

Nuclear Security's Global Reach

The world has made progress since 9/11 to upgrade the global framework for nuclear and radiological security. The work goes on. The latest IAEA action plan targets States' needs through 2009

*f*ive years ago, the events of 11 September shocked the world and changed perceptions of the intentions and capabilities of terrorists.

In the nuclear field, work has accelerated dramatically to improve security measures. Much has been achieved but results are uneven across the board. More needs to be done.

The IAEA is at the forefront of international efforts to make the world's nuclear security regime stronger. A new action plan, which started on 1 January, builds on one that the Agency's Board first put into place in March 2002, within six months of "9/11".

While nuclear security is and should remain a national responsibility, international cooperation is essential if security efforts are to be effective. Global cooperation helps States to build up national capacities, and to establish wider networks for combating transnational threats.

The IAEA's Nuclear Security Plan

The IAEA's new Nuclear Security Plan is founded on measures to guard against thefts of nuclear and other radioactive material and to protect related facilities against malicious acts. The work has three main points of focus: needs assessment; prevention; detection and response.

- **Needs Assessment.** Needs assessment underpins the whole plan by providing information relevant to support activities e.g. by ensuring that information on trafficking incidents is shared effectively. The Agency database on illicit trafficking, now with 90 participating countries, has



The IAEA has supported Georgia and other countries in recovering dangerous old radioactive sources.

Credit: IAEA

proven valuable in identifying patterns of trafficking activity, potential threats and trafficking routes and methods.

- **Prevention.** Effective physical protection of nuclear and other radioactive materials; the protection of related nuclear facilities and transports; and strong systems for accounting for and control of radioactive materials are the cornerstones of an effective security system. The IAEA has been providing a range of international advisory service

missions, training workshops and technical guidance documents on nuclear security, physical protection, “design basis threat” assessments, and nuclear material accounting, to assist States in implementing these preventive measures. The IAEA has been working to promote a common approach to transport security through the development of guidelines and the provision of training courses and has arranged for the recovery and safe storage of large numbers of high activity sources.

Timely Initiatives

Important international and regional initiatives support efforts of the IAEA Nuclear Security Plan. They provide a valuable context through which the Agency can coordinate programmes, establish priorities and, above all, gain support for improving nuclear security worldwide.

The initiatives include the:

- Group of Eight (G8) *Global Partnership Programme*;
- European Union’s *Strategy Against the Proliferation of Weapons of Mass Destruction*;
- USA’s *Global Threat Reduction Initiative*;
- Australia’s *Regional Security of Radioactive Sources* project.

—For more information about Nuclear Security and these initiatives, visit the nuclear security features pages at www.iaea.org/NewsCenter/Features/NuclearSecurity/index.html

- **Detection and Response.** The aim is to have systems in place that can help countries to identify, at an early stage, illicit activity related to nuclear materials or radioactive sources and to have in place programs that allow a rapid response to such events. The IAEA has developed topical workshops on “response” to acts of illicit trafficking. In addition, the IAEA helps countries from many regions in training customs and border officials and installing better equipment at border crossings.

The Nuclear Security Program is greatly assisted by the work of other IAEA Departments—the IAEA’s Nuclear Safety and Safeguards programmes are recognised for their contribution to nuclear security, as are the roles of Department of Technical Cooperation, Office of Legal Affairs, Office of External Relations and Policy Coordination, Nuclear Energy and Nuclear Applications. This is a truly cross-cutting activity.

- **Scope of Work & Resources.** When the IAEA established its programme on the Security of Materials in the 1990s, the main concern was the prospect that nuclear or other radioactive materials could fall into the wrong hands. Among the driving forces for that programme was an alarming increase in reported cases of illicit trafficking in the early and mid-1990s and the recognition that States needed better and more coordinated efforts to combat the problem.

The scope and geographic reach of the programme has expanded over the years. Today, the nuclear security activities take place all over the world with more intensive support plans and equipment supply, thereby helping States in tangible ways.

Progress has been made, but the imperatives that first led to the IAEA’s nuclear security plan have not lost their relevance or urgency.

Since September 2001, the IAEA has carried out some 87 projects in Africa; 65 in Latin America; 195 in Europe; 74 in East Asia; and 84 in West Asia. The Agency has held more than 125 security advisory and evaluation missions, and convened over 100 training courses, workshops and seminars.

The work includes securing nuclear and other radioactive material. Working with Russia and the USA, for example, the IAEA implements contracts to dismantle and transport disused vulnerable radiation sources to more secure locations. Sealed sources from Bolivia, Côte d’Ivoire, Haiti, Iran, Malaysia, Panama, Sudan and Thailand have been conditioned for storage or shipped back to the original suppliers. The need for such high-priority assistance efforts is expected to grow.

So far, States and other organizations have been prepared to provide sufficient financial and in-kind resources to fund the IAEA security programme and related activities. Since September 2001, the IAEA Nuclear Security Fund has received over \$40 million from more than two dozen countries — as well as from the European Union and the Nuclear Threat Initiative (NTI).

Many countries have provided in-kind support. Countries from all regions have hosted workshops and regional and national training courses, participated in source recovery missions, provided technical insights on how engineered

safety features at nuclear facilities can enhance security against sabotage, and contributed to the development of IAEA guidelines and recommendations.

Channels of Cooperation

The cooperation of international organizations has proved instrumental to progress in nuclear security. They include Interpol, Europol, the European Commission, the Organization for Security and Cooperation in Europe, and the World Customs Organization. The benefits of IAEA assistance — and the reach of limited resources — have been maximized by coordinating activities with other organizations, and through regional partnerships. They include the IAEA/EU Joint Actions in the context of the European Council's *EU Strategy against the Proliferation of Weapons of Mass Destruction* and the Global Threat Reduction Initiative.

The IAEA also is working closely with governments interested in assistance for responding to UN Security Council resolution 1540. It called for effective border controls and law enforcement efforts to detect and combat illicit trafficking, and called upon States to refrain from providing any form of support to non-State actors that attempt to develop, acquire, use or transfer nuclear, chemical or biological weapons or their delivery systems. The Agency provides legal and technical advice, training and peer reviews.

Looking to the Future

Progress has been made, but the imperatives that first led to the IAEA's Nuclear Security Plan have not lost their relevance or urgency.

The latest plan extends through 2009, with extra-budgetary resources required to implement the plan approaching US \$16 million. The plan draws upon a review of the nuclear security programme over the past years, and the outcomes of international conferences that the IAEA has convened in the field of nuclear and radiological security. The extensive evaluation showed that the programme has established a solid foundation of assistance to States that contributes to higher levels of security. Yet gaps and shortcomings remain that need to be addressed.

In effect, the sights of global cooperation are set on creating a nuclear "security culture" — a mindset that, while providing the impetus for local and regional action, thinks globally and is fully capable of extending across borders. Ultimately, progress will be as strong as the weakest link.

—IAEA Staff Report

In Search of Security

Nuclear security is one part of a bigger global picture

As IAEA Director General Mohamed ElBaradei notes and the UN's Millennium Development Goals enshrine, our security threats cover a broad spectrum, and vary in nature and magnitude. They range from poverty, infectious diseases and environmental degradation to organized crime, terrorism, armed conflict and weapons of mass destruction.

The issues may appear unrelated. But upon closer look, they are clearly connected. And in today's world, they contribute to a prevailing sense of insecurity.

Dr. El Baradei cites a late 2003 Gallup International survey of 43,000 individuals in 51 countries that asked how they felt about the state of international security. Almost twice as many respondents rated global security as "poor" as those who answered "good". And almost half said they believed their children — the next generation — would live in an even more insecure world.

Why do we feel so insecure? What kind of security threats do we face?

He points to the huge and widening gap in living conditions, with 40% of the world's population surviving on less than \$2 per day, inevitably results in diminished opportunities and a sense of despair. These conditions — compounded in many cases by human rights abuses, the absence of good governance, and a sense of injustice and humiliation — provide the ideal environment for civil wars, organized crime, and all forms of extremism. And often, in regions plagued by longstanding conflict, countries hoping to achieve security and project power end up following in the footsteps of those who have resorted to nuclear weapons in search of security.

—Dr. ElBaradei made these points in a speech at the International Institute of Strategic Studies, in London. See the IAEA.org website for full text at www.iaea.org/NewsCenter/Statements/2005/ebsp2005n019.html

Nuclear Trafficking

IAEA's Latest Statistics

There were 103 confirmed incidents of illicit trafficking and other unauthorized activities involving nuclear and radioactive materials in 2005, newly released statistics from the Agency's Illicit Trafficking Database (ITDB) show.

The ITDB covers a broad range of cases from illegal possession, attempted sale and smuggling, to unauthorized disposal of materials and discoveries of lost radiological sources.

Eighteen of the confirmed incidents in 2005 involved nuclear materials; 76 involved radioactive material, mainly radioactive sources; two involved both nuclear and other radioactive materials, and seven involved radioactively contaminated materials.

Another 57 incidents from previous years were reported. They involved illicit trafficking and other unauthorized activities and had occurred earlier, mainly in 2004.

Two reported cases in 2005 involved small quantities of high-enriched uranium (HEU) which is a fissile material. In New Jersey, USA, a package containing

3.3 grams of HEU was reported lost. The second incident occurred in Fukui, Japan, when a neutron flux detector containing 0.017 grams of HEU was lost at a nuclear power plant.

"From the terrorism threat standpoint, these cases are of little concern but they show security vulnerabilities at facilities handling HEU," the latest report from the ITDB said. Indeed the majority of cases reported in 2005 showed no evidence of criminal activity.

The ITDB facilitates the exchange of authoritative information on incidents of trafficking in nuclear and radioactive materials. There are 91 countries that report to the IAEA's database. For the full report covering the last 13 years, see: www.iaea.org/NewsCenter/Features/RadSources/PDF/fact_figures2005.pdf

