

Security of Material

Objective

To increase Member States' awareness and ability to control, account for and protect nuclear and other radioactive materials and nuclear installations from subnational terrorist or other illegal activities, and to detect and respond to such activities.

Technical, Administrative and Regulatory Arrangements in Member States to Protect and Control Nuclear Material

To help operators identify vulnerabilities in safety systems that are of security relevance for protection against sabotage, the Agency developed *Guidelines for the Self-assessment of Safety and Security Vulnerabilities of Nuclear Installations*. These guidelines identify important synergies between nuclear safety and security.

The Agency supported Member States in evaluating their national physical protection systems by conducting International Physical Protection Advisory Service (IPPAS) missions and follow-up activities in Armenia, Bulgaria, Chile, Mexico, Norway, Peru, Philippines, Poland, Romania, Turkey and Ukraine. As a result of these missions, upgrades of physical protection systems were initiated. In addition, the Agency offered an extensive programme of physical protection related training courses, workshops and seminars in Algeria, Argentina, Czech Republic, Ghana, Hungary, India, Mexico, the Russian Federation and the USA.

The Agency reviewed and updated the design basis threat (DBT) methodology, which provides the essential foundation for State systems of physical protection, and completed a document entitled *Guidance for Development and Maintenance of a DBT*. Together with DBT workshops in South Africa and Brazil, these efforts assisted State authorities in managing their DBTs.

Effective State Systems of Accounting for and Control of Nuclear Material (SSACs) are essential for ensuring the security of such material. Training courses and evaluation missions focusing on SSACs were held in eight Member States, and guidelines for SSACs, including those for the establishment,

improvement and maintenance of an effective SSAC and for a State's self-assessment of its SSAC, are being developed. In addition, the Agency started work on the promotion of an enhanced 'security culture', one of the fundamental principles of physical protection.

Addressing Illegal Activities Involving Nuclear and other Radioactive Material

If the protection and control of nuclear or other radioactive material are deficient, States need to have effective capabilities to detect, interdict and respond to the theft of and illicit trafficking in these materials, as well as to sabotage and other such threats. The Agency's efforts to assist Member States in enhancing these capabilities included border evaluation missions for customs and other 'front-line' personnel (Fig. 1). As a result of these activities, upgrades are being implemented in Belarus, Bosnia and Herzegovina, Croatia, Georgia, The Former Yugoslav Republic of Macedonia and Ukraine.

The Agency has intensified its efforts to strengthen response measures in Member States. A pilot regional course on combating nuclear terrorism and incidents involving illicit trafficking in nuclear material was held in Romania, and a national course on the same subject was held in Albania. In addition, incident response missions visited Ecuador, Nigeria and Uganda. Other work included the completion of a



FIG. 1. An Agency expert demonstrates the use of a radiation detection 'pager' to border guards in Uzbekistan.

technical document on *Preparedness and Response for Malevolent Acts Involving Radioactive Material*.

In the process of implementing national strategies for regaining control over radioactive sources, the Agency conducted missions to a number of Member States. A publication entitled *Strengthening Control Over Radioactive Sources in Authorized Use and Regaining Control over Orphan Sources: National Strategies* (IAEA-TECDOC-1388) was completed. The Agency also conducted several missions under the umbrella of the "Tripartite Initiative", which focuses on securing vulnerable, high activity radioactive sources within the former Soviet Union. All of these missions had the goal of providing assistance in the investigation of nuclear material theft and in efforts to locate the material.

To help States identify the best means of strengthening their nuclear security, the Agency initiated the International Nuclear Security Advisory Service (INSServ), aimed at identifying measures for additional or improved security for nuclear related activities. The recommendations generated from this service are expected to facilitate subsequent, more specific, nuclear security assistance, either through Agency programmes or through bilateral assistance. Such support includes technical advice, legislative and regulatory assistance, training, and equipment. INSServ missions were carried out in Azerbaijan, the Democratic Republic of the Congo, the United Republic of Tanzania, Uganda, Uzbekistan and Yemen.

The Agency provided assistance to Member States in drafting national legislation in the field of nuclear security, including a legislative framework containing the basic requirements and procedures for the control of radioactive sources and for the physical protection of nuclear material. This also involved revision of *Categorization of Radioactive Sources*, issued as IAEA-TECDOC-1344, which contributes to risk informed decision making in dealing with the security of radioactive sources.

The Illicit Trafficking Database (ITDB) continued to expand in terms of both the number of participating States and reported incidents. In 2003, membership in the ITDB reached 75 States. A total of 75 new incidents have been reported by Member States, 60 of which occurred in 2003. A new format for the *ITDB Quarterly Report* was introduced, and an expanded *ITDB Annual Report* was issued to Member States. In October, the Agency organized a meeting of the national contact points for the ITDB at which

actions to improve the effectiveness of the ITDB were identified.

Convention on the Physical Protection of Nuclear Material: Status of the Amendment

In 2003, a total of 15 additional States became parties to the 1979 Convention on the Physical Protection of Nuclear Material (CPPNM), making a total of 97 States Parties. This increase reflects the importance given to the CPPNM as part of the international nuclear security regime.

The open-ended group of legal and technical experts convened by the Director General to prepare a draft amendment aimed at strengthening the CPPNM (the Group) completed the task for which it was established at its final meeting in March 2003. On 14 March 2003, the Group adopted by consensus its final report, after which the Secretariat distributed the report to all States Parties to the CPPNM for their consideration. The report sets out possible amendments to the CPPNM that reflect an extension of the scope of the CPPNM to cover: the physical protection of nuclear material used for peaceful purposes, in domestic use, storage and transport and the protection of nuclear material and nuclear facilities used for peaceful purposes against sabotage; the importance of national responsibility for the establishment, implementation and maintenance of a physical protection regime; the Physical Protection Objectives and Fundamental Principles; the basis for cooperation in the case of a credible threat of sabotage of nuclear material and nuclear facilities or in the case of sabotage thereof; and new offences relating to sabotage, nuclear smuggling, and offences that are contributing to, and organizing or directing, the commission of an offence. The text prepared by the Group does, however, contain a number of clauses on which it was not able to reach agreement.

At the 47th regular session of the General Conference, the Director General urged States Parties to the CPPNM to work rapidly towards consensus on the remaining outstanding issues so that a diplomatic conference could be convened to adopt the proposed amendments at an early date. In this context, the General Conference, in resolution GC(47)/RES/8, welcomed the finalization of the work of the Group and urged Member States to act on that basis with a view to achieving a well defined amendment of the CPPNM as soon as possible. ■