

IAEA ILLICIT TRAFFICKING DATABASE (ITDB)

IAEA information system on illicit trafficking and other unauthorized activities involving nuclear and radioactive materials

Fact Sheet

Established in 1995, the ITDB is more than just a database. It is the Agency's information system on incidents of illicit trafficking and other unauthorized activities involving nuclear and radioactive materials. It is a unique collection of authoritative information on such incidents and a mechanism for dissemination of confirmed reports about such incidents to States and international organizations. In addition to State-confirmed reports, the ITDB also collects information from open media sources and seeks confirmation of media reports from States concerned.

The ITDB's principle objective is to facilitate the exchange of authoritative information on reported incidents among States. The information collected from the States is subjected to ongoing analysis by the Agency's ITDB staff to identify common trends and patterns, to assess threats, and to evaluate weaknesses in material security and detection capabilities and practices. The collected statistics and analyses are provided to the participating States and partnering organizations. ITDB information and analyses are also used to provide support to the implementation of the IAEA Nuclear Security Plan.

Participation in the ITDB programme is voluntary. As of 1 September 2008, 100 States have joined the programme (Annexe B). Communication with participating States is maintained through the network of national Points of Contact (POC). Meetings of the POCs are organized to review the Database operations.

To improve information cooperation with States within the framework of the ITDB programme, the IAEA conducts information workshops on regional and sub-regional levels that bring together regulatory and law enforcement officials. To-date, five workshops have been conducted in Singapore, Republic of South Africa, Qatar, Kenya and Sri Lanka.

Security and confidentiality of information

The ITDB incorporates strict information classification and dissemination guidelines. Information provided below represents a cross-section of the ITDB aggregate data that is available for public consumption.

Scope of the ITDB

The ITDB covers incidents, reported by national Points of Contact or otherwise confirmed by States, involving unauthorized acquisition (e.g. by theft), provision, possession, use, transfer or disposal of nuclear and other radioactive materials, whether intentionally or unintentionally, with or without crossing international borders, as well as unsuccessful or thwarted acts of the above type. It includes, therefore, but is not limited to incidents involving illegal trade and movement of materials across borders. It also covers the loss of materials and the discovery of uncontrolled materials.

The scope of the ITDB covers all types of nuclear materials (i.e. uranium, plutonium, thorium), all naturally occurring and artificially produced radioisotopes, and radioactively contaminated materials. No limitation is placed on the quantity of material, its activity level, and other technical characteristics.

The ITDB also encourages States to report incidents involving non-radioactive materials in cases when such materials are intentionally offered for sale as nuclear or radioactive (scams).

Joining the ITDB

Non-participating States are strongly encouraged to join the ITDB programme. States wishing to join the ITDB programme should contact the IAEA Office of Nuclear Security. States will be asked to nominate a single national Point of Contact who will provide reports on incidents to the ITDB, receive information and ITDB reports produced by the Agency, and will be able to facilitate enquiries on specific incidents sent by the ITDB Secretariat. Information on the Database, the procedures for reporting incidents, and copies of the Incident Notification Form will be sent to the POC.

Membership and Nominations

Membership applications and nominations of Points of Contact should be sent to:

Ms. Anita Nilsson
Director, Office of Nuclear Security
International Atomic Energy Agency
Wagramerstrasse 5, P.O. Box 100
A-1400, Vienna, AUSTRIA
Tel: +43-1-2600-22299
Fax: +43-1-2600-29299

ITDB highlights 1993-2007

As of 31 December 2007, the ITDB contained 1340 confirmed incidents reported by the participating States and a few non-participating States.

Of the 1340 confirmed incidents, 303 incidents involved unauthorized possession and related criminal activity, 390 incidents involved theft or loss of nuclear or other radioactive materials, and 570 incidents involved other unauthorized activities. For the remaining 77 incidents, the reported information was not sufficient to determine the category of incident.

Information reported to the ITDB shows a persistent problem with the illicit trafficking in nuclear and other radioactive materials, thefts, losses and other unauthorized activities.

Group 1. Unauthorized possession and related criminal activity, 1993-2007

This group includes such incidents as illegal possession and movement of material, attempts to sell or purchase, or use these materials illegally. Illicit trafficking in nuclear and other radioactive materials is a potential threat to the security of states and to international security. It could be a shortcut to nuclear proliferation and to nuclear or radiological terrorism.

Of the 18 incidents involving HEU and Pu reported to the ITDB during 1993-2007 (Annexe A), fifteen incidents involved unauthorized possession of HEU and Pu; some of these incidents involved attempts to sell these materials and their smuggling across national borders.

A few of these incidents involved seizures of kilogram quantities of weapons-usable nuclear material, but the most involved very small quantities. In some of these cases, however, there is a possibility that the seized material was only a sample of larger quantities available for illegal purchase or at risk of theft. These materials continue to pose potential security risks.

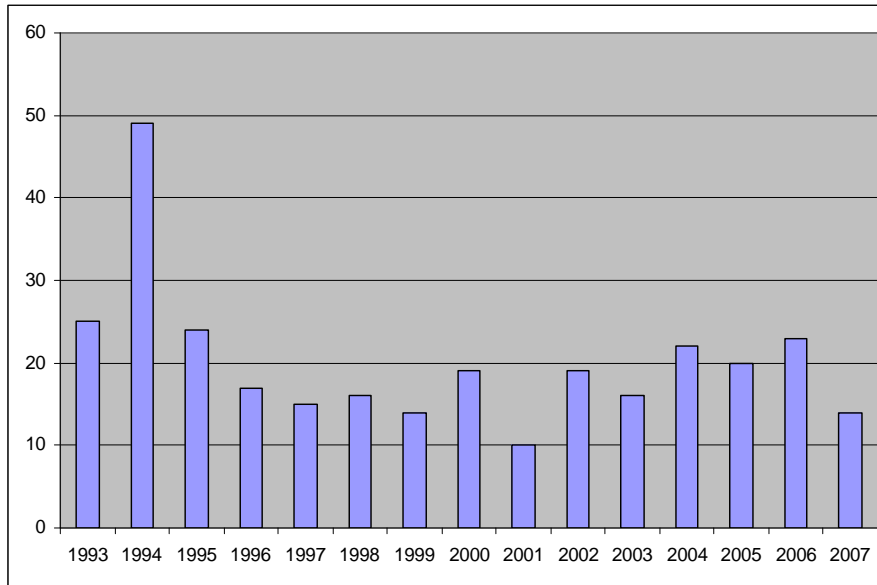


Figure 1. Incidents reported to the ITDB involving unauthorized possession and related criminal activities, 1993-2007

Incidents involving illegal possession, movement or attempt to sell nuclear or other radioactive materials indicate that there is a perceived demand for such materials on the illegal market. The majority of these incidents have been supply-driven with no pre-identified buyer. Buyers and repeat offenders, however, have been identified in some cases.

Amateurish character and poor organization have been the characteristics of many cases of unauthorized possession and related criminal activities. Well-organized, professional and demand-driven activities would be much more difficult to detect. Where information on motives is available, it indicates that financial gain is the principal motive behind most events. Some cases, however, showed an indication of malicious intent.

Group 2. Thefts and losses, 1993-2007

Incidents included in this group involved the theft or loss of nuclear and other radioactive materials from facilities or during transport, which were detected and reported to the ITDB. Theft of nuclear or radioactive materials can be the beginning of an illicit trafficking activity and is an indicator of vulnerability in control and security systems.

The reported information shows that in about 66% of the cases, the materials reported lost or stolen have not been subsequently recovered. In 2004-2007, the share of incidents with un-recovered materials has increased to about 75%. Un-recovered materials include Category 2 and 3 high-risk 'dangerous'¹ radioactive sources, which may present considerable radiological danger if used in a malicious act.

Reported thefts and losses have primarily involved radioactive sources, such as ¹³⁷Cs, ²⁴¹Am, ⁹⁰Sr, ⁶⁰Co, ¹⁹²Ir and other radioisotopes. The information shows that sources used in portable or mobile industrial equipment, such as gauges or radiography devices, are predictably most vulnerable to theft or loss. This is particularly so during transportation by vehicle.

¹ IAEA *Categorization of Radioactive Sources*, RS-G-1.9. Radioactive sources belonging to Categories 1, 2 and 3 are considered 'dangerous,' i.e. as having potential to cause deterministic health effects if uncontrolled or used for malicious purposes.

Thieves' intentions are not often known, or apparent. Radioactive sources and devices in which they are used can be attractive because of their perceived high resale value or the value of their shielding or encapsulation metals for metal scrap dealers. Some cases, however, indicate a perceived demand for radioactive materials on the illegal market. One incident of theft showed evidence of malicious intent.

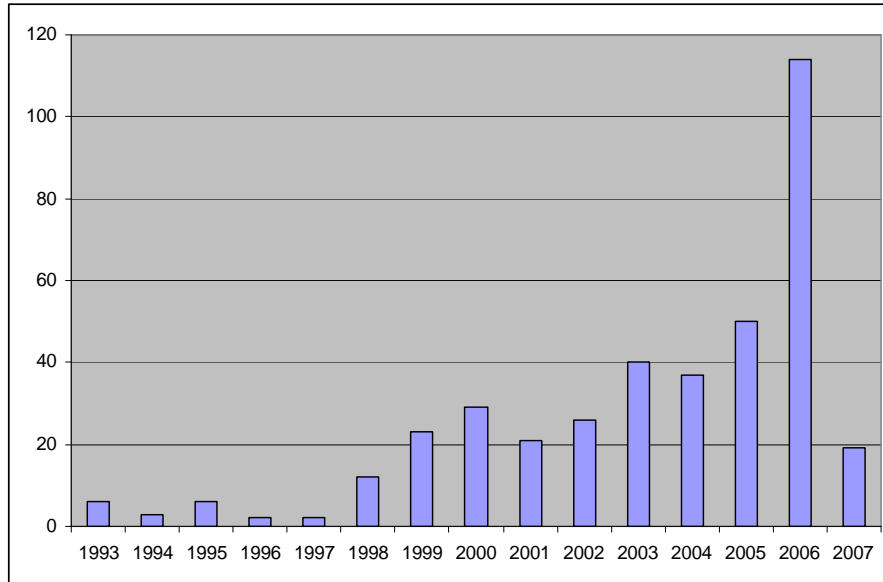


Figure 2. Incidents reported to the ITDB involving theft or loss, 1993-2007²

Group 3. Other unauthorized activities, 1993-2007

Incidents included in this group primarily involved various types of material recovery showing no direct evidence of criminal behavior, such as discovery of orphan sources, detection of materials disposed of in an unauthorized way, etc.

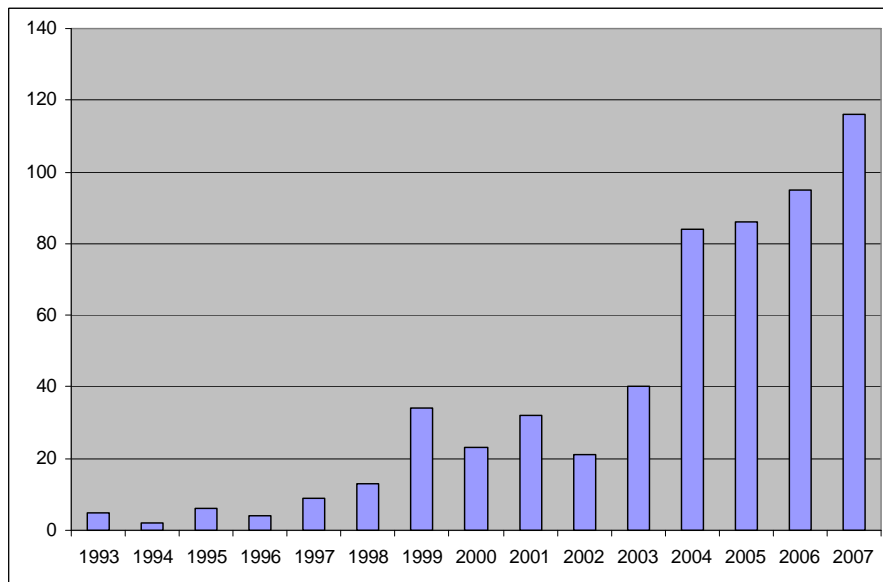


Figure 3. Other unauthorized activities, 1993-2007

² The significant increase of the number of reported cases involving theft or loss in 2006 is due almost entirely to a change in the reporting practice of one state that greatly increased their number of reports. In 2007 the same state reverted to its prior practice, but even when this decrease is accounted for, there may be a decline in these types of cases in 2007, although some of the decline may be due to delayed reporting rather than actual decrease in incidents' occurrence.

Incidents involving other unauthorized activities have mainly involved radioactive sources, including some Category 1, 2 and 3 high-risk 'dangerous' sources, and radioactively contaminated materials. Occurrence of such incidents is an indication of failures in systems to control, secure and dispose of radioactive materials. They also show weaknesses of regulatory systems.

Annexe A. Incidents involving HEU and Pu confirmed to the ITDB, 1993-2007

Date	Location	Material Involved	Incident Description
1993-05-24	Vilnius, Lithuania	HEU/ 150 g	4.4 t of beryllium including 140 kg contaminated with HEU were discovered in the storage area of a bank.
1994-03	St.Petersburg, Russian Federation	HEU/ 2.972 kg	An individual was arrested in possession of HEU, which he had previously stolen from a nuclear facility. The material was intended for illegal sale.
1994-05-10	Tengen-Wiechs, Germany	Pu/ 6.2 g	Plutonium was detected in a building during a police search.
1994-06-13	Landshut, Germany	HEU/ 0.795 g	A group of individuals was arrested in illegal possession of HEU.
1994-07-25	Munich, Germany	Pu/ 0.24 g	A small sample of PuO ₂ -UO ₂ mixture was confiscated in an incident related to a larger seizure at Munich Airport on 1994-08-10.
1994-08-10	Munich Airport, Germany	Pu/ 363.4 g	PuO ₂ -UO ₂ mixture was seized at Munich airport.
1994-12-14	Prague, Czech Republic	HEU/ 2.73 kg	HEU was seized by police in Prague. The material was intended for illegal sale.
1995-06	Moscow, Russian Federation	HEU/ 1.7 kg	An individual was arrested in possession of HEU, which he had previously stolen from a nuclear facility. The material was intended for illegal sale.
1995-06-06	Prague, Czech Republic	HEU/ 0.415 g	An HEU sample was seized by police in Prague.
1995-06-08	Ceske Budejovice, Czech Republic	HEU/ 16.9 g	An HEU sample was seized by police in Ceske Budejovice.
1999-05-29	Rousse, Bulgaria	HEU/ 10 g	Customs officials arrested a man trying to smuggle HEU at the Rousse customs border check point.
2000-12	Karlsruhe, Germany	Pu/ 0.001 g	Mixed radioactive materials including a minute quantity of plutonium were stolen from the former pilot reprocessing plant.
2001-07-16	Paris, France	HEU/ 0.5 g	Three individuals trafficking in HEU were arrested in Paris. The perpetrators were seeking buyers for the material.
2003-06-26	Sadahlo, Georgia	HEU/ ~170 g	An individual was arrested in possession of HEU upon attempt to illegally transport the material across the border.
2005-03 to 2005-04	New Jersey, USA	HEU/ 3.3 g	A package containing 3.3 g of HEU was inadvertently disposed of.
2005-06-24	Fukui, Japan	HEU/ 0.0017 g	A neutron flux detector was reported lost at an NPP.
2006-02-01	Tbilisi, Georgia	HEU/ 79.5 g	A group of individuals was arrested trying to illegally sell HEU.
2006-03-30	Hennigsdorf, Germany	HEU/ 47.5 g	Authorities discovered trace amounts of HEU on a piece of tube found amidst scrap metal entering a steel mill.

Annexe B. States Participating in the ITDB, 1 September 2008

1. Algeria
2. Argentina
3. Armenia
4. Australia
5. Austria
6. Azerbaijan
7. Bangladesh
8. Belarus
9. Belgium
10. Bolivia
11. Brazil
12. Brunei Darussalam
13. Bulgaria
14. Canada
15. Central African Republic
16. Chile
17. China
18. Croatia
19. Colombia
20. Cuba
21. Cyprus
22. Czech Republic
23. Denmark
24. Dominican Republic
25. Ecuador
26. Estonia
27. Ethiopia
28. Finland
29. France
30. Georgia
31. Germany
32. Ghana
33. Greece
34. Hungary
35. Iceland
36. India
37. Indonesia
38. Iran
39. Iraq
40. Ireland
41. Israel
42. Italy
43. Japan
44. Kazakhstan
45. Kenya
46. Korea, Republic of
47. Kuwait
48. Kyrgyzstan
49. Latvia
50. Lebanon
51. Lithuania
52. Luxembourg
53. Macedonia, The Former Yugoslav Republic of
54. Madagascar
55. Malaysia
56. Mali
57. Mauritius
58. Mexico
59. Moldova
60. Montenegro
61. Morocco
62. Namibia
63. Netherlands
64. New Zealand
65. Niger
66. Nigeria
67. Norway
68. Pakistan
69. Paraguay
70. Peru
71. Philippines
72. Poland
73. Portugal
74. Qatar
75. Romania
76. Russian Federation
77. Saudi Arabia
78. Serbia
79. Slovak Republic
80. Slovenia
81. South Africa
82. Spain
83. Sri Lanka
84. Sweden
85. Switzerland
86. Tajikistan
87. Tanzania
88. Thailand
89. Tunisia
90. Turkey
91. Uganda
92. Ukraine
93. United Kingdom
94. USA
95. Uruguay
96. Uzbekistan
97. Venezuela
98. Vietnam
99. Yemen
100. Zimbabwe