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GENERAL ASSEMBLY FIRST COMMITTEE  
DISARMAMENT AND INTERNATIONAL SECURITY

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### DESCRIPTION OF THE COMMITTEE

The General Assembly (GA) is the main decision-making body of the United Nations. It includes all 192 member states; each member state has one vote. The GA addresses issues involving all aspects of the UN's work, including humanitarian, peace and security, and human rights matters, and it can refer threats to peace to the Security Council for deliberation. Resolutions produced by the GA are not binding—the GA cannot force countries to take action on any issue—but because they are supported by a majority of countries in the world, they are important international documents.

The GA is divided into six committees. The GA First Committee deals disarmament and international security issues, and discusses issues related to protecting the peace. Like the other committees, the First Committee includes all 192 UN member states. It has the power to pass draft resolutions, which then go to the main General Assembly session, called the Plenary, for a final vote.

“In the nuclear non-proliferation regime, it is the IAEA which controls that nuclear energy is not misused for military purposes, and the Director General has stood out as a bold advocate of new measures to strengthen that regime. At a time when disarmament efforts appear deadlocked, when there is a danger that nuclear arms will spread both to states and to terrorist groups, and when nuclear power again appears to be playing an increasingly significant role, this work is of incalculable importance.”

*Source:* Speech given by The Chairman of the Norwegian Nobel Committee, Ole D. Mjøøs (Oslo, December 10, 2005), [http://nobelpeaceprize.org/eng\\_lect\\_2005a.html](http://nobelpeaceprize.org/eng_lect_2005a.html)



## TOPIC: PROTECTION OF NUCLEAR MATERIALS

### INTRODUCTION

**Nuclear weapons** are considered the most destructive ever known to humankind.\* Not only is the strength of a nuclear blast devastating, but the **radiation** produced by the blast lingers, causing illness and deformities in survivors. Many experts and leaders in the international community acknowledge that the destructive power of nuclear weapons is so great, that no country should ever produce nuclear weapons. The more countries acquire nuclear weapons programs, the greater the likelihood that nuclear weapons will again be used in warfare—a possibility every country wants to avoid.

But the tremendous power of nuclear weapons makes them a desirable form of defense for countries. This is especially true of countries with unstable governments; nuclear weapons would be an effective form of political intimidation. Nuclear weapons are also appealing to terrorists, and several terrorist groups have announced their desire to acquire them.

Countries with nuclear defenses are pressured to **disarm**—to reduce their stocks of nuclear weapons and discontinue their nuclear weapons programs. But the fact that several countries still have nuclear weapons means that one day, a terrorist, criminal, or unstable government might be able to obtain one. In addition, the nuclear science has many beneficial applications; as a result, **nuclear materials** are widely used in many countries. These materials might enable criminals to create nuclear bombs or other destructive weapons.

In a world increasingly plagued by the threat of terrorism, protecting nuclear materials and weapons is more important than ever. The UN and individual member states must do everything possible to prevent the theft and trafficking of nuclear weapons and materials.

### BACKGROUND

US President Dwight Eisenhower stated in 1953, “It is not enough to take [nuclear technology] out of the hands of the soldiers. It must be put into the hands of those who will... adapt it to the arts of peace.” Four years later, UN member states created the **International Atomic Energy Agency (IAEA)** to promote safe, peaceful uses of nuclear science.<sup>1</sup> IAEA helps countries assess their energy needs and safely plan the construction of nuclear power plants, and trains officials to safely apply nuclear technology to developmental efforts. In fact, because nuclear science offers advancements in many fields, from medicine to electricity-production, the United States and Soviet Union long ago provided nuclear materials to other countries.<sup>2</sup>

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\* For more information on how nuclear weapons work and what happens after they explode, visit the “How Stuff Works” webpage at <http://science.howstuffworks.com/nuclear-bomb.htm>.



Nuclear science involves the reactions of particles within atoms. The release of these particles during nuclear reactions is called radiation, which has a number of important scientific applications. Radiation can be used to diagnose illnesses, to treat cancers, to disinfect medical equipment, and to perform scientific research. The energy released during nuclear reactions can be used in power plants, to produce electricity.

The IAEA is also responsible for monitoring much of the world's nuclear materials, both materials used in weapons and materials used for peaceful purposes (even the materials used in research facilities or power plants can be used to produce a weapon). This makes monitoring nuclear activity especially difficult; IAEA must monitor both governmental and **civilian** facilities.

The success of IAEA's monitoring program depends on the cooperation of governments. Governments are sometimes reluctant to allow IAEA inspectors to survey their defense plants or research buildings, for fear of disclosing important defense secrets. Other times, governments are eager to secretly create nuclear defense programs.

#### CRITICAL THINKING

*The monitoring program requires the cooperation of governments. This is true of many of the UN's agreements and policies. But the political will of the individual countries often circumvents the execution of these policies. What are some reasons countries might agree to a program, but not cooperate with its execution? What does this mean for the effectiveness of international agreements? How can the international community make international agreements enforceable?*

In addition, IAEA must encourage workers in the civilian sector to protect **radiological materials**. This can be an overwhelming task, as the materials are common in power plants, research facilities and hospitals throughout the world. The materials at these civilian facilities are not the kind required to make a nuclear bomb, but they could be used to produce a "**dirty bomb**," which would spread low-grade radiological material over a public area. Even though a dirty bomb would not kill tens of thousands of people, as a nuclear explosion would, it would cause billions of dollars in damage and would sicken thousands of people. Exposure to radiation caused by the dirty bomb could cause tissue damage, radiation poisoning and even cancer. This radiation could contaminate buildings and food sources, potentially affecting millions of people.

Reports by the IAEA and other nuclear-safety watchdog groups indicate that not enough of these civilian organizations and government facilities are secure. The possessors of nuclear or dangerous radiological material must protect themselves from two important threats: theft and corruption.



## CIVILIAN NUCLEAR AND RADIOACTIVE MATERIALS

There are currently 443 nuclear power plants in the world.

-“Power Reactor Information System,” International Atomic Energy Agency,  
[www.iaea.org/programmes/a2](http://www.iaea.org/programmes/a2)

At least 30 countries have nuclear power reactors, and over 70 countries have major facilities with nuclear material in them.

-“IAEA Safeguards: Stemming the Spread of Nuclear Weapons,” International Atomic Energy Agency, [www.iaea.org/Publications/Factsheets/English/S1\\_Safeguards.pdf](http://www.iaea.org/Publications/Factsheets/English/S1_Safeguards.pdf)

### *Theft*

In the past, terrorist groups and other criminals have attempted to steal nuclear materials from government defense warehouses and from nuclear research facilities. Experts are especially concerned with the possibility of theft from a Russian nuclear weapons facility. Russia does not have the ability to properly protect its approximately 16,000 nuclear weapons.<sup>3</sup> Over half of Russia’s nuclear weapons facilities do not have modern security systems or dependable tracking systems. **Weapons-grade** materials, which can be made into a powerful nuclear weapon, have been stolen from Russian warehouses in the past.<sup>4</sup>

“Theft and smuggling of weapons-usable nuclear materials is not a hypothetical concern, but an ongoing reality: the International Atomic Energy Agency has documented 18 cases, confirmed by the states involved, of seizures of stolen plutonium or highly enriched uranium over the past decade.”

“Introducing: Interdicting Nuclear Smuggling,” Nuclear Threat Initiative,  
[www.nti.org/e\\_research/cnwm/interdicting/index.asp](http://www.nti.org/e_research/cnwm/interdicting/index.asp)

Private companies must also work to secure their radiological materials. The safety efforts of most corporations and research facilities focus on preventing accidental exposure to radiation, instead of theft. When these civilian companies are concerned about theft, it is often because the equipment is very expensive, not because they worry that the materials could be used to create a weapon. Sometimes, when the equipment becomes obsolete, it is simply discarded, even though the radiological material is still active. Many radioactive materials, which could be used to create a dirty bomb, are simply thrown away and discovered later in junk yards.<sup>5</sup> This kind of carelessness could lead to disaster.

### *Corruption*

Countries must also prevent their nuclear materials from being illegally sold by corrupt officials. Officials at some of Russia’s most powerful nuclear research institutions have tried to sell



nuclear materials and technology to terrorists,<sup>6</sup> and some experts fear that Pakistan’s military might illegally sell a nuclear weapon on the **black market**.<sup>7</sup> Pakistan has already demonstrated that it is willing to sell dangerous nuclear technology: In 2004, the founder of Pakistan’s nuclear weapons program admitted to illegally providing nuclear secrets to Iran, Libya and North Korea—all governments with a history of aggression.<sup>8</sup>

### CRITICAL THINKING

*Corruption is often a symptom of a government’s general instability, or its inability to properly police its own organization. Governments may intend to protect nuclear materials, but they are incapable because of political infighting or criminal activity by high-ranking officials. How does this make governments difficult to deal with? What can the international community do to encourage reform in these governments?*

### *Difficulties of Recovery*

Once materials are stolen or sold, it can be very difficult to recover them. Many countries have difficulty controlling their borders—these countries already suffer from illegal trafficking problems. Many countries have borders that are thousands of miles long, and officials inspect thousands of vehicles passing across borders every day.

Countries with nuclear facilities and radioactive materials must pay special attention to their guarding their borders, and to ensuring that the officials controlling the borders are not susceptible to corruption. These officials must also be provided equipment to detect radioactive and nuclear substances. They must also be trained to recognize these materials and use this equipment.

### *Cases of Trafficking in Nuclear and Radioactive Materials*

These security concerns have already been exploited by criminals. Between 1993 and 2004, the IAEA recorded 662 incidents of illicit or unauthorized transportation of nuclear or radioactive materials. 196 of these incidents involved nuclear materials, 400 involved other radioactive materials.<sup>9</sup> Most of the illicitly trafficked material recorded in the IAEA reports was not strong or radioactive enough to create a dangerous nuclear weapon or “dirty bomb.” Only about 50 of these incidents involved high-risk materials which could have been used to produce a weapon.<sup>10</sup>



### REPORTED ILLICIT TRAFFICKING INCIDENTS FROM 1993-2004

IAEA's Illicit Trafficking Database recorded 662 incidents of illicit or unauthorized transportation of nuclear or radioactive materials. They include:

- 196 incidents involving nuclear materials.
- 400 incidents involving other radioactive materials.
- 24 incidents involving both nuclear and other radioactive materials.
- 37 incidents involving materials contaminated by radiation.

“Illicit Nuclear Trafficking Facts & Figures,” International Atomic Energy Agency,  
[www.iaea.org/NewsCenter/Features/RadSources/Fact\\_Figures.html](http://www.iaea.org/NewsCenter/Features/RadSources/Fact_Figures.html)

### PAST INTERNATIONAL ACTION

#### *The Non-proliferation Treaty*

Because the insecurity of nuclear weapons and radiological materials poses a threat to everyone, the international community must ensure that those countries with nuclear capabilities are in complete control of their nuclear materials. The safest way to do this, of course, is for countries to disarm their nuclear stockpiles, but countries that have invested years of research and millions of dollars in creating a nuclear weapons program are unwilling to do this. As long as other countries maintain a nuclear arsenal, nuclear-capable countries will refuse to disarm.

To stop the spread of nuclear weapons, UN member states adopted the *Treaty on the Non-Proliferation of Nuclear Weapons* (or just NPT for “Non-Proliferation Treaty”) in 1970. The NPT had three main points. First, the five countries with nuclear weapons at that time—China, France, the Soviet Union (today the Russian Federation), the United Kingdom and the United States—would not give nuclear weapons or technology to other countries. Second, non-nuclear-weapons countries would not develop or obtain weapons. Third, all countries would discuss disarmament and create “a treaty on general and complete disarmament under strict and effective international control.”<sup>11</sup>

The International Atomic Energy Agency (IAEA) oversees if and how countries are following the NPT. To do this, the Agency sets up “**safeguard**” systems with each country that has ratified the treaty. These “safeguards”—which come from separate agreements between each country and the IAEA—allow officials to inspect nuclear facilities.



## SAFEGUARDS

“Safeguards” have become important elements in the disarmament debate.

A safeguard is an activity that allows the IAEA to make sure that countries do not use nuclear technology to make weapons. Countries set up this system through the NPT, but each country makes its own safeguards agreement with the IAEA. Today, there are over 140 agreements in place.

Through safeguards, countries can make sure that others are following the rules. Safeguard activities can include inspections, video-camera monitoring and reviewing reports from countries. Safeguards can be made even more effective if countries sign “additional protocols,” which give IAEA inspectors more power. Not all countries sign these documents though.

For more information on safeguards and IAEA inspections, visit [www.iaea.org/publications/factsheets/english/sg\\_overview.html](http://www.iaea.org/publications/factsheets/english/sg_overview.html).

The NPT has been a very successful international document. But it has not always been followed. For instance, the treaty states that the international community should have serious talks about complete nuclear disarmament. But after 30 years, disarmament is still a major question.

### *Physical Protection Efforts*

In 1972, the International Atomic Energy Agency published “Recommendations for the Physical Protection of Nuclear Material,” to assist member states improve security. The document has undergone several revisions since 1972. It is now referred to as “The Physical Protection of Nuclear Material and Nuclear Facilities,” and includes suggestions for preventing the sabotage of nuclear facilities.

In 1987 the *Convention on the Physical Protection of Nuclear Material* entered into force. This convention required all parties to the convention to take “appropriate steps” to ensure that nuclear materials are protected from theft and illegal trafficking. The convention requires that states not export, import or allow the transportation of dangerous nuclear or radiological materials unless the state can ensure that the material will be completely protected. If dangerous nuclear or radiological materials are stolen, states must cooperate with international organizations and with other countries to recover the materials. The convention even describes the kinds of protection dangerous materials will require, such as constant surveillance, trusted guards and physical barriers.<sup>12</sup>

In the 1990s, several high-profile instances of illicit nuclear trafficking brought attention to the need for greater international cooperation. IAEA assisted governments create and maintain an effective State System for Accountancy and Control (SSAC), which helps countries track locations and quantities of nuclear materials. The International Physical Protection Advisory



Service (IPPAS), a team of IAEA inspection officials, evaluates nuclear facilities and nuclear regulatory systems, but only at the request of individual countries.<sup>13</sup>

IAEA, in cooperation with the World Customs Organization, the International Criminal Police Organization (Interpol) and the European Commission helps train law enforcement and customs officials. Training sessions have been conducted in the Philippines, in Romania and in South America.

Even though IAEA was tasked with monitoring of nuclear and radioactive substances, and even though nuclear theft is a threat to international security, it is individual governments that are responsible for security of these materials.<sup>14</sup> And still, many states are reluctant to grant authority over their national security to an international body like IAEA.

#### **CRITICAL THINKING**

*Why would a country be reluctant to cooperate with the IAEA? Could a country committed to nonproliferation and international security still refuse to cooperate with IAEA monitoring? If so, why?*

#### *IAEA's Illicit Trafficking Database*

IAEA has been tracking reports of stolen nuclear and radiological material since 1992. In 1995, the Agency established the **Illicit Trafficking Database (ITDB)**, a collection of detailed reports that it distributes to UN member states. The ITDB is not intended to compile all knowledge of illicit trafficking in nuclear materials. It is supposed to build knowledge about how trafficking occurs, how it is most frequently detected, where nuclear sources originate and what regions of the world they are trafficked to.

The ITDB relies on the UN member states to submit reports of nuclear trafficking, but as of September 2005, only 82 UN member states were participants in the program.<sup>15</sup> IAEA urges all member states to join the ITDB program and contribute their own nuclear trafficking statistics, so that other countries have a better understanding of the extent of the problem, and are alerted to ways that nuclear smuggling incidents have been resolved in the past.

In spite of these important international agreements and efforts, experts still worry that not enough has been done to secure nuclear materials. In 2004, a report released by American scientists indicated that most security efforts are made on a case-by-case basis. No comprehensive international plan has been established to protect these dangerous substances.<sup>16</sup>



## RECOMMENDATIONS FOR CREATING A RESOLUTION

Delegates should address the following when creating draft resolutions:

- Setting universal guidelines for the protection of nuclear and radiological material;
- Furthering efforts to disarm or reduce nuclear stockpiles in nuclear-capable countries;
- Sharing information about nuclear trafficking incidents and efforts to decrease these incidents; and
- Improving transparency in the security process, so the international community can be certain that countries are protecting their dangerous materials, without compromising national security.

### QUESTIONS TO CONSIDER

1. Does your country have nuclear weapons? Why or why not?
2. Does your country have a nuclear-energy program or programs that use radiological materials? If so, how does your country protect its hazardous materials?
3. Has your country signed the *Non-Proliferation Treaty*? Why or why not?
4. Has it signed the conventions protecting nuclear material? Why or why not?
5. Does your country support additional nuclear disarmament treaties, agreements or actions? If so, what are they and why?

## SOURCES FOR RESEARCH

International Atomic Energy Agency [www.iaea.org](http://www.iaea.org)

Federation of American Scientists [www.fas.org](http://www.fas.org)

Nuclear Threat Initiative [www.nti.org](http://www.nti.org)

“Proliferation News and Resources,” Carnegie Endowment for International Peace  
[www.carnegieendowment.org/npp](http://www.carnegieendowment.org/npp)



## TERMS AND CONCEPTS

**Nuclear weapon:** a weapon of mass destruction that detonates by nuclear reaction, the interactions particles within an atom. Nuclear weapons are the most destructive weapons every created by humans. They have only been detonated twice in history, and even those initial uses are considered controversial.

**Radiation:** the release of energy and subatomic particles from a material.

**Disarm:** to dismantle weapons programs.

**Nuclear materials:** materials that can release powerful atomic energy through the breakdown of its atoms. “Nuclear materials” usually refers specifically to the powerful substances that can be used to create a bomb—such as highly enriched uranium or plutonium.

**International Atomic Energy Agency (IAEA):** a UN agency established in 1957 to promote safe, peaceful uses of nuclear science. IAEA plays an important role in the international monitoring of nuclear materials.

**Civilian:** regarding a person or people who are not members of the military.

**Radiological materials:** materials that emit subatomic particles called ‘radiation.’ Radiological materials involve the release of atomic energy and the breakdown of atoms. They may loosely be called “nuclear materials” because they involve the nucleus of the atom, but they are not as powerful or dangerous as high-grade nuclear materials. Radiological materials cannot be converted into a full-scale nuclear weapon. Instead, they are generally used for scientific research.

**Dirty bomb:** a weapon that uses an explosion to spread low-grade radiological material over a wide area, causing injury or death from radiation exposure.

**Weapons-grade:** materials with a quality or potency that make them ideal for use in weapons.

**Black market:** the purchase and sale of illegal goods. Black market operations are secretive and often involve networks of criminal organizations as both suppliers and consumers of illegal materials.

**Safeguard:** an activity that allows the IAEA to make sure that countries do not use nuclear technology to make weapons. Through safeguards, countries can make sure that others are following the rules. Safeguard activities can include inspections, video-camera monitoring and reviewing reports from countries.

**Convention on the Physical Protection of Nuclear Material:** a 1987 convention requiring countries to ensure that nuclear materials are protected from theft and illegal trafficking. The convention even describes the kinds of protection required, including surveillance, guards and physical barriers.

**Illicit Trafficking Database (ITDB):** a collection of detailed reports about illegal nuclear trafficking incidents that IAEA distributes to UN member states.



## REFERENCES

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- <sup>1</sup> “The ‘Atoms for Peace’ Agency” International Atomic Energy Agency, [www.iaea.org/About](http://www.iaea.org/About)
- <sup>2</sup> “Nuclear Terrorism: A Brief Review of Threats and Responses,” CRS Report for Congress, Congressional Research Service, September 2004, [www.fas.org/irp/crs/RL32595.pdf](http://www.fas.org/irp/crs/RL32595.pdf)
- <sup>3</sup> “Nuclear Numbers,” Proliferation News and Resources, Carnegie Endowment for International Peace, [www.carnegieendowment.org/npp/numbers/default.cfm](http://www.carnegieendowment.org/npp/numbers/default.cfm)
- <sup>4</sup> Wolfsthal, Jon, “Preventing Nuclear Terrorism,” Carnegie Endowment for International Peace, [www.carnegieendowment.org/npp/publications/index.cfm?fa=view&id=950](http://www.carnegieendowment.org/npp/publications/index.cfm?fa=view&id=950)
- <sup>5</sup> “Testimony of Dr. Henry Kelly, President, Federation of American Scientists before the Senate Committee on Foreign Relations.”
- <sup>6</sup> “Nuclear Threat Initiative: The Demand for Black Market Fissile Material,” [www.nti.org/e\\_research/cnwm/threat/demand.asp](http://www.nti.org/e_research/cnwm/threat/demand.asp)
- <sup>7</sup> “Nuclear Terrorism: A Brief Review of Threats and Responses.”
- <sup>8</sup> “Analysis: Pakistan’s Shame,” BBC News, [http://news.bbc.co.uk/2/hi/south\\_asia/3459617.stm](http://news.bbc.co.uk/2/hi/south_asia/3459617.stm)
- <sup>9</sup> “Illicit Nuclear Trafficking Facts & Figures,” International Atomic Energy Agency, [www.iaea.org/NewsCenter/Features/RadSources/Fact\\_Figures.html](http://www.iaea.org/NewsCenter/Features/RadSources/Fact_Figures.html)
- <sup>10</sup> “Illicit Nuclear Trafficking Facts & Figures,” International Atomic Energy Agency, [www.iaea.org/NewsCenter/Features/RadSources/Fact\\_Figures.html](http://www.iaea.org/NewsCenter/Features/RadSources/Fact_Figures.html)
- <sup>11</sup> *Treaty on the Non-Proliferation of Nuclear Weapons*, April 22, 1970.
- <sup>12</sup> “Convention on the Physical Protection of Nuclear Material,” IAEA, 1980, [www.iaea.org/Publications/Documents/Conventions/cppnm.html](http://www.iaea.org/Publications/Documents/Conventions/cppnm.html)
- <sup>13</sup> Elbaradei, Mohamed, “Physical Protection of Nuclear Materials,” International Atomic Energy Agency
- <sup>14</sup> Elbaradei, Mohamed, “Physical Protection of Nuclear Materials,” International Atomic Energy Agency, [www.iaea.org/Publications/Magazines/Bulletin/Bull394/elbaradeiart.html](http://www.iaea.org/Publications/Magazines/Bulletin/Bull394/elbaradeiart.html)
- <sup>15</sup> “Illicit Nuclear Trafficking Facts & Figures,” International Atomic Energy Agency
- <sup>16</sup> “Nuclear Terrorism: A Brief Review of Threats and Responses.”

