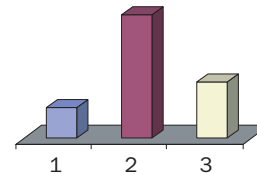


# SECURITY OF MATERIAL

## PROGRAMME OBJECTIVE

To assist Member States, through training, expert assistance, equipment and exchange of information, in the protection of nuclear and other radioactive materials against forcible seizure, theft and other criminal activities and to provide them with the knowledge and tools for detecting and responding to incidents of trafficking should they occur.

Regular budget expenditure: \$861 111  
Extrabudgetary programme expenditure  
(not included in chart): \$847 885



1. Information: \$126 732
2. Protection of Nuclear Material: \$503 441
3. Protection of Other Radioactive Material: \$230 938

## OVERVIEW

The Agency focused on providing assistance to Member States and establishing systems to prevent the diversion of nuclear material for illegal or unauthorized purposes. Information exchange continued and was enhanced through the use of new software; the number of States participating in the Illicit Trafficking Database (ITDB) Programme increased. Training activities for Member States included regional seminars, conducted in co-operation with the World Customs Organization (WCO) and INTERPOL, and through national seminars. The Agency completed the final report of the Illicit Trafficking Radiation Detection Assessment Programme (ITRAP) in October 2000. Recognizing the need of countries for detection and monitoring equipment, the Agency formulated a follow-up programme on technology development in co-operation with Member States and private industry. Finally, the Agency contributed to efforts aimed at improving international standards for the physical protection of nuclear material by Member States.

## INFORMATION

The effective and accurate exchange of information is of paramount concern to the Agency and Member States. Accordingly, the Agency redesigned the Illicit Trafficking Database (ITDB) — which contains 531 incidents of which 345 were confirmed, including 175 confirmed incidents involving nuclear material. A demonstration version was distributed to Member State representatives at the ITDB Programme Review meeting in November 2000, and to selected international organizations.

Software upgrades will allow access to more comprehensive information than was previously possible. Future access to the ITDB through a Web based application was also discussed and will be evaluated in 2001. Seven new Member States joined the ITDB Programme in 2000, increasing the total number of members to 68.

## PROTECTION OF NUCLEAR MATERIAL

Three meetings of a working group of the Expert Meeting “to consider whether there is a need to revise the Convention on the Physical Protection of Nuclear Material” took place. At the request of the working group, the Secretariat prepared a number of papers on: Analysis of Illicit Trafficking of Nuclear Materials; IAEA Physical Protection Recommendations and Guidance and their Use; IAEA International Physical Protection Advisory Service (IPPAS) Programme; IAEA Physical Protection Training Programme; Other IAEA Support to Member States in the Area of Physical Protection; Physical Protection Objectives and Fundamental Principles; Co-ordinated Technical Support Programme; and Bilateral Physical Protection Support Compilation of Input from Member States. The group identified several initial recommendations intended to promote further the effective implementation and improvement of physical protection worldwide. The recommendations included a spectrum of measures, initiatives and actions related to: the strengthening of the existing Convention; the need for Member States to

draft a resolution at the 45th General Conference; and improving the logical hierarchy of physical protection documents to guide States in designing, implementing and regulating their national systems of physical protection. The Expert Meeting is expected to consider the final recommendations of the working group and report its conclusions thereon to the Agency’s Director General in the course of 2001.

Continuing its support to Member States in evaluating their physical protection arrangements, the Agency conducted International

***“Revised recommendations for the physical protection of nuclear material and facilities underlined the need to use threat assessments as a basis for physical protection arrangements.”***

Physical Protection Advisory Service (IPPAS) missions to Belarus and the Democratic Republic of the Congo. Revised recommendations for the physical protection of nuclear material and facilities underlined the need to use threat assessments as a basis for physical protection arrangements. In this regard, the Agency finalized the curriculum of a Design Basis Threat (DBT) workshop, developed to assist States in reviewing their threat assessments.

## PROTECTION OF OTHER RADIOACTIVE MATERIAL

Experience with the Illicit Trafficking Radiation Monitoring Assessment Programme (ITRAP), as well as with its own test results, led the Agency to propose a CRP to improve technical means for the detection of illicit trafficking. One of these techniques, the use of CdZnTe (cadmium–zinc–telluride) detectors in hand-held isotope identifiers, necessary for characterizing seized radioactive items at borders, proved useful in the detection of shielded and mixed sources.

In a related activity, ITRAP was completed and the results of the evaluation were

presented in October 2000. The certification of various types of monitoring and detection equipment will enable Member States to more effectively select equipment for different applications.

A technical document was prepared in co-operation with INTERPOL and WCO. Various aspects of trafficking are examined, including the range of detection and monitoring equipment available, and the responses to incidents of illicit trafficking.

A CRP was proposed with the aim of enhancing Member State capabilities for

border monitoring and the use of detection equipment. The CRP will draw on the expertise of the Agency, contractors and manufacturers to design and produce the next generation of detection and identification equipment.

The Agency, through Member State Support Programmes, developed software for a commercial hand-held digital gamma spectrometer and began field testing. The instrument is a multi-purpose device for such activities as the detection of trafficking of nuclear material and radioactive sources, for the characterization of nuclear waste, and for use in nuclear verification.