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# Excerpts from the Introductory Statement

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## Protection Against Nuclear Terrorism

The question of nuclear security to protect against terrorism has been on our minds for the past few months, and I am pleased now to present to the Board a concrete plan of action... The plan covers eight areas: physical protection of nuclear material and nuclear facilities; detection of malicious activities (such as illicit trafficking) involving nuclear and other radioactive materials; strengthening of State systems for nuclear material accountancy and control; security of radioactive sources; the assessment of safety and security related vulnerabilities at nuclear facilities; response to malicious acts or threats thereof; the adherence to international agreements and guidelines; and enhancement of programme co-ordination and information management for nuclear security related matters...

I should emphasize that the activities proposed are not a substitute for national measures, nor can they diminish the primary responsibility of the State on all matters of security; rather they are designed to supplement and reinforce national efforts in areas where international co-operation is indispensable to the strengthening of nuclear security...

The financing of an action plan for nuclear security will bring benefits for all States - regardless of the existence or size of their nuclear programmes - by contributing to improved protection of nuclear material and other radioactive sources, better border controls, and enhanced national and international mechanisms for responding to radiological emergencies. Those benefits should be an encouragement for all to contribute...

## Nuclear Technology

You have before you the Nuclear Technology Review, which focuses on technological developments in both power and non-power nuclear applications. Nuclear techniques continue to evolve and to serve human needs that range from energy production to disease control and water management, yet many of these applications continue to be relatively unknown to the public.

In this context I should mention that the World Summit on Sustainable Development (WSSD) will convene in Johannesburg in August, with the primary objective of reviewing progress made on sustainable development issues - under the Agenda 21 programme - since the 1992 Earth Summit in Rio de Janeiro. The Agency has contributed significantly to the progress made on a broad range of Agenda 21 issues. For example, in the area of agricultural productivity and food safety, nuclear techniques have been developed and implemented for the mutation of new plant strains, for pest control and eradication, for tracking soil erosion and fertilizer uptake, and for food preservation through irradiation.

### Water Resource Management (and World Water Day)

Another Agenda 21 issue relates to the sustainable development of freshwater resources, which dovetails directly with the Agency's extensive programme on isotope hydrology. In recognition of this role, the Agency has been asked to lead the United Nations system's 2002 celebration of World Water Day, which takes place this coming Friday in Vienna. This year's theme, "Water for Development," fits well with Agency efforts to improve the management of groundwater resources, particularly in Africa, Asia and South America...

### Application of the Sterile Insect Technique

The sterile insect technique (SIT) has proven to be an effective, environmentally friendly alternative to insecticides, with significant benefits in agricultural productivity...

The tsetse fly is recognized as one of the greatest constraints to socio-economic development in Sub-Saharan Africa, and the Agency is working closely with the Organization of African Unity - as well as with the Food and Agriculture Organization (FAO) and the World Health Organization - to launch SIT projects to eradicate tsetse on isolated areas of the mainland of Africa, including Ethiopia and Mali...

### Human Health

Agency projects continue to apply innovative nuclear techniques in the human health area. The examples from 2001 are numerous: in Latin America, over 18 000 people were screened for hepatitis C using an immuno-radiometric assay technique; in East Asia, a regional screening network for neonatal hypothyroidism rescued 360 babies from mental retardation out of 1.3 million screened; and in Africa, over 70 000 tests for the detection of tumours were carried out in 17 countries...

### Nuclear Power

Nuclear power continues to be in a "holding position," with a growing number of political leaders supporting the need for a "nuclear revival," but also with several others expressing concerns about nuclear safety and waste disposal. In the meanwhile, global nuclear operating experience continues to build (passing the 10 000 reactor-year milestone last year), and performance continues to improve.

New construction continues to be focused in Asia and countries of eastern and central Europe, which account for 31 out of the 32 reactors currently under construction. In Western Europe, the Finnish Government has given its approval in principle for a fifth reactor, with the decision now before the Parliament. And last month the USA announced a new government-industry collaboration, "Nuclear Power 2010," which intends to bring a new US nuclear plant online by the end of the decade.

But while it is important that every effort be made to continue to refine and advance existing nuclear power technology, it is equally important that we continue to encourage and support innovative ideas and technologies.

The Agency's International Project on Innovative Nuclear Reactors and Fuel Cycles (INPRO), currently with 13 members, continues to focus in its present phase on defining "user requirements." These requirements relate to economics and demand, nuclear safety, spent fuel and waste management, proliferation resistance, local infrastructure needs, legal and institutional prerequisites, and education and training. A separate task will develop methods and criteria that Member States may use in applying these requirements to specific innovative nuclear concepts within specific national situations. INPRO progress will be examined at a 2003 conference on nuclear innovation.

**Radioactive Waste Management**

In the management of spent fuel and radioactive waste, some important progress is worthy of note. In addition to the decision by Finland to construct a final disposal facility near the Olkiluoto nuclear power plant, a decision I reported to you last June, the President of the USA approved last month the recommendation for a high level waste repository at Yucca Mountain, Nevada, and forwarded the recommendation to the US Congress for consideration. I should mention that the Agency has played a supportive role in this decision through the organization of international peer reviews...

**Management of Nuclear Knowledge**

A growing concern that affects the entire nuclear community relates to the management of nuclear knowledge. A primary issue is one of "succession planning" for the nuclear workforce - ensuring that, as nuclear scientists, engineers and technicians retire, a younger generation with appropriate educational backgrounds become available to take their place...

In response to these concerns, the Agency is convening a senior level meeting this coming June to better define the scale and scope of the problem, to understand what academia, national governments and industry are doing to address the problem, and to determine what more could be done through co-operative effort.

**Nuclear Safety**

You have before you the Nuclear Safety Review. Nuclear safety continues to improve at power plants worldwide. Yet public demands for reassurance on safety issues, with calls for greater transparency and accountability, are widely voiced in many countries. The need, therefore, for a more effective and transparent international safety regime continues to be a high priority...

In the mid-1990s, a major overhaul of the entire IAEA safety standards programme was initiated, with a revised oversight committee architecture and a systematic, rigorous approach to upgrading the entire corpus of standards. The new standards that have resulted are of the highest calibre, represent best practice and should be viewed as globally applicable. In my view the international community will be much better served by focusing its efforts on the development of one comprehensive set of internationally accepted standards and on the harmonization of the various approaches that can be used in the implementation of these standards. The solution to an effective worldwide safety regime is clearly through the establishment of one global system rather than a set of disparate regional systems...

Recipient Member States invariably have expressed appreciation for the insights gained through these services. But for the international nuclear safety regime to become more effective, these services must become more visible, with a better method of communicating the results to the public and to recipient governments. The development and implementation of an "Integrated Safety Evaluation" service - providing a consolidated diagnostic of a country's nuclear safety status - may serve as the vehicle for raising the profile and better communicating the results of Agency safety services...

**Safety of Radioactive Sources**

A specific safety issue that has received recent media attention is the safety of radioactive sources. Particular vulnerability exists for sources that, due to neglect or disuse, have fallen outside of regulatory oversight. In the November Board, I highlighted our concern that such so-called orphan sources could be employed in malicious acts. That concern remains, but public health effects due to inadvertent exposure is an equally important concern, as was demonstrated late last year when two powerful radioactive sources were found unshielded in a remote area of the Republic of Georgia.

The Georgian incident should serve as an illustration of the much larger problem of orphan sources. Estimations differ as to the number and nature of such sources that remain at large but it is clearly a problem that deserves prompt attention and has been included in our plan of action to combat nuclear terrorism.

**Nuclear Verification**

**Safeguards Agreements and Additional Protocols**

The universalization, consolidation and strengthening of the non-proliferation regime, including concrete steps to reduce the number of and dependence on nuclear weapons, are more than ever important for the continuing sustainability and credibility of the regime. The Agency continues to be central to that regime through its verification of non-proliferation obligations. But, as I have mentioned repeatedly, only with comprehensive safeguards agreements in force can the Agency provide any non-proliferation assurance, and only with safeguards agreements and additional protocols in force can the Agency provide assurance not only about declared but also about possible undeclared activities. I regret, however, to report that the conclusion of comprehensive safeguards agreements and additional protocols remains slow. Fifty-one States have yet to fulfil their obligations under the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) to bring safeguards agreements with the Agency into force, and out of the protocols approved for 61 States, only 24 have entered into force.

**Conceptual Framework for Integrated Safeguards**

You have before you my report on the completion of the conceptual framework for integrated safeguards - representing a true milestone. Integrated safeguards ushers in a new system of verification that is more comprehensive in its outlook, more effective in its measures and ultimately more efficient in terms of cost. I should underline, however, that countries must have both safeguards agreements and additional protocols in place for the Agency to be able to make use of the new system...

