

DISCUSSION GUIDE

Radioactive Challenge

Photo courtesy of IAEA

There's enough nuclear material in the world for a Hiroshima every day for 328 years. This isn't science fiction.

The world's leaders say nuclear terrorism is the greatest threat we face—with good reason. Even if there's little chance of it, the explosion of one crude nuclear bomb in one major city would change the world forever. Not only could it cause death on a mass scale, but it could also trigger global economic disruption, environmental degradation, and a wider conflict requiring a military response.

There has been a serious effort to scoop up and lock down the world's nuclear materials since the end of the

Cold War. Yet nearly 20 years later, we are far from having all of these radioactive materials secure. And we are at risk of them falling into the wrong hands. Only a global cooperative effort can prevent this.

Radioactive Challenge helps viewers examine the challenge of securing all vulnerable nuclear materials globally. It aims to encourage discussion of the complexities of the "world's greatest security challenge," keeping nuclear material out of the hands of terrorists.

radioactivechallenge.org



Suggested Discussion Questions

Before you watch, think about:

- Is nuclear terrorism preventable?
- How much concern do you have that nuclear materials will fall into the wrong hands?
- What is your perception of the US role in securing vulnerable nuclear materials?

Questions for discussion, including the above:

- Whose responsibility is it to prevent nuclear materials from falling into the wrong hands?
- We often hear leaders from the developed world describe nuclear terrorism as the "world's greatest security challenge." But in the developing world other threats may seem more pressing. What steps could be taken to bridge this divide over how the threat of nuclear terrorism is perceived?
- Do you believe nuclear terrorism is the "world's greatest security challenge?"
- Do you think the administration's goal to secure all vulnerable nuclear materials worldwide in four years is achievable? Why or why not?
- Should the United States be leading a global effort to prevent the "low probability, high impact" threat of nuclear terrorism?
- In what ways is the United States' partnership with Kazakhstan (and other countries) to secure nuclear materials important?
- What can individual citizens do about this threat?
- If you were a policymaker, how would you prioritize the allocation of US budget resources to prevent nuclear terrorism?
- What do you think the next steps should be in controlling or halting the flow of nuclear materials globally?



Securing the Borders. A semi-tractor trailer crosses a border checkpoint into Kazakhstan from Russia, passing two large devices that monitor radiation levels in vehicles. If radiation is detected, an alarm goes off and a fuller inspection is conducted. By 2015, Kazakhstan will install monitors at 30 border points with help from the US Department of Energy and other countries. (Photo/Sean Harder)

Glossary of Terms

CTBT: The Comprehensive Nuclear Test Ban Treaty (CTBT) bans all nuclear explosions in all environments, for military or civilian purposes. It was adopted by the United Nations General Assembly on September 10, 1996, but it has not yet entered into force. As of November 2009, 151 states have ratified the CTBT and another 31 states have signed but not yet ratified it, including the United States. www.ctbto.org

Downblending: High enriched uranium is blended with naturally occurring uranium in order to reduce the concentration of U-235.

FMCT: A Fissile Material Cut-off Treaty (FMCT) has not yet been negotiated, but such an agreement might prohibit the production of fissile material for nuclear explosives and the production of such material outside of international safeguards. An FMCT's ban on unsecured production of fissile material would place a quantitative constraint on the amount of fissile material available for use in nuclear weapons.



Documenting Security. *Stanley Foundation staffers Sean Harder and Christina MacGillivray gather photos and video during a tour of the Ulba Metallurgical Fuel Plant in Ust-Kamenogorsk, Kazakhstan. The plant produces uranium pellets used as nuclear reactor fuel, and is where the US airlifted more than half of a ton of weapons-grade materials in 1994, following the collapse of the Soviet Union. (Photo/Marina Gorobevskaya)*

HEU: Uranium enriched to more than 20% U-235 is called highly enriched uranium (HEU) and can only be used in nuclear weapons and in research reactors. Uranium used in nuclear weapons is enriched to approximately 93% U-235.

IAEA: The International Atomic Energy Agency (IAEA) is the world's center of cooperation in the nuclear field. The agency works with its member states and multiple partners worldwide to promote safe, secure, and peaceful nuclear technologies. www.iaea.org

LEU: Low enriched uranium (LEU) is enriched to 3 to 5% U-235 and can be used as fuel in commercial nuclear power plants.

NNSA: The National Nuclear Security Administration (NNSA) was established by Congress in 2000 as a separately organized agency within the US Department of Energy. NNSA is responsible for the management and security of US nuclear weapons, nuclear nonproliferation, and naval reactor programs. It also responds to nuclear and radiological emergencies in the United States and abroad. Additionally, NNSA federal agents provide safe and secure transportation of nuclear weapons and components and special nuclear materials along with other missions supporting the national security. www.nnsa.energy.gov

NPT: The Treaty on the Non-Proliferation of Nuclear Weapons, also known as the Nuclear Non-Proliferation Treaty (NPT), is a treaty to limit the spread (proliferation) of nuclear weapons. The treaty came into force on March 5, 1970. Currently there are 189 nations party to the treaty, including the United States.

Nunn-Lugar Act: The Cooperative Threat Reduction (CTR) program, also known as Nunn-Lugar based on a 1992 law sponsored by Senators Sam Nunn and Richard Lugar, is an initiative housed within the Defense Threat Reduction Agency. The purpose of CTR is to secure and dismantle weapons of mass destruction and their associated infrastructure in former Soviet Union states. www.dtra.mil/Missions/NunLugar/GlobalCooperationInitiative.aspx

U-235: Uranium-235 is the chain-reacting isotope of uranium. Unlike the predominant isotope uranium-238 it is fissile, meaning it can sustain fission chain reaction.

UNSCR 1540: In April 2004, the UN Security Council adopted UN Security Council Resolution 1540, establishing for the first time binding obligations on all UN member states to take and enforce effective measures against the proliferation of WMDs, their means of delivery, and related materials.

WMD: A weapon of mass destruction (WMD) is a weapon that can kill large numbers of people and/or cause great damage to man-made or natural structures or the biosphere in general. The most widely used definition of WMD is one of nuclear, biological, or chemical weapons.

Taking Action

- Discuss the issue with others.
- Write an opinion piece for the local newspaper.
- Raise the issue with elected officials and candidates.
- Expand your knowledge about the issue by exploring resources available online (see the Learn More section).
- Request the Now Showing *Radioactive Challenge* toolkit to hold your own event.



Showing Resolve. US President Barack Obama chaired a meeting of the UN Security Council in September 2009 to renew multilateral nuclear nonproliferation commitments. (Photo/UNDPI)

Learn More

Fissile Materials Working Group (FMWG): The FMWG brings together the experience of leading nonproliferation experts and nongovernmental organizations concerted working to "secure all vulnerable nuclear materials worldwide within four years." www.fmwg.org

International Panel on Fissile Materials (IPFM): The IPFM is an independent group of arms control and nonproliferation experts that analyze the technical basis for practical and achievable policy initiatives to secure, consolidate, and reduce stockpiles of highly enriched uranium and plutonium. www.fissilematerials.org

The James Martin Center for Nonproliferation Studies (CNS): The CNS combats the spread of WMD by training the next generation of nonproliferation specialists and disseminating timely information and analysis. cns.miis.edu

The Project on Managing the Atom (MTA): Based at the Belfer Center for Science and International Affairs, Harvard Kennedy School, MTA brings together scholars and practitioners who conduct policy-relevant research on key issues affecting the future of nuclear weapons, the nuclear nonproliferation regime, and nuclear energy—particularly where these futures intersect. www.managingtheatom.org

Nuclear Threat Initiative (NTI): NTI's mission is to strengthen global security by reducing the risk of use

and preventing the spread of nuclear, biological, and chemical weapons and to work to build the trust, transparency, and security that are preconditions to the ultimate fulfillment of the Non-Proliferation Treaty's goals and ambitions. www.nti.org

Partnership for Global Security (PGS): PGS mounts a global effort to decrease the dangers posed by WMDs by working for a world in which all WMDs are secured and the threat of their use is eliminated. www.partnershipforglobalsecurity.org

The Stanley Foundation: As a part of its work to promote public understanding, constructive dialogue, and cooperative action on critical international issues, the Stanley Foundation believes there is a clear need to move toward greater nuclear disarmament and better nonproliferation control, as well as preventing loose nuclear material from falling into the wrong hands. www.stanleyfoundation.org/nuclearsecurity

About The Stanley Foundation

The Stanley Foundation is a nonpartisan, private operating foundation that seeks a secure peace with freedom and justice, built on world citizenship and effective global governance. It brings fresh voices and original ideas to debates on global and regional problems. The foundation advocates principled multilateralism—an approach that emphasizes working respectfully across differences to create fair, just, and lasting solutions.

The Stanley Foundation's work recognizes the essential roles of the policy community, media professionals, and the involved public in building sustainable peace. Its work aims to connect people from different backgrounds, often producing clarifying insights and innovative solutions.

The foundation frequently collaborates with other organizations. It does not make grants. www.stanleyfoundation.org

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