IAEA ILLICIT TRAFFICKING DATABASE (ITDB)

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

The IAEA Illicit Trafficking Database (ITDB) is a unique asset helping participating States and selected international organizations in combating illicit trafficking and other unauthorized activities and events involving nuclear and radioactive materials. It is also an essential component of the information platform supporting the implementation of the IAEA's Nuclear Security Plan.

The ITDB was established in 1995. It is a unique collection of authoritative information and a dissemination mechanism for confirmed reports about illicit trafficking and other unauthorized activities and events involving nuclear and radioactive materials to States. Information is also distributed to certain international organizations.

Participation in the ITDB reporting is voluntary. As of 1 September 2009, 107 States were participating in the ITDB programme (Annexe). Communication with participating Member States is maintained through the network of national Points of Contact (POC). Meetings of the POCs are organized from time to time to review the Database operations.

Scope of the ITDB

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

The scope covers all types of nuclear materials (i.e. uranium, plutonium, and thorium), all naturally occurring and artificially produced radioisotopes, and radioactively contaminated materials. No limitation is placed on the quantity of material, its activity level, or other technical characteristics. States are also encouraged to report incidents involving non-radioactive materials in cases when such materials are intentionally offered for sale as nuclear or radioactive (scams).

Regional meetings on illicit nuclear trafficking information management and coordination

These meetings contribute to strengthening national, regional, and international capacities to prevent and combat illicit trafficking in nuclear and other radioactive materials through enhanced information and knowledge sharing, management, and coordination.

The meetings are designed, among other things, to contribute to the improved awareness of States about the ITDB programme, to better reporting, to the enhanced regional dialogue on this and related issues, and to the promotion of the culture of information and knowledge sharing and networking.

Since July 2007, eight regional information meetings have been conducted for countries in Asia, Africa, Middle East and Eastern Europe. Further meetings are planned for States in other regions with the intention to cover all regions in the world.

Confidentiality and security of ITDB 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.

Joining the ITDB

Non-participating States are 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 illicit trafficking 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 or 29250

ITDB highlights 1993-2008

Incidents reported to the ITDB show that there is a persistent problem with illicit trafficking in nuclear and other radioactive materials, with thefts, losses and other unauthorized activities and events.

As of 31 December 2008, the ITDB contained 1562 confirmed incidents reported by the participating States and some non-participating States. Of the 1562 confirmed incidents, 336 incidents involved *unauthorized possession and related criminal activities*, 421 incidents involved reported *theft or loss*, and 724 incidents involved *other unauthorized activities and events*. In the remaining 81 cases the reported information was not sufficient to determine the category of incident.

Unauthorized possession and related criminal activities, 1993-2008

Incidents included in this group involve illegal possession and movement of nuclear material or radioactive sources, attempts to sell or purchase, or use these materials illegally.

Illegal possession, trade and movement of nuclear and other radioactive materials present potential threat to the security of states and to international security. These activities could constitute a shortcut to nuclear proliferation and to nuclear or radiological terrorism.

About 30% of all incidents involving *unauthorized possession and related criminal activities* reported to the ITDB occurred in 1993-1995. After this period, the number of reported cases per year declined but has been fairly stable over the years – with minor fluctuations – averaging at about 19 incidents per year.

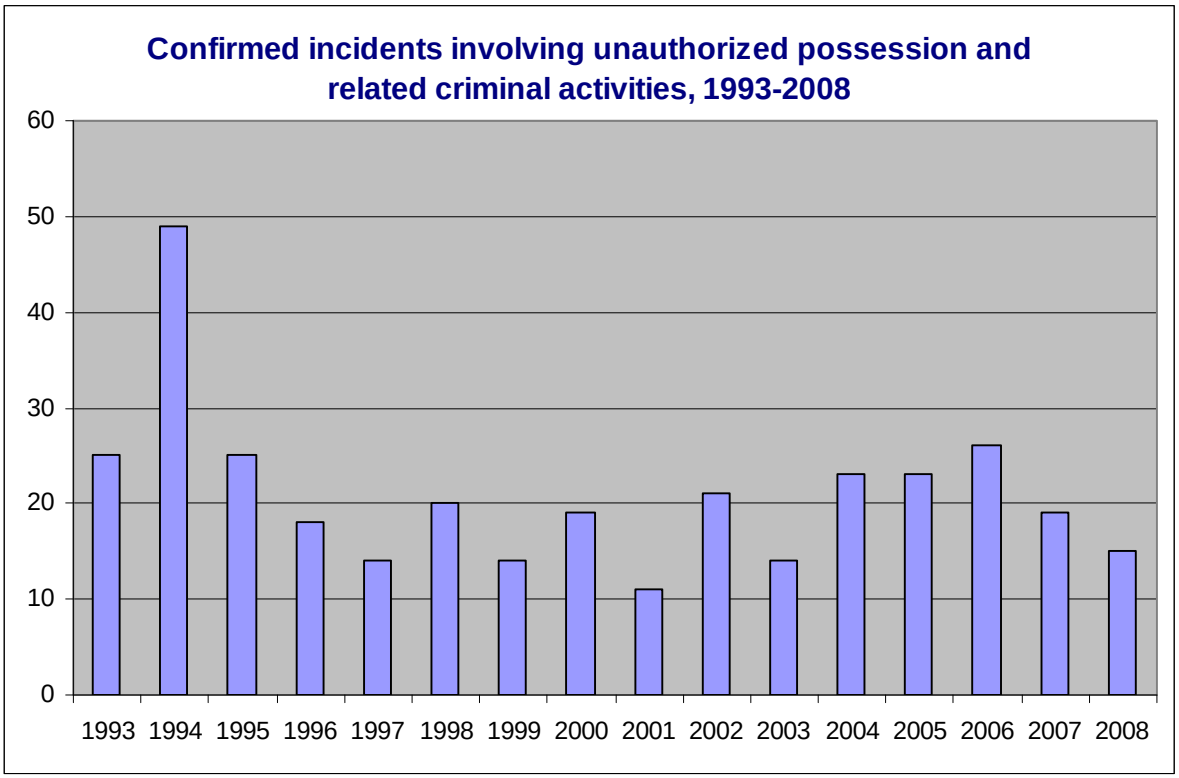

Figure 1. Incidents reported to the ITDB involving unauthorized possession and related criminal activities, 1993-2008.

During 1993-2008, fifteen confirmed 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 are indications that the seized material was only a sample of larger quantities available for illegal purchase or at risk of theft. These larger quantities have not been identified and recovered and pose potential security risk.

Incidents involving attempts to sell nuclear materials or radioactive sources 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 buyers. But in some cases, buyers and repeat offenders have been identified.

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

Thefts and losses, 1993-2008

Incidents included in this group involved the thefts or losses of nuclear materials or radioactive sources from facilities or during transport, which were detected and reported to the ITDB. Theft can be the beginning of an illicit trafficking activity. Thefts and losses are also indicative of vulnerabilities in security and control systems.

The reported information shows that in about 65% of the cases, the lost or stolen materials have not been recovered. In 2004-2008, the share of incidents with un-recovered materials has increased to

about 73%. Un-recovered materials include Category 2 and 3 high-risk 'dangerous'[1] radioactive sources, which present radiological danger if used in a malicious act.

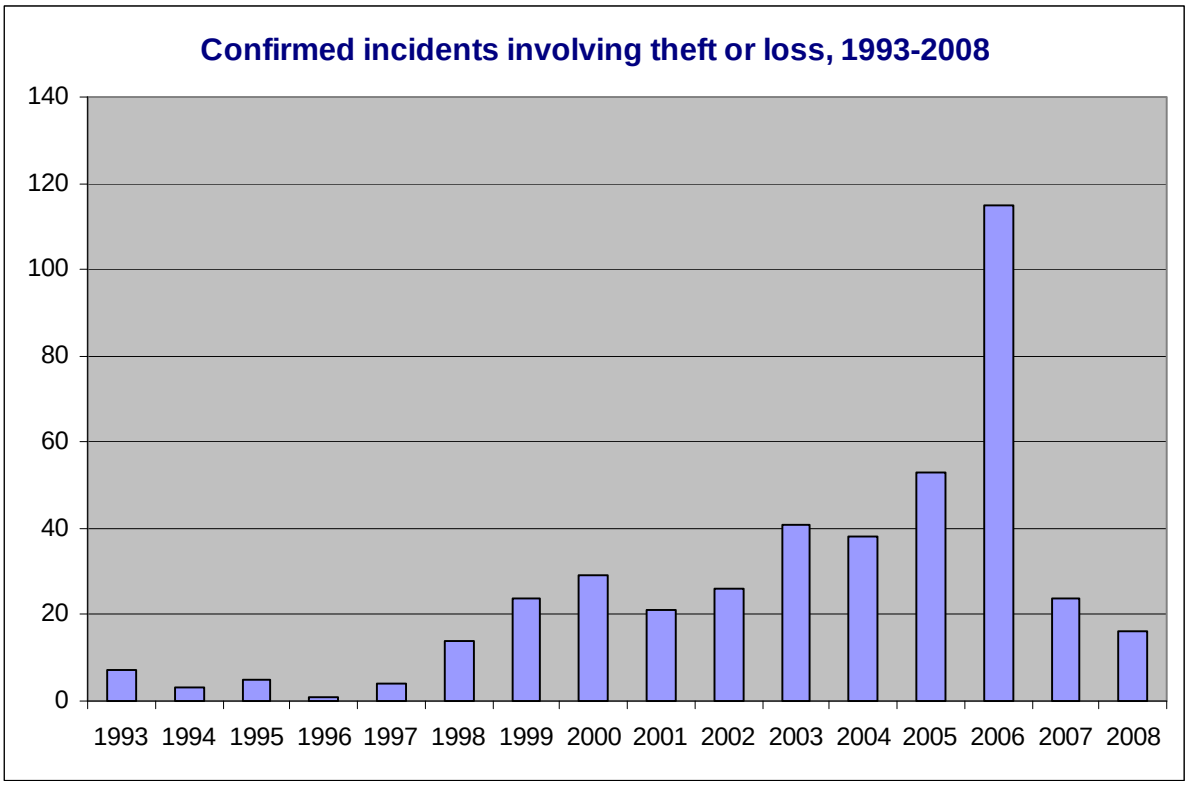

Figure 2. Incidents reported to the ITDB involving theft or loss, 1993-2008.

Note: The number of reported cases involving theft or loss increased significantly in 2006 and then decreased. This fluctuation is a result of a change in reporting procedures, rather than actual increase/decrease in the occurrence of incidents.

Reported thefts and losses have primarily involved radioactive sources, such as ^{137}Cs, ^{241}Am, ^{90}Sr, ^{60}Co, ^{192}Ir 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. State reports indicate the need to improve security measures and regulatory arrangements during the use, storage, transport and disposal of such sources.

Thieves' intentions are often not known, or immediately 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 as metal scrap. Some cases, however, indicate a perceived demand for radioactive materials on the illegal market. One incident of theft showed evidence of malicious intent.

Other unauthorized activities and events, 1993-2008

Incidents included in this group primarily involved various types of material recovery, such as discovery of orphan sources, detection of materials disposed of in an unauthorized way, and detection of inadvertent unauthorized possession or shipment of nuclear or other radioactive materials.

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[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.

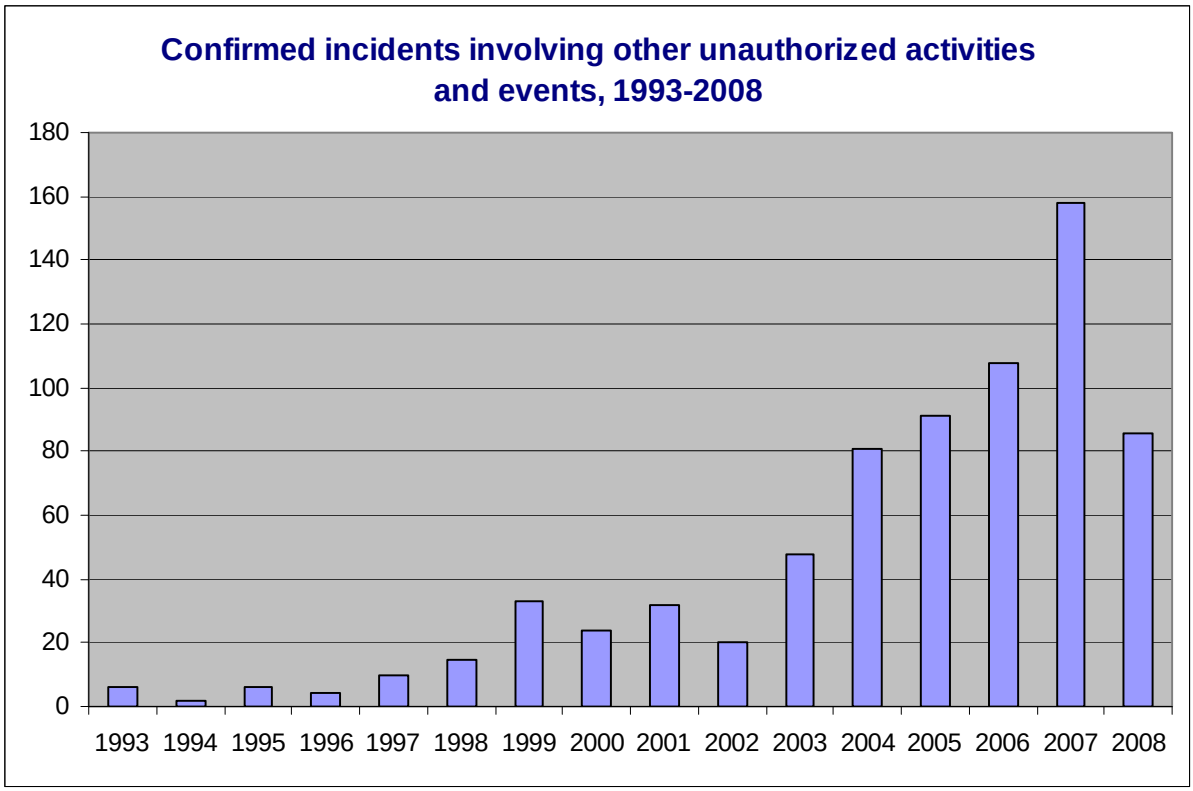

Figure 3. Other unauthorized activities and events, 1993-2008.

Incidents involving *other unauthorized activities or events* 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.

A considerable number of incidents in this category during 2006-2008 involved the detection of metal products contaminated by Co-60. The number of such incidents and the geography of origins of the contaminated metal products indicate a persistent problem in securing and detecting unauthorized disposal of Co-60 sources in some countries.

Annexe. States Participating in the ITDB, 1 September 2009

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