


# Nuclear and Biological Terrorism

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*Presentation to the Black Sea Executive Program*



Professor Graham Allison  
Harvard University's Kennedy School of Government  
April 24, 2007

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**Nuclear Terrorism: The Ultimate Preventable Catastrophe**

# The Greatest Threat

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U.N. High-Level Panel on Threats, Challenges  
and Change:

“We are approaching a point at which the erosion of the non-proliferation regime could become irreversible and result in a cascade of proliferation.”

## Proposition I: Inevitable

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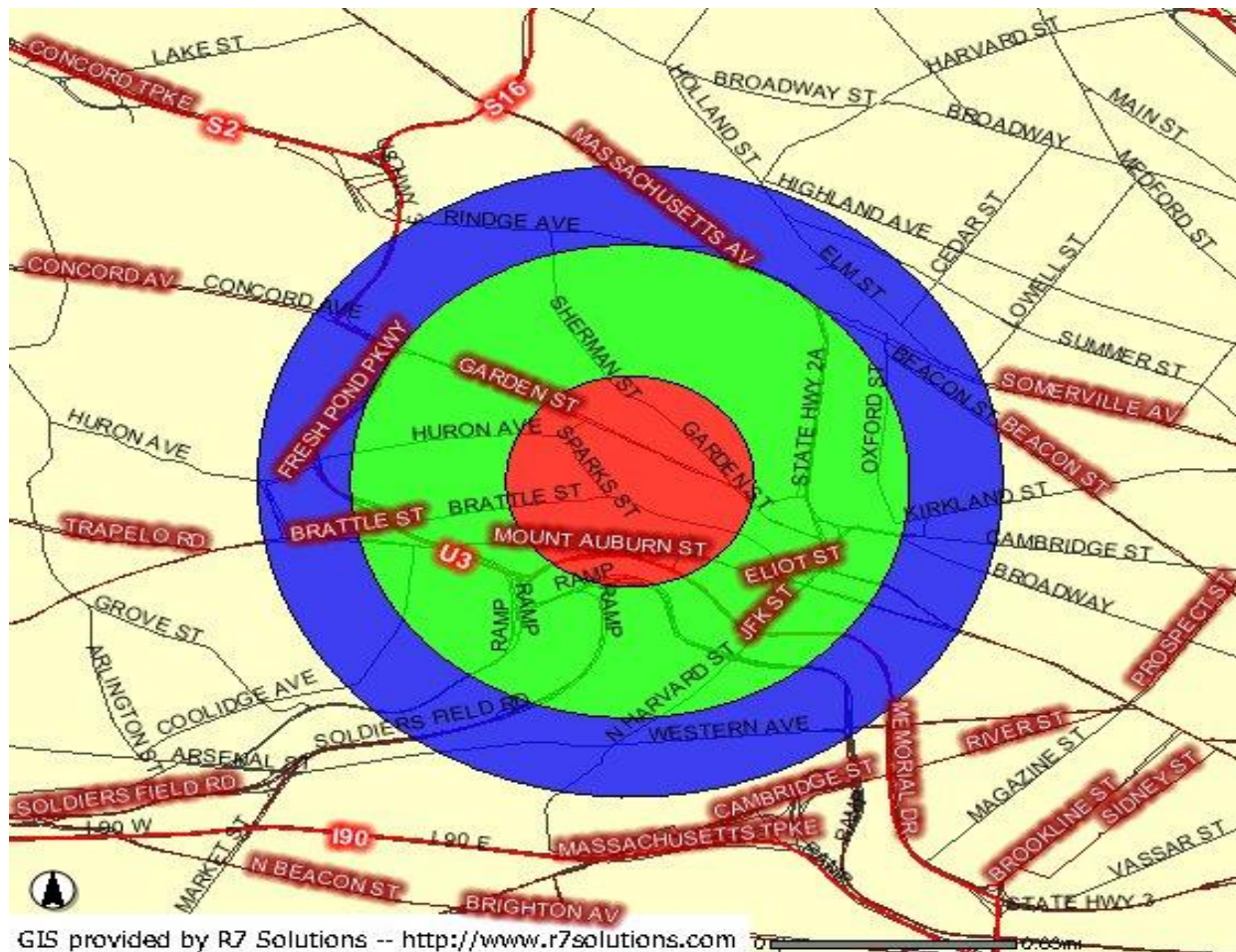
*On the current track, nuclear terrorism is inevitable*

If the U.S. and other governments just keep doing what they are doing today, a nuclear terrorist attack in a major city is more likely than not in the decade ahead.

1. Who could be planning a nuclear terrorist attack?
2. What nuclear weapons could terrorists use?
3. Where could terrorists acquire a nuclear bomb?
4. When could terrorists launch the first nuclear attack?
5. How could terrorists deliver a nuclear weapon to its target?

# What if?

## *Cambridge, Massachusetts—Harvard University*

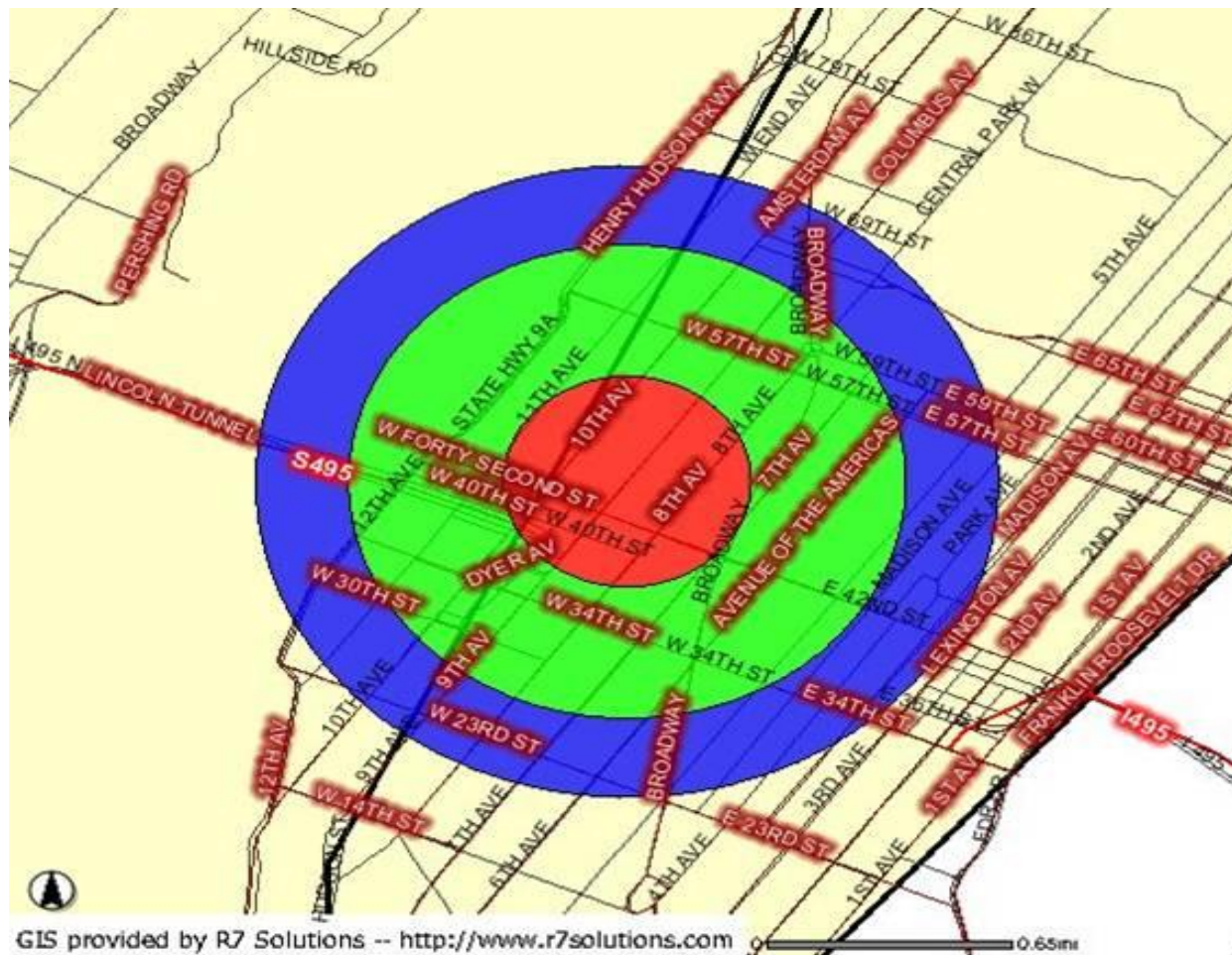


[www.nuclearterror.org](http://www.nuclearterror.org)

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# What if?

## *New York City—Times Square*



[www.nuclearterror.org](http://www.nuclearterror.org)

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## The Threat of Loose Nukes – Suitcase Nukes

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Carrying case for W54 Special Atomic Demolition Munition (SADM).



SADM had a yield of 1 kiloton and was deployed between 1964 and 1988.

Weight: 163 pounds.

# The Threat of Loose Nukes

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## W48 155-millimeter Nuclear Artillery Shell



1,000 W48 nuclear artillery shells were deployed with Army and Marine Corps forces between 1963 and 1991. W48 yield: 2-4 tons of TNT.

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## Proposition II: Preventable

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*Nuclear terrorism is preventable by a feasible, affordable agenda of actions—some of which we are not taking, others which we are not taking fast enough.*



## Preventable: How?

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*A global strategy to prevent nuclear terrorism can be organized under a Doctrine of 3 No's:*

### **Doctrine of 3 No's**

- No Loose Nukes
- No New Nascent Nukes
- No New Nuclear Weapon States

## Preventable: How?

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*No Loose Nukes* requires securing all nuclear weapons and weapons-usable material, on the fastest possible timetable, to a new “gold standard.”

Urgent Challenge: Russia, Pakistan, Belarus

*No New Nascent Nukes* means no new national capabilities to enrich uranium or reprocess plutonium.

Urgent Challenge: Iran

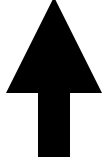
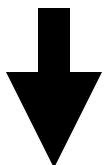

*No New Nuclear Weapon States* draws a line under the current 8 ½ nuclear powers and says unambiguously: “Stop. No more.”

Urgent Challenge: North Korea

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# Preventing Nuclear Terrorism: A Global Report Card

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Subject	Past Year	Overall Grade
No Loose Nukes		B-
No New Nascent Nukes		C-
No New Nuclear Weapons States		F

Allison 4/24/07

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**Nuclear Terrorism: The Ultimate Preventable Catastrophe**

## Actions Required for A-level Performance: No Loose Nukes

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- Make preventing nuclear terrorism an absolute priority
- US and Russian presidents must work to expand participation in the Global Initiative to Combat Nuclear Terrorism (GICNT), a joint program to minimize the risk of nuclear terrorism
- Appoint individuals of stature reporting directly to chief executive as commanders in the war on nuclear terrorism
- Develop new "gold standard" for security of world's nuclear weapons and materials
- Secure all nuclear weapons and materials to the gold standard as fast as technically possible on a set timetable
- Lead a campaign to persuade other nuclear states to adopt the gold standard
- Draw on previous nuclear cooperation with China to enlist Pakistan in the preventing nuclear terrorism club
- Accelerate Global Threat Reduction Initiative to take back HEU from both Soviet- and US-supplied research reactors on fastest technically feasible timetable

## Actions Required for A-level Performance: No New Nascent Nukes

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- Close current NPT loophole that permits signatories to develop nuclear fuel production capabilities
- Orchestrate consensus that there will be no new national HEU enrichment or Pu reprocessing
- Guarantee supply of reactor fuel to non-nuclear weapons states at prices less than half national production costs
- Organize program to securely store spent fuel from civilian reactors
- Persuade all states to adopt the Additional Protocol
- Limit import of equipment for existing civilian programs to states that have signed Additional Protocol
- Expand Proliferation Security Initiative beyond current states
- Make grand bargain with Iran: in exchange for dismantlement of enrichment and reprocessing facilities, offer fuel-cycle agreement, acceptance of Bushehr, relaxation of trade sanctions, and security guarantee
- Pose credible threats to Iran sufficient to persuade it to accept grand bargain
- Accelerate and highlight deep cuts in US-Russian nuclear arms, and minimize role of nuclear weapons as fulfillment of NPT Article IV
- Resume Fissile Material Cutoff Treaty (FMCT) negotiations

## Actions Required for A-level Performance: No New Nuclear Weapon States

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- Draw bright line under today's 8 1/2 nuclear powers and declare: no more
- Subordinate all policy objectives on N. Korea (e.g., regime change) to this goal
- Offer carrots in exchange for verifiable dismantlement: bilateral non-aggression pledge, expansion of food aid, resumption of fuel shipments
- Describe further benefits in a step-by-step plan to roll back North Korea's nuclear program: financing for natural gas pipeline, construction of a light-water reactor, aid for infrastructure reconstruction, North Korean Nunn-Lugar, eventual normalization of relations
- Pose credible threat to North Korea sufficient to persuade it to choose freeze and start down path to eliminate nuclear weapons
- Ratify Comprehensive Test Ban Treaty (CTBT)

# Bioterrorism

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## *The Threat of Bioterrorism:*

- The dual-use nature of biotechnology research makes it difficult to distinguish biological research programs with a military objective from those intended only for peaceful purposes.
- Advancement of biology, genetics, etc. will continue to make it easier to produce deadly biological weapons.
- The end of the Soviet Biopreparat program left thousands of weapons scientists unemployed and huge stockpiles of biological agents with minimal security.
- The spread of SARS showed how a bioterrorist attack utilizing an infectious disease in one country could quickly spread across the globe.

## Bioterrorism: Actions Required for A-level performance

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*Limit the availability of potential weaponized pathogens.*

- The Biological and Toxin Weapons Convention (BTWC) must be universally adopted with provisions for verification.
- The UN Panel on Threats, Challenges and Change recommends: “States parties to the Biological and Toxin Weapons Convention should also negotiate a new bio-security protocol to classify dangerous biological agents and establish binding international standards for the export of such agents. Within a designated time frame, States parties to the Convention should refrain from participating in such biotechnology commerce with non-members.”



## Bioterrorism: Actions Required for A-level performance

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*International cooperation in biodefense is required to deal effectively with the threat. Among the areas where states must collaborate:*

- Early detection and identification of outbreaks, both natural and caused by bioterrorists.
- Improved public health systems to both deal with the effects of an attack in the target state and to halt or slow the global spread of an infectious agent.
- Availability of vaccines and other therapeutics for all states.
- Organized capability to distribute vaccines and therapeutics in a timely manner to prevent and mitigate damage.