



International Atomic Energy Agency

Statement to the Third Session of the Preparatory Committee for the 2005 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons

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INTRODUCTION

The States Party to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) gather here at a time when the multilateral nuclear non-proliferation and arms control regime is at a cross-road. Events of the past year have placed the nuclear non-proliferation regime under stress on multiple fronts, and have made it clear that concrete steps are urgently required in order to preserve and strengthen global nuclear non-proliferation norms and practices.

The focus of International Atomic Energy Agency's (IAEA) statement is on the Agency's activities relevant to the implementation of the Treaty. Some more detailed information on the Agency safeguards system and on peaceful uses of nuclear energy are in the distribution copy of this Statement, and more will be provided in the discussions on "cluster two" and "cluster three" issues.

VERIFICATION OF NUCLEAR NON-PROLIFERATION

The Agency's role as an independent, objective verification body remains central to the effectiveness of the NPT regime. The IAEA's verification activities are designed to provide credible assurance that States honour their undertakings not to use nuclear material and facilities for nuclear-weapon purposes. In the early 1990s, after the discovery of the clandestine nuclear-weapon programme in Iraq, the international community committed itself to strengthen the Agency's verification capability – specifically, its ability to provide the assurance not only that *declared* nuclear material has not been diverted for non-peaceful purposes, but equally also the Agency's ability to detect that no *undeclared* nuclear material or activities exist. As you are aware, in spite of the additional authority that has been conferred upon the Agency, its implementation still remains uneven due to the slow progress of States subscribing to the Agency's strengthened safeguards system.

Status of Comprehensive Safeguards Agreements and Additional Protocols

Currently, 44 non-nuclear weapon States (NNWS) party to the NPT have yet to fulfil their legal obligation to bring into force an NPT safeguards agreement with the Agency. As a result, the Agency cannot provide any assurance with respect to the non-proliferation credentials of these 44 countries. Seven years after the adoption by the Agency's Board of Governors of the Model Protocol Additional to Agreements between State(s) and the IAEA for the Application of Safeguards, such additional protocols have been signed by just 83 NPT States and only 39 of these States have brought

their protocols into force. This means that for more than 100 NPT States Parties, no additional protocols are in force. On a more positive note, however, the imminent entry into force of the Additional Protocols for all States members of the European Union will mark considerable progress in this respect – though it will have taken more than six years for these protocols to be brought into force.

For countries without an additional protocol in force, the Agency has limited ability to provide comprehensive and credible assurances about the peaceful nature of their nuclear programmes - particularly about the absence of undeclared nuclear material and activities. For the Agency to provide the required assurances under the NPT, it must have the required mandate and powers. It is important, therefore, that the international community make every effort to achieve the universality of comprehensive safeguards agreements and additional protocols. Later this week, during the discussion on “cluster two” issues, the IAEA delegation will make an intervention describing how it reaches conclusions regarding the non-diversion of nuclear material under safeguards and of the absence of undeclared nuclear material and activities.

Allow me, on behalf of the Agency, again to urge NPT States Parties without safeguards agreements and/or additional protocols in force, to conclude and bring into force these legal instruments and recommend that efforts be redoubled to accomplish this prior to the opening of the 2005 NPT Review Conference. As proposed in the 2000 Final Document of the NPT Review Conference, the Agency and many of its member States are implementing an Action Plan with this objective in mind. On Tuesday next week, the Agency delegation will provide a briefing for States, without NPT safeguards in force, on the conclusion and bringing into force of NPT safeguards agreements and additional protocols.

Implementation of Safeguards in the DPRK

The situation in the Democratic People's Republic of Korea (DPRK) continues to pose a serious and immediate challenge to the nuclear non-proliferation regime. Since December 2002, the Agency has not been in the position to perform any verification activities in the DPRK, and therefore cannot provide any assurance about the nature of the DPRK's nuclear programme. There is an obvious need for a comprehensive settlement of the DPRK nuclear issue through a combination of diplomacy and verification, and it is our hope that the process of the six-party talks will bring substantive results in this respect. We trust that any future settlement will ensure that the Agency will be given the necessary authority and resources to be able to verify and to provide the expected assurances about the nature of DPRK's nuclear programme.

Implementation of Safeguards in Iraq

As you are aware, since 17 March 2003, the Agency has not been in the position to implement its mandate in Iraq under the United Nations Security Council resolution 687 (1991) and related resolutions. It is the Agency's understanding that the obligations of the Agency pursuant to those resolutions remain valid unless and until the Security Council decides otherwise. The IAEA remains ready, subject to Security Council guidance, to resume its Security Council mandated verification activities in Iraq.

The IAEA Director General submitted his most recent progress report to the Security Council, on 11 April 2004, on the Agency's verification activities in Iraq pursuant to the relevant Security Council resolutions.

During the past year, the IAEA has continued to focus its activities on further analyzing information with the objective of identifying lessons learned and deciding whether and to what extent

the Agency's plan for resuming verification activities needs to be adapted in light of the changing situation in Iraq.

Irrespective of the Agency's mandate under Security Council resolutions, the Agency continues to assume its responsibility under Iraq's NPT safeguards agreement with the Agency to ensure that, in accordance with that agreement, Iraq does not have any proscribed nuclear material or activities, and that all nuclear activities in Iraq are for peaceful purposes. In June 2003, the Agency recovered and re-verified nuclear material under Agency safeguards, that had been looted, at 'Location C' Nuclear Storage Facility near Tuwaitha.

Implementation of Safeguards in the Islamic Republic of Iran

As you are aware, during the past twelve months the Director General has provided four reports to the IAEA Board of Governors on the implementation of the NPT safeguards agreement in the Islamic Republic of Iran. His reports concluded that Iran had failed to meet its obligations under its Safeguards Agreement with respect to the reporting of nuclear material, the subsequent processing and use of that material and the declaration of facilities where the material was stored and processed. Although the quantities of nuclear material involved have not been large, and the material would need further processing before being suitable for use as the fissile material component of a nuclear explosive device, the number of failures by Iran to report the material, facilities and activities in question in a timely manner as it is obliged to do pursuant to its Safeguards Agreement became a matter of serious concern. Since last June, the Board of Governors has adopted three resolutions on the subject.

While Iran has committed to correct the failures and breaches of its obligation to comply with the provisions of its safeguards agreement and is rectifying these failures, the process of verifying the correctness and completeness of the Iranian declarations by the Agency is still ongoing.

Since October 2003, after a shift in Iran's policy towards more openness and transparency, the Agency, with the unanimous support of the Board of Governors, was able to move forward steadily in its work towards confirming that the information provided by Iran on its past and present nuclear activities is correct and complete. The Agency will continue to work towards drawing the required conclusions about the nature of Iran's nuclear programme.

As you are aware, on 10 November 2003, Iran agreed to co-operate with the Agency in accordance with the provisions of the additional protocol, and signed the protocol in December 2003. Iran has also decided to suspend enrichment and reprocessing activities as a confidence-building measure – as requested by the IAEA Board of Governors in September 2003. The Agency currently is working with Iran to verify this suspension.

The remaining urgent tasks of our work in Iran include verifying the origin of the high-enriched uranium particles found at a number of locations in Iran, and fully understanding Iran's possession of P-2 uranium enrichment centrifuge technology and related R&D. This will require, as stated in our reports, full and close co-operation by Iran and by a number of States from which certain equipment and components, and nuclear and non-nuclear materials originated. The Director General will report to the Board of Governors before the end of May on the status of implementation of the relevant resolutions of the Board regarding the application of safeguards in Iran.

Implementation of Safeguards in the Socialist People's Libyan Arab Jamahiriya

On 19 December 2003, Libya announced its decision to eliminate all materials, equipment and programmes leading to the production of internationally proscribed weapons — including nuclear weapons. In the months since, we have been working closely with the Libyan authorities to gain a

complete picture of Libya's nuclear programme. Libya's failure, over many years, to declare to the Agency its nuclear material and activities represents a breach of its obligation to comply with the provisions of its safeguards agreement, and its acquisition of a nuclear-weapon design clearly is a matter of utmost concern. In March 2004, the Board of Governors determined that this constituted non-compliance by Libya with its NPT safeguards agreement, and requested the Director General to report the matter to the Security Council for information purposes. On 22 April 2004, the Security Council issued a Presidential Statement on this matter.

Following the disclosure of its undeclared nuclear activities, Libya has granted the Agency unrestricted access to all requested locations, responded promptly to the Agency's requests for information, and assisted the Agency in gaining a full picture of its nuclear programme. On 9 December 2003, Libya agreed to conclude an additional protocol and to act in the meantime as if the protocol is in force. Libya signed an additional protocol in March 2004. This active co-operation and openness will facilitate the Agency's ability to complete its verification of Libya's past nuclear activities.

Libya's undeclared nuclear programme involved frequent movements of key equipment and nuclear material, and relied heavily on support from foreign sources. With the co-operation and support of Member States, the Agency is now proceeding with a thorough investigation of all aspects of Libya's undeclared nuclear programme. As part of verifying the correctness and completeness of Libya's declarations, the Agency is also investigating, with the support of Member States, the supply routes and the sources of sensitive nuclear technology and related equipment and nuclear and non-nuclear materials to ensure that the sensitive nuclear technologies and equipment found in Libya have not proliferated further.

Responses to the Challenges to the Nuclear Non-Proliferation Regime

One of the most important outcomes of our verification work in recent months is the lessons we have learned on measures that must be taken to adapt the nuclear non-proliferation regime to the new challenges.

First, it should by now be obvious that the additional protocol is a sine qua non for effective verification. Without additional protocols in force, the IAEA has little prospect of uncovering sophisticated clandestine nuclear-weapon programmes. The IAEA Director General has repeatedly emphasized that for the Agency to be able to fulfil its verification responsibilities in a credible manner, the additional protocol must become the standard for all countries that are party to the NPT.

Second, from the events of the past year it also became clear that the systems in place to control the export of sensitive nuclear technology must be broadened in its reach and tightened in its controls. A universal, multilateral system, based on commonly shared norms, to strike the proper balance — between necessary controls against abuse, on the one hand, and the importance of assured access to peaceful technology including that for nuclear safety and security, on the other — would be in the interest of all, and should command global support. While responsibility for the establishment and operation of export control systems rest with the States, the effectiveness of these systems is clearly of direct relevance to the Agency's verification mandate. As the UN Security Council underlined in its statement issued after the summit meeting of the Council on non-proliferation held in 1992, fully effective safeguards and effective export controls play an integral role in the implementation of the NPT. In view of this interrelationship, it would be important to ensure that the IAEA is informed of all nuclear or nuclear-related technology exports and export denials relevant to its verification mission.

Third, the wide dissemination of the most proliferation-sensitive parts of the nuclear fuel cycle — the production of enriched uranium fuel, the reprocessing of plutonium, and the disposal of

spent fuel and radioactive waste — could be the “Achilles’ heel” of the present nuclear non-proliferation regime. As you are aware, the IAEA Director General voiced his concern in this regard and suggested that consideration be given to better controls over these operations, which could be done, for example, by bringing them under some form of multilateral control, in a limited number of regional centres. In doing so, appropriate checks and balances should be used to preserve commercial competitiveness, to control proliferation of sensitive information, and to ensure uninterrupted supply of fuel cycle services. While being aware that these are complex issues, and that a variety of views exist on the feasibility or possible modalities of multilateral approaches to the fuel cycle, we owe it to ourselves to explore and examine all available options for a better control over the sensitive parts of the nuclear fuel cycle. The Agency will commence an examination of these matters in the forthcoming weeks. Pending the outcome of this examination, the Agency will encourage that existing facilities, that use high-enriched uranium be converted to use low-enriched nuclear fuel, and the IAEA will continue its activities towards the reduction of HEU stockpiles and the safe and secure disposal of spent HEU fuel.

The Agency suggests that NPT States parties would consider transmitting these, among other, recommendations regarding the further strengthening of the non-proliferation treaty regime in the report of the Preparatory Committee to the 2005 NPT Review Conference.

Agency Verification of Nuclear Arms Control and Disarmament Agreements

For many years, the Agency has been involved in activities pursuant to the initiative by the Russian Federation and the USA to submit nuclear material released from their military programmes to Agency verification, with a focus on the associated technical, legal and financial issues. Step 8 of the “practical steps” contained in the 2000 NPT Final Document referred to the completion and implementation of this Trilateral Initiative. As we informed the PrepCom last year, the initial phase of the work has been concluded and verification concepts explored under that initiative would allow the Agency to derive credible and independent verification conclusions, while the States concerned would be able to ensure that sensitive information relating to the design or manufacture of nuclear weapons would not be divulged. The legal framework developed is ready to be used as the basis for the negotiation of verification agreements. However, we have yet to receive a request by either of the States concerned to further pursue these arrangements.

Negotiations on a Fissile Material (Cut-off) Treaty are also of relevance to the Agency’s mandate. It is regrettable that negotiations on the treaty, which could put an end to the production of fissionable material for nuclear weapons, have not moved forward for nearly eight years. The Agency remains ready to consider playing an active role in the verification of States compliance with an FMCT should a treaty be agreed upon in the future.

NUCLEAR SAFETY AND SECURITY

The 2000 NPT Final Document highlighted the role of the IAEA in strengthening nuclear safety and security. Given time constraints, I will touch upon a few key issues.

Chernobyl Forum

Today marks the 18th anniversary of the Chernobyl nuclear power plant accident. People in the region still live with wildly varying reports about the impact of the accident on their health and the environment. The Chernobyl Forum, initiated by the IAEA, is currently working to provide people in the affected areas greater certainty in this regard by issuing factual, authoritative statements on the health effects and the environmental consequences of the accident. A key aspect of the Forum’s work is to advise on, and help to implement, programmes that mitigate the accident’s impact, such as, inter alia, special health care of the affected population, monitoring long-term human exposure to radiation,

environmental aspects of decommissioning the Chernobyl nuclear power plant as well as environmental issues related to radioactive waste from the accident, including remediation of contaminated land.

Nuclear Safety

The 2000 NPT Final Document encouraged efforts of the IAEA in the promotion of nuclear safety in all its aspects and encouraged all NPT States Parties to take appropriate national, regional and international steps to enhance and foster a nuclear safety culture. The safety and security of nuclear activities around the globe remain key factors for the future of nuclear technology. Nuclear safety continues to improve at nuclear power plants worldwide, more countries are raising their standards of performance in radiation protection, and significant steps have been taken in the past two years to improve nuclear security.

Safety Conventions and Standards

The development and adoption of international legally binding norms has proven to be a powerful mechanism for enhancing nuclear safety worldwide. The *Early Notification and Assistance Conventions* continue to serve as mechanisms for Agency response in connection with radiological emergencies. The Agency is increasing its involvement in the implementation of the *Convention on Nuclear Safety* by reporting on the trends and issues observed during our various safety reviews and missions. And the *Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management* has now been in force for over two years. However, many States are not yet party to these conventions, and certain key areas of the nuclear fuel cycle, notably research reactors, are still not subject to conventions.

Establishing nuclear safety standards and providing for their application are statutory functions of the Agency that are essential for a global safety regime that provides for the protection of people and the environment. Over the next three to four years, we hope to fill in the remaining gaps in coverage – such as safety standards on geological waste repositories. These standards, which represent best practice, should, if accepted and implemented worldwide, provide for a high level of nuclear and radiation safety.

Safety and Security of Radioactive Sources

International concern related to the safety and security of radioactive sources remains high, particularly with respect to “orphan” source accidents and the malevolent use of radioactive sources. The findings of a major *International Conference on Security of Radioactive Sources*, held in Vienna in March 2003, were incorporated into the Agency’s new *International Action Plan for Safety and Security of Radioactive Sources*. The 2003 IAEA General Conference welcomed the revised *Code of Conduct on the Safety and Security of Radioactive Sources* and, since then, a number of Member States have stated that they intend to follow the guidance contained therein.

Transport Safety

Safety of transport of radioactive material in all forms, domestically within States and internationally between States, and by all modes of transport — road, rail, water and air — is vital to the peaceful uses of these materials. The Agency, as part of its statutory mandate, has worked for decades with its Member States and other relevant international organizations to foster the development and application of sound safety standards for the transport of radioactive material. The Agency organized an *International Conference on the Safety of Transport of Radioactive Material* was held in Vienna in July 2003. The Conference addressed many technical topics, compliance with

the Agency's Transport Regulations, as well as issues of liability and communications relating to nuclear transports that contribute to maintaining the good record for transport safety.

Nuclear Security and Protection Against Nuclear Terrorism

Nuclear security is first and foremost the responsibility of States and a comprehensive approach to nuclear security must involve all States. The Agency's efforts to help States increase their nuclear security are continuing at an exceptionally fast pace on multiple fronts.

The identification and protection of vulnerabilities in nuclear installations is one area in which safety and security aspects merge. The Agency's *International Nuclear Security Advisory Service* (INSServ) serves to identify areas requiring additional or improved security for nuclear activities on a State-wide basis. Our *International Physical Protection Advisory Service* (IPPAS) identifies requirements for strengthening physical protection systems. The Agency also provides assistance to States to formulate national strategies for locating and securing high risk radioactive sources which are not under proper regulatory control, as well as peer review missions to review existing arrangements for radioactive source control and security. The Agency's *International SSAC Advisory Service* (ISSAS) is a new initiative designed to provide recommendations for strengthening *State Systems for Accounting and Control* (SSAC).

Since September 2001, the Agency has conducted more than 40 advisory and evaluation missions, and convened more than 60 training courses, workshops and seminars. The Agency is also strengthening its co-operation with other international organizations, including the UN and its specialized agencies, Interpol, Europol, the World Customs Organization, the Universal Postal Union and the European Commission.

The increased attention paid to the international nuclear physical protection regime is manifested by the adherence of 20 additional States in the past two years to the *Convention on the Physical Protection of Nuclear Material* and the gradually emerging consensus for an amendment to broaden the scope of the Convention.

CO-OPERATION IN THE PEACEFUL USES OF NUCLEAR ENERGY

The NPT in its Article IV refers to the inalienable right of all Parties to develop research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with Articles I and II of the NPT. The Agency's Technical Co-operation Programme is designed, inter alia, to facilitate such co-operation while remaining mindful of the NPT's non-proliferation objectives. The strategic goal is to promote tangible socio-economic benefits in a cost-effective manner to the achievement of the sustainable development priorities of each country. In this regard, the 2000 NPT Final Document commended "the Agency for its efforts to enhance the effectiveness and efficiency of the Agency's Technical Cooperation Programme". The Agency's technical co-operation programme provides about \$80 million of assistance per year, and continues to be a principal mechanism for implementing the Agency's basic mission – "Atoms for Peace". However, consistent efforts are required to ensure that the Agency is provided the necessary human and financial resources for its technical co-operation activities, in order to meet the objectives mandated in Article IV of the Treaty as well as in the IAEA Statute.

Nuclear Power Applications

The Agency's 2004 *Nuclear Technology Review (NTR)* is the third comprehensive edition of this review. It covers the fundamentals of nuclear technology development, including: power applications; applications for food, water and health; and applications for environmental and industrial processes.

The urgent need for sustained human development clearly requires increases in the supply of energy in the coming decades. In recent years nuclear power has supplied about 16% of world electricity production, and it remains the only energy source that can provide electricity on a large scale with comparatively minimal impact on the environment. However, medium-term projections for the future of nuclear power remain cautious. Energy decisions, however, cannot be made on a “one-size-fits-all” basis. Each country and region faces a different set of variables when choosing its energy strategy. Despite engineering analyses showing that public health risks from nuclear power are among the lowest of any energy technology, public perceptions of risk in many countries continue to be influenced by the memory of Chernobyl and Three Mile Island. How countries balance the risk of a nuclear accident against other factors — such as climate change, air pollution, mining accidents, or dependency on foreign fuel supplies — are complex matters that require further consideration.

The Agency continues to work to provide the most objective information possible to support a country’s decision on energy supply, to ensure that the risks and benefits of nuclear technology are clearly and fairly understood, and to assist those countries that choose nuclear power in operating their facilities safely and securely. We also continue to encourage, through our innovation activities, the development of new reactor and fuel cycle technologies that would ensure future cost competitiveness while incorporating, among other things, a greater reliance on passive safety features, enhanced control of nuclear materials through new fuel configurations, and design features that enhance proliferation-resistance while allowing for reduced construction times and lower operating costs. In addition, the Agency is also assisting member States in their work to demonstrate effective, long-term solutions to the management and disposal of spent fuel and high-level radioactive waste, an issue that remains the most significant hurdle for the nuclear power industry.

Non-Power Nuclear Applications

Food and Agriculture

In the area of food and agriculture, nuclear techniques continue to play a significant role in improving crop production. Radiation has long been used to speed up conventional breeding, in addition, the latest advances in molecular techniques allow systematic screening to identify specific gene functions. Rice strains with high tolerance to salinity are now targeted for over 4.3 million hectares of harsh environment in Asia, and a variety of bread wheat with improved nutrition and better performance during drought conditions is being cultivated extensively in Africa. Many other radiation induced plant derivatives are being used for increased yield, nutritional value or suitability for harsh environments. The biotechnology advances that allow gene identification are revolutionizing our research on livestock and draft animals with better resistance to disease. And food irradiation continues to gain greater acceptance, with 70 irradiation facilities now in operation in 33 countries.

In recent years, the Sterile Insect Technique (SIT) has become a more cost-effective technology for suppression of the fruit fly, capable of competing in cost with conventional insecticide-based suppression. Overall losses due to trypanosomosis in the agricultural gross domestic products of tsetse-infested countries in Sub-Saharan Africa are estimated at \$4.75 billion per year. The Agency played an active role in identifying internationally agreed priority areas for agricultural development, where tsetse and trypanosomosis intervention, including the SIT component, would likely generate quick, tangible and sustainable benefits.

Human Health

The number of new cancer cases per year in the developing world is expected to double to 10 million by 2015, as life expectancy increases and lifestyles change. However, most developing countries do not have sufficient numbers of health professionals or radiotherapy machines to treat

their cancer patients effectively. Indeed, some 15 African nations and several countries in Asia lack even one radiation therapy machine. The Agency has been working with key partners such as the World Health Organization to provide training, expert missions and equipment to support national and regional radiotherapy programmes - as well as projects in nuclear medicine, nutrition studies and many other health related areas. A highly visible result of Agency support across Africa has been an increase of approximately 35%, over the past five years, in the number of cancer patients receiving treatment in participating countries of the African Regional Co-operative Agreement (AFRA) – an increase of approximately 6500 patients per year.

Fresh Water

Improved understanding of the earth's water cycle has been widely recognized as one of the key elements of scientific information necessary for developing policies toward a sustainable management of freshwater resources. The Agency's assistance programme for the application of isotopes in hydrology helps to provide rapid hydrological information for large areas at low cost.

CONCLUSION

The NPT enshrines three objectives – nuclear non-proliferation; co-operation in peaceful uses of nuclear energy; and nuclear disarmament. The activities of the IAEA are also based on three pillars – nuclear technology, nuclear safety and security, and nuclear verification. The review of the activities in 2003 makes it clear that the scope of the Agency's work has continued to expand and that there have been significant challenges in all the areas of our activities. The Agency has responded to all of these challenges guided by the principle that only through international co-operation can there be progress in dealing with the pressing issues of poverty, enhancing international peace and security, and protecting the environment.

In view of the challenges before us regarding the need for further strengthening the nuclear non-proliferation regime, the Agency will continue to do everything it can to contribute to the restoration of confidence in the effectiveness of this vital multilateral regime. We have made solid progress in building an effective nuclear safety regime — but pockets of weakness remain, in both the nuclear and the radiation safety areas. Nuclear technologies provide significant opportunities for economic and social development — but we must work together to maximize their benefits and minimize their risks. And, the Agency's effectiveness in facilitating peaceful nuclear technologies to address development needs, especially of the developing countries, is dependent on all our Member States contributing their financial share. The Agency looks forward to the continuing support of NPT States Parties on all these fronts.

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