February of the UN Administrative Committee on Co-ordination (ACC) chaired by the Secretary-General.

The expanding responsibilities of the IAEA, and the legitimate expectation that we identify priorities and limit costs, require that we continue a close critical scrutiny of programmes and seek rationalization of work methods. In this regard, let me note:

First, that the rolling medium-term perspective that we have established—last year the General Conference had before it a draft Medium Term Plan for 1995-2000—is designed to facilitate an orderly phasing out and phasing in of programmes, in line with the changing needs of Member States.

The abrupt termination of programmes is often difficult and costly. Such problems of change can be minimized through programmatic foresight.

Second, that in a two-day meeting last June a number of senior officials from Member States met with the Agency's senior management to look even beyond the year 2000. There was an understanding that the Agency's roles must continue to evolve in various areas: the verification functions will grow; many of our activities in the area of nuclear safety and technology transfer will remain essential and programmes in the field of nuclear waste may expand. Further, although the acquisition of nuclear technologies will increasingly become commercial rather than governmental decisions, the Agency should be ready to provide impartial advice on pros and cons of available nuclear and non-nuclear solutions to problems—in both power and non-power applications. It was also stressed that the Secretariat must at all times be alert to the emergence of new technologies, be they nuclear, information or verification related.

Third, that we are introducing some changes to rationalize the programme and organizational structure of the Agency. As I have mentioned, as of the beginning of 1996, the new Department of Nuclear Safety will be established, thereby bringing together in one organizational unit the full range of Agency work related to nuclear safety.

Fourth, as suggested at the General Conference over a number of years, we have now introduced a new presentation and format of the Annual Report, and harmonized the Programme and Budget document and the Performance Report, and improved our procedures for formulating programme proposals. We thereby hope to achieve increased transparency to our Members and increase their ability to influence programme developments in accordance with their priorities and interests. Further, we are well underway for the shift to a programme-based system of accounting and control beginning in 1997. Improved management through training and application of the Agency's Programme Performance and Assessment System (PPAS) should also help to bring about more effective programme implementation and rationalization.

We are also achieving efficiencies through the introduction or expanded use of new technologies, especially in the area of communications. Many printed products are being replaced by electronic ones. As word processing and electronic mail become the norm, support staff are able to perform a wider range

of duties. These efficiencies continue to contribute to our ability to improve programme delivery. As the "Internet" becomes a tool for the public, the media and decision-makers, we are ensuring that many Agency products are available on it (address: <http://www.iaea.or80>). I would expect that increasing use can be made of electronic communications for the business of the governing bodies and for the work of the Agency generally. As an example, the Department of Technical Co-operation is planning to encourage Member States to submit project proposals in electronically readable form. This would greatly help to reduce paper work and expedite the technical appraisal process.

Lastly, in response to resolutions adopted by the General Conference, special efforts have been made to increase the professional representation of women and staff from developing countries in the Secretariat. The results of these efforts are reflected in document GOV/GC(39)/15. When the number of staff is static—as ours has been—change is not easy. Also, some of our activities require very specialized skills from a very limited labour market. We continue to look for ways to improve the situation. Member States could sometimes do more to help identify and make available well qualified candidates from the under-represented target groups. On some occasions we have been unable to obtain "government sponsorship" for appointments involving well qualified women and candidates from developing countries.

In spite of the constraints on resources, I believe we have managed during the last ten years to deliver an expanding programme and to respond to needs of Member States. This result certainly could not have been achieved without extrabudgetary contributions from several governments. It is also in large measure attributable to the efficiency, skill and loyalty of staff who have responded positively and creatively to the challenges. I regret that this effort has not been matched by corresponding improvements in the conditions of employment of the professional staff. The current remuneration scheme of the Common System is outdated and compares very unfavourably with those applied to comparable work in other intergovernmental systems, such as the OECD, the World Bank and the European Community.

It is a great relief that the Board of Governors last week reached a consensus on a package comprising the financing of safeguards and targets for contributions to the Technical Assistance and Co-operation Fund. It remains a matter of concern, however, that a zero real growth budget is being proposed for

1996—the twelfth consecutive year—and that we have not been able to incorporate into the regular budget several activities regarded as essential. Let me conclude by recalling that the NPT Conference urged that every effort be made to ensure that the IAEA has the financial and human resources necessary to meet effectively its responsibilities in the areas of technical co-operation, safeguards and nuclear safety. I hope that all the Governments which gave their full support to these conclusions in New York will be equally supportive in Vienna in the coming year as we grapple with the resource questions which arise from the expanding demands placed on the Agency.

Finally, I should like to acknowledge with thanks the continuing support and co-operation which we and the other international agencies in Vienna have received from our host, the Government of Austria and from the city of Vienna. The facilities we are provided here at the VIC remain amongst the best of their kind in the world and do much to help maintain the efficiency of our activities.

Statement to the 50th Session of the United Nations General Assembly

On the occasion of the fiftieth anniversary of the United Nations, it might be appropriate to review some of the main achievements and challenges facing the international community in the field of competence of the IAEA, which was created to foster international co-operation in the field of the peaceful and safe use of nuclear energy.

The NPT Conference

International efforts to promote the peaceful applications of nuclear energy and to prevent the further spread of nuclear weapons have resulted in the non-proliferation regime, with the Non-Proliferation Treaty at its centre and the IAEA providing the function of verifying compliance with non-proliferation pledges. In May this year, the Review and Extension Conference of the NPT decided to extend the Treaty indefinitely. This decision underlined the broad and solid commitment of the then 178 parties to the Treaty. In my view, the extension decision and the principles and objectives and the strengthened review process which were also adopted should be read as a collective commitment to the exclusively peaceful use of nuclear energy and the renunciation of nuclear weapons; a commitment by non-nuclear-weapon States not to acquire such weapons and a commitment by the weapon States to nuclear disarmament with the ultimate goal of eliminating these weapons.

The outcome of the NPT Conference has far-reaching implications for the future work of the IAEA. The Agency's role as a center for international co-operation in the peaceful uses of nuclear energy was confirmed and the IAEA was expressly recognized as the competent authority responsible for verifying compliance with safeguards agreements. The Conference called on NPT parties with concerns regarding non-compliance with safeguards agreements to direct such concerns, along with supporting evidence and information, to the IAEA for it to consider, investigate, draw conclusions and decide on necessary actions in accordance with its mandate. The Conference further called for support for the Agency's efforts to strengthen safeguards and to develop its capability to detect possible undeclared nuclear activities. I take this as a sign of trust in the Agency's existing role in the field of verification.

The Conference also expressed its support for an expanded IAEA role in verification. It recommended that nuclear material released from military use be placed under IAEA safeguards as soon as practicable, and that safeguards should be universally applied once the elimination of nuclear weapons has been completed.

The NPT Conference called for the early conclusion of an agreement to end the production of nuclear material for nuclear weapons or other nuclear explosive devices, and endorsed the creation of additional nuclear-weapon-free zones. It also set 1996 as the target date for the completion of a nuclear test-ban, universally recognized as a vital component of the non-proliferation regime and an important step towards nuclear disarmament. There is an emerging consensus that IAEA safeguards would be an essential element of the verification of a cut-off agreement. It is also to be expected, if the existing nuclear-weapon-free zone agreements are an indication, that the Agency would have a verification role in any future nuclear-weapon-free zone. With regard to a comprehensive test ban it is relevant to note that such a ban—verified by the IAEA—is already in force for the more than 170 non-nuclear-weapon States which have accepted comprehensive IAEA safeguards on all their nuclear activities. These States are obliged not to use any nuclear material for explosions and IAEA safeguards are required to verify that this obligation is respected. What role the Agency might be asked to assume under a comprehensive test ban treaty is still a matter of discussion at the Conference on Disarmament in Geneva. Entrusting the IAEA with the verification function of a CTBT would undoubtedly save resources, which would seem natural at a time when efforts are urged to avoid duplication, overlap and unnecessary cost in the UN family. It would also permit more rapid implementation.

Strengthening of the IAEA Safeguards System

Credible IAEA verification of States' compliance with their nuclear arms control pledges is becoming an increasingly important factor in global security and nuclear disarmament. The lessons of Iraq and the increasing demands placed on IAEA safeguards have necessitated that the safeguards system be strengthened and made more cost-effective. In particular, governments and the public now demand that the IAEA safeguards system should have the capacity to detect any secret, undeclared nuclear material and installations. There is also a greater understanding and readiness to accept that such verification must

comprise no-notice inspections, greater freedom of movement for the inspectors and use of the most modern means of detection and communication. The Agency's efforts to develop a strengthened safeguards system have focused on three essential elements. The first is increased access to information about a State's nuclear activities, the second is broader access to sites and locations within a State, the third is maximum use of new and available technologies to increase detection capacity and, in due course, to reduce the frequency of on-site inspections. I am pleased to note that the Agency's Board of Governors has already accepted the first part of the Agency programme to strengthen its safeguards system, the so-called Programme 93 + 2. The Secretariat is in a position to implement these new measures after the required consultations with Member States. The second part of the programme, which relates to measures requiring additional legal authority, is due for consideration by the Agency's Board of Governors within some months. The test of any new measure is that it enhances the effectiveness of the system and is cost-effective. Experience gained in field trials of some of the new measures suggests that they can be implemented without much additional intrusion or cost to States.

On the other hand, a significant increase in the IAEA's verification effort in terms of cost and resources may result if nuclear material released from the military programmes of nuclear-weapon States are placed under IAEA safeguards, as urged by the NPT Conference. Verification of some such material released from the weapons programme of the United States was started a year ago. These expanded efforts could require new arrangements to ensure that the released material would permanently remain under safeguards and that the financing of such verification is assured.

The Democratic People's Republic of Korea (DPRK)

Last year I reported that the Democratic People's Republic of Korea was not in full compliance with its safeguards agreement pursuant to the NPT. This continues to be the case. In the framework that was agreed to between the DPRK and the USA on 21 October 1994, the DPRK agreed to freeze and eventually dismantle its graphite-moderated reactors and related facilities and stated its intention eventually to come into full compliance with the safeguards agreement. As you are aware, the Security Council, confirming that the DPRK's safeguards agreement remains in force and binding, requested the Agency to take the necessary steps to monitor the freeze. With the authorization of the Board, we

have been doing this *inter alia* through the maintenance of a continuous presence of Agency inspectors in the DPRK. I can confirm that the freeze has been put into effect and has been maintained to date. For the DPRK to come into full compliance with the safeguards agreement, however, it must enable the Agency to verify effectively the accuracy and completeness of its declaration of nuclear material subject to safeguards. Until this co-operation—long overdue—comes about, it is essential that all necessary steps be taken to preserve information that may be relevant to the eventual verification of the DPRK's initial declaration.

Technical meetings have been held with the DPRK on a number of occasions to discuss activities that are required by the Agency for it to fulfil its obligations under the safeguards agreement including monitoring the freeze. Since the first of these discussions in November last year, arrangements have been made which enable the Agency to meet many of its obligations. However, a number of issues remain to be resolved, including the measures required for the preservation of information.

Iraq

Let me now turn to Iraq. As I reported to the General Assembly last year, it is our conclusion that the essential components of Iraq's clandestine nuclear weapon programme have been identified and destroyed, removed or rendered harmless. This assessment was not based on faith in Iraqi statements, but on data gathered during inspection, on information provided by the suppliers and Member States and, to a great extent, on analysis of the large number of original documents which were obtained in Iraq early in the inspection process. Since August 1994, IAEA inspectors have been continuously present in Iraq to perform on-going monitoring and verification of Iraq's compliance with the relevant Security Council resolutions. This does not exclude the further conduct of inspections for the purpose of investigation, should such an investigation be called for, for example, to verify new information.

Recently the IAEA received additional information on Iraq's former nuclear weapons programme by way of new declarations, voluminous documents and other materials, which were transmitted to the IAEA and UNSCOM by Iraq following the departure of the former Iraqi Minister of Industry and Military Industrialization. What we have been told is that in 1990, Iraqi authorities

instituted a crash project to take safeguarded highly enriched research reactor fuel and transform the fissile material for use in a nuclear weapon. It is uncertain whether Iraq would have been able to overcome the considerable technical difficulties involved in this project. As it was, the project was made impossible by damage inflicted on the nuclear research centre at Tuwaitha by the January 1991 bombing and the safeguarded nuclear fuel was fully accounted for in the IAEA post-war inspection. The new Iraqi declarations, along with all of the documents and materials to which I have referred, are currently being carefully examined for any new data. What can be concluded at this stage is that Iraq's withholding of information, documents and materials clearly constitutes a breach of Iraqi obligations under the Security Council resolutions and that the crash programme was in violation of the safeguards agreement and the NPT.

Nuclear-Weapon-Free Zones

As requested last year by the Agency's General Conference the Agency has continued to assist the African States in their effort to establish an African Nuclear-Weapon-Free Zone and in particular to help elaborate its verification regime. A draft treaty text which, inter alia, entrusts the Agency with the task of verification, was adopted by the African Heads of States in Addis Ababa last June and is now before the General Assembly. We look forward to performing the verification role in an African Nuclear-Weapon-Free Zone.

The General Conference of the IAEA continues to call upon all parties directly concerned in the Middle East to consider taking the practical and appropriate steps required to establish a mutually and effectively verifiable nuclear-weapon-free zone in the Middle East region. This year's resolution once again requested the Director General to continue consultations with the States of the Middle East to facilitate the early application of full-scope Agency safeguards to all nuclear activities in the region and the preparation of model verification agreements as a step toward the establishment of such a zone. I intend to continue my visits to and consultations with States in the region in order further to explore the verification questions and the material obligations which may be agreed upon and which may call for verification.

Trafficking in Nuclear Materials

For the last two years the international community has been expressing alarm at the number of incidents of illicit trafficking in nuclear materials as well as other radioactive sources. Although the reported cases in 1995 show a decreasing trend, this is no cause for complacency. It is clear that greater efforts are needed and that States must pay increased attention to the physical protection of all radioactive material—and especially weapons-useable nuclear material—whether in use, transport or storage. While the primary responsibility in the field of illegal trafficking falls upon the State concerned, authorities in many countries, as well as a number of international organizations, are seeking to strengthen and co-ordinate their efforts to better protect and control radioactive materials. The IAEA has recently hosted a large inter-agency meeting for that purpose.

Within the IAEA a plan of action has been put in place. The Agency is establishing a data base of trafficking incidents to provide factual information to Member States' governments and to the public. Further, as effective national accounting and protection is the basic prerequisite for preventing nuclear material from falling into unauthorized hands, the Agency is conducting training courses in the implementation of State systems of accounting and control of nuclear material and in physical protection methods and technology. With the assistance of many donor countries, the Agency has also co-ordinated technical support efforts in the upgrading of physical protection of nuclear material in the Newly Independent States of the former Soviet Union.

Nuclear Safety

Since the Chernobyl accident, the Agency's role in the field of nuclear safety has been gradually expanding. In addition to the sharing of information and the development of safety guidelines and standards, the Agency has moved progressively in the field of providing advisory services to Member States, such as Operational Safety Advisory Review Teams (OSARTs) which provide expert services in assessing and advising on operational safety of power reactors, and Analysis of Safety Significant Events Teams (ASSETs). Agency work on assessment of the safety of nuclear power plants in Eastern Europe and countries of the former Soviet Union has continued; an international consensus now exists

on the major safety issues and their significance for each of the various reactor types. The emphasis is now shifting to a review of the status of implementation of the proposed safety improvements and to the collection of up-to-date information on the upgrading situation at each of the reactors involved. The results of our work provide input into bilateral and multilateral assistance projects co-ordinated by the G-24 mechanisms in Brussels.

The decision to operate—or not to operate—a reactor is a national prerogative. The IAEA has not been given any supranational competence in this regard. However, the Agency continues to provide, upon request, expert advice on the safety of reactors and on safety improvements needed. On some occasions the Agency has advised that it would be imprudent for a particular reactor to operate unless safety improvements were ensured.

No nuclear accident has been the subject of more analysis, both as regards its causes and its consequences, than the one at Chernobyl. Even so—or perhaps precisely for this reason—the accounts and explanations vary considerably, especially as to the radiological impact of the accident on the health of the affected people and the environment. It is evidently desirable that this impact be scientifically established as is the radiological impact of the Hiroshima and Nagasaki nuclear bombs. On the occasion of the 10th anniversary of the tragic accident at the Chernobyl nuclear power plant in April 1986, the Agency and several other organizations—e.g. the WHO and the European Union—are organizing, in April next year, an international conference to seek a common understanding of the nature and magnitude of the consequences of that accident. Let me add, however, that while such understanding is highly desirable, there is no reason for anybody to delay action and assistance to alleviate the situation of the people concerned. Many inquiries following the Chernobyl accident have documented the distressing situation in which they live.

In the field of nuclear power safety, the IAEA has long issued recommendations based on best experience and practice. More recently the Agency has also moved to develop binding international safety standards. This is a clear manifestation of the increased interest of the international community that nuclear safety be at a high level everywhere. There is a growing realization that an accident anywhere is an accident everywhere. A major accomplishment was the adoption in June last year of the Convention on Nuclear Safety. So far the Convention has been signed by 59 States. It may be expected to enter into

force next year. This month representatives of signatories of the Convention and other interested States will hold their second meeting to discuss matters relating to the implementation process.

Still in the field of nuclear safety and security, let me note that these subjects will be taken up at a summit meeting to be hosted in Russia next spring. It is to be hoped that the summit will give political impetus to work in the field of nuclear safety and security, thereby reducing risks and making nuclear power more broadly acceptable to the public.

Nuclear Waste

Nuclear waste disposal remains a major concern among the public in many countries. This concern might lessen when governments and industry have actually established repositories for wastes of different levels of radioactivity. From the scientific and technical standpoint there are no serious obstacles to the building of repositories which remain safe for extremely long periods of time. The selection of disposal sites, however, often meets with opposition. We can only place our faith in the effect of rational argument. An open dialogue with the public is required. The IAEA continues to be active in the field of radioactive waste management, including providing assistance to developing States to build up infrastructures for waste management, and promoting the minimization, safe processing, storage and disposal of radioactive wastes. I am pleased to report that work has already started on the preparation of a Convention on the Safe Management of Radioactive Waste providing binding standards. Significant progress has been made and it is to be hoped that a final draft could perhaps be ready sometime next year.

Energy to Support Sustainable Development

One of the greatest challenges facing the international community is to find the proper means of providing sufficient energy for sustainable development. That is to say providing energy without unacceptable damage to the environment. Experts have concluded that goals to stabilize carbon dioxide emissions at 1990 levels are not attainable by the year 2000 under present conditions. In national action reports prepared by parties to the Framework Convention on Climate Change many countries report that they will not achieve the goal they have set for themselves, goals that they have already agreed are not

adequate for the long term. Indeed, looking around in the world we can easily see how the need for development and the correlated need for greater energy use is leading to the construction of ever more installations burning coal, oil or gas. Extensive analysis of energy options is clearly needed if we are to resolve the dilemma between development and preservation of the environment.

It is not very meaningful to analyse the economic and ecological aspects of any given energy option in isolation. All sources and uses of energy have their risks - as, indeed, an absence of energy carries risks. Only an analysis of different options side by side can tell us which energy policy is economically and ecologically least burdensome.

The IAEA is co-operating with several international organizations in drawing up methodologies and data bases for comparative assessment of different options for the production of electric power. An international symposium addressed this issue in Vienna last month. This is an area where difficult policy decisions must be taken. Governments need to devise long-term energy policies that are economically and ecologically acceptable. Solar power, wind power, biomass and other renewables will bring a valuable but minor contribution to the global energy supply within the next few decades. There is scope for more efficient energy use, and it should be promoted. However, in most places it will not offset the need for additional energy and it is evident that developing countries will need energy in much greater amounts. There are no new energy sources on the horizon that can magically meet these needs. Fusion is still very distant.

Expansion of nuclear power, which now provides about 8% of the world energy and 17% of its electricity, could provide a part of the solution on the supply side without increasing emissions of CO₂, SO₂ or NO_x. The main obstacle to increased use of nuclear energy is public concern with safety, radioactive waste and non-proliferation. Any particular energy mix chosen has to be based on comparative risk assessment of the various sources of energy and will need to be thoroughly explained to the public. The IAEA for its part will continue to make available the data that are relevant in this regard and factual information relevant to nuclear safety, radioactive waste and non-proliferation.

Few developing countries have a technological level and infrastructure that would allow them to make use of the present type of nuclear power reactor. It is

to be hoped that, in the future, smaller and less costly nuclear reactors will become available for use by developing countries for the generation of electricity and perhaps also in the desalination of water to compensate for scarce fresh water resources. Developing countries, members of the IAEA are keenly interested in these questions. It is obvious that the rapidly increasing number of cities of more than a million, even more than 10 million, inhabitants in developing countries cannot be provided with electricity generated by, say, solar cells, wind mills or biomass. Their real choice for decades to come will be between fossil fuels and nuclear power.

Technical Co-operation

At present only a few developing countries use nuclear power. However, most of them are intensely interested in non-power nuclear techniques that may help their development, and the IAEA is engaged in assisting the transfer of such techniques. Emphasis is being placed on techniques which will contribute to sustainable development, food production and preservation, the harnessing of fresh water resources, industrial uses and the promotion of human health. The Agency has undertaken several initiatives recently to strengthen its technical co-operation programme and to make it more effective and more relevant to sustainable development. Working together with Member States, the Secretariat has started preparing country programme frameworks which will help focus the technical co-operation programmes on key areas of government priority, with fewer but better focused projects. Another measure planned is the promotion of technical co-operation among developing countries or TCDC, with the aim of sub-contracting institutions in developing countries which are recognized as centers of excellence in a particular field to implement selected technical co-operation projects.

At the NPT Review and Extension Conference all participants acknowledged the importance of the work of the Agency as the principal agent for the transfer of nuclear technology to developing countries and welcomed the successful operation of the Agency's technical assistance and co-operation programme. It was also recognized that the success of these programmes depends on the availability of predictable resources. I sincerely hope that the Agency's Member States will pay their contributions to the technical co-operation fund in full and in time for the Agency to be able to continue to perform its development mission successfully.

Co-ordination in the UN System

During the fiftieth anniversary of the United Nations I cannot close my statement to the General Assembly without some comments on co-ordination within the UN family of organizations and on effectiveness and efficiency. In both respects severe criticism has been voiced.

That co-ordination is difficult in a vast system of organizations, authorities and administrations is no novelty to national governments, many of whom have experience of similar problems, although they have the advantage of a central government and a legislature. Within the UN family action by ECOSOC and the Administrative Committee on Co-ordination (ACC) and under informal contacts and arrangements can help harmonize activities and prevent some overlap. Between the IAEA and the United Nations, the most important contacts occur in cases of non-compliance with safeguards agreements. The cases of Iraq and the DPRK have given us much experience in co-operation.

The ACC, under the chairmanship of the Secretary-General, is increasingly—and, I think, with some success—trying to ensure effective system-wide responses in matters—such as sustainable development, African development, the role of women—which are relevant in all or most organizations. The technique recently employed of indicating *lead agencies* for certain questions may prove helpful.

Effectiveness and Efficiency in the UN System

Effective action by organizations in the UN family is in many cases directly dependent on the degree of co-operation that can be achieved among Member States. There is also much action that is undertaken mainly by the Secretariats. Here effectiveness depends largely upon the same factors as those which influence efficiency: availability of adequate and predictable resources, co-operation of States that may be affected and last, but not least, the competence and skill of management and staff in the Secretariats. We stand or fall on the quality of our management and staff. This is true of the IAEA and, I am sure, for the other organizations in the UN family.

The IAEA has some unique features which continue to serve us well in staffing, but which may also deter some qualified experts from joining us: professional staff are not recruited for a career in the IAEA but rather for a period of five to seven years. This policy of rotation has been followed to ensure a continuous influx of talents fresh from laboratories, nuclear installations and other institutions, talents abreast of the latest developments in their field. To have the respect and co-operation of the experts with whom our staff interact in Member States, our professional staff must be on par with the national experts.

Remuneration in the Common System

I am not suggesting that there is a direct correlation between remuneration and work delivery. However, there is not the slightest doubt that when weighing the pros and cons of employment in an international organization, remuneration, home leaves, education grants for children, pension benefits, etc. have a very significant impact on potential candidates and, hence, on our ability to recruit staff of the highest calibre.

In this regard, the IAEA and other organizations are dependent upon the so-called UN Common System of remuneration, to which we have adhered. This system, as it now stands, falls short on several counts. Let me give you just a few illustrations. We have general service staff who turn down offers of posts at the professional level because this would *lower* their salary. Since 1984 professional remuneration in Vienna has lost about 20% of its purchasing power. A senior energy economist who goes from the Agency to the World Bank may expect a 40 percent higher salary; a safeguards inspector who leaves the Agency in Vienna for EURATOM in Luxembourg may expect his income to increase by at least one third. We do not know how many candidates refrain from applying for a job in the Agency because they are offered better conditions elsewhere, but we know that only 4-6 percent of those who nowadays apply for jobs with us meet our exacting recruitment standards.

Salary Increase for Improved Recruitment

As Director General of the IAEA I joined other executive heads in a statement recently adopted by the ACC which *inter alia* endorses the International Civil Service Commission (ICSC) recommended salary increase which would bring UN remuneration into the middle of the margin range

approved by the General Assembly. Such a step, in itself urgently needed, would have to be subsequently supplemented, however, by a longer term strategy of restoring competitiveness.

An improvement in the remuneration system is not a panacea to all the problems that UN organizations are facing in management. It might even look to some as an odd response to a critical financial situation and to sharp criticisms for waste and inefficiency. I would submit, however, that the remuneration system is part of the present problem. Unless management is given the ability and freedom to recruit professional staff of the highest calibre from anywhere in the world—and this can only be done if remuneration is internationally competitive and if governments refrain from interfering in a fair selection process—it will be hard, if not impossible, to achieve the continuous improvement in quality and efficiency that is rightly called for in the Secretariats of UN organizations.

I am sorry to bring these mundane matters before you, but this august body, the General Assembly, not only lays down political guidance to us in Vienna but also decides on employment and other conditions which directly affect our and other international organizations' ability to fulfil the mandates given to us.

Let me end on a nice note telling you that Vienna, although in some respects an expensive city, is an excellent work station and the Austrian Government and the City of Vienna the friendliest of hosts.



International Atomic Energy Agency

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THE INTERNATIONAL ATOMIC ENERGY AGENCY SHALL SEEK TO ACCELERATE AND ENLARGE THE CONTRIBUTION OF ATOMIC ENERGY TO PEACE, HEALTH AND PROSPERITY THROUGHOUT THE WORLD. IT SHALL ENSURE, SO FAR 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.

(Article II of the Statute)