Nuclear Terrorism: Threat Briefing.
How Serious is the Threat?

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Nuclear Terrorism: Threat Briefing
How Serious is the Threat?

Nuclear Security Summit
April 12-13, 2010

“Nuclear terrorism is the most serious danger the world is facing.”
— Mohamed ElBaradei, former director of the IAEA and winner of the 2005 Nobel Peace Prize
What if?

U.S. Capitol, Washington, D.C.

"Dragonfire" Bomb

Nuclear Terrorism: Threat Briefing
Key Questions

• Who could be planning a nuclear terrorist attack?

• What nuclear weapons could terrorists use?

• Where could terrorists acquire a nuclear bomb?

• When could terrorists launch the first nuclear attack?

• How could terrorists deliver a nuclear weapon to its target?

“Just one nuclear weapon exploded in a city—be it New York or Moscow; Tokyo or Beijing; London or Paris—could kill hundreds of thousands of people. And it would badly destabilize our security, our economies, and our very way of life.”

— President Barack Obama
Al Qaeda, Chechnya-based separatists, Lashkar-e-Taiba, and Aum Shinриkyo have demonstrated interest in acquiring a nuclear weapon.

• “Acquiring these weapons for the defense of Muslims is a religious duty.”
  — Osama bin Laden (1998)

• “We have the right to kill 4 million Americans—2 million of them children—and to exile twice as many and wound and cripple hundreds of thousands.”
  — Al Qaeda spokesman Suleiman Abu Gheith (2002)

• There are “clear signs of terrorists trying to acquire nuclear material through criminal networks.”
  — Former IAEA Director, Mohammed ElBaradei (2006)

“Al Qaeda has tried to acquire or make nuclear weapons for at least ten years…and continues to pursue its strategic goal of obtaining a nuclear capability.”
What?

A sophisticated terrorist group could make a crude nuclear explosive—capable of destroying the heart of a major city—if it secured enough highly enriched uranium or plutonium.

- A ready-made weapon from the arsenal of a nuclear state
- An improvised nuclear device constructed from HEU or Pu stolen from a state stockpile
- An attack on a nuclear facility

U.S. intelligence assesses that “Al Qaeda probably had access to nuclear expertise and facilities and that there was a real possibility of the group developing a crude nuclear device...fabrication of at least a ‘crude’ nuclear device was within Al Qaeda’s capabilities, if it could obtain fissile material.”

—Commission on the Intelligence Capabilities of the U.S. Regarding WMD (2005)
Where?

The world’s stockpiles of HEU and separated plutonium are sufficient for more than 200,000 nuclear weapons.

- 23,360 nuclear weapons
- 1,600,000 kg HEU*
- 500,000 kg separated Pu*
- 1,131 nuclear facilities
- Hundreds of locations holding nuclear weapons or weapons-usable material

Only 25 kg of HEU or 8 kg of Pu are required for a bomb.

—IAEA

* 1 kg = 2.2 pounds
When?

If terrorists acquire 25 kg of HEU, they could make an elementary nuclear bomb in less than 1 year.

“Unless the world community acts decisively and with great urgency, it is more likely than not that a weapon of mass destruction will be used in a terrorist attack somewhere in the world by the end of 2013.”
— Commission on the Prevention of Mass Destruction Proliferation and Terrorism (2009)
How?

Bringing an improvised nuclear device into a major city is as easy as drug smuggling or human trafficking.

- Cargo ships make 9,000 port stops per week.
- There are 20-30 million unauthorized immigrants worldwide.
- The IAEA reports 1,266 incidents of illicit trafficking over the last 12 years—submitted by 99 countries—including 18 incidents involving HEU or plutonium trafficking.
- “Experts estimate that terrorists with an amount of HEU that would fit into six one-liter* milk cartons, need only smuggle it across borders in order to create an improvised nuclear device that could level a medium-sized city.”
  — UN High-Level Panel on Threats, Challenges, and Change (2004)

* 1 liter ≈ 1/3 gallon

Nuclear Terrorism: Threat Briefing
Risk

\[ \text{Risk} = \text{Likelihood} \times \text{Consequences} \]

“Were a nuclear terrorist attack to occur, it would cause not only widespread death and destruction, but would stagger the world economy and thrust tens of millions of people into dire poverty…[creating] a second death toll throughout the developing world.”

— Kofi Annan, former UN secretary general (2005)
Best Judgments

• “Nuclear terrorism is the most serious danger the world is facing.” — Mohamed ElBaradei, former director of the IAEA and winner of the 2005 Nobel Peace Prize (2009)

• “Nuclear terrorism is the most immediate and extreme threat to global security.” —Barack Obama, U.S. president (2009)

• “One of the most dangerous threats...is that of nuclear components falling into the hands of terrorists.” —Dmitry Medvedev, Russian president (2009)

• “Nuclear terrorism is one of the most serious threats of our time.” — Ban Ki-moon, U.N. secretary general (2007)

• “Terrorists’ capacity should not be underestimated to put together and detonate a Hiroshima-sized nuclear device.” — Co-chairs of the International Commission on Nuclear Non-proliferation and Disarmament: Gareth Evans, former foreign minister of Australia, and Yoriko Kawaguchi, former foreign minister of Japan (2009)

• “Every senior leader, when you’re asked what keeps you awake at night, it’s the thought of a terrorist ending up with a weapon of mass destruction, especially nuclear.” —Robert Gates, U.S. secretary of defense (2008)