

The Nuclear Non-Proliferation Treaty: Regulating Nuclear Weapons around the World

In May 2010, scientists, national security experts, and state delegates from nations around the world will convene in New York for the 2010 Nuclear Non-Proliferation Treaty Review Conference. They will review current guidelines for nuclear testing and possession of nuclear weapons in accordance with the Nuclear Non-Proliferation Treaty of 1968, which recognized nations as Nuclear Weapons States and Non Nuclear Weapons States. During the review, officials will consider recommendations for changes to policy, discuss recent world events involving nuclear testing—especially by Non Nuclear Weapons States—and monitor progress toward a nuclear free world, as outlined in Article VI of the treaty.

Tiffany Willey Middleton, from the American Bar Association Division for Public Education recently conducted an interview with three experts, who discussed the Nuclear Non-Proliferation Treaty, the upcoming conference, and the legal issues surrounding nuclear weapons:

- *Jonathan Granoff, chair, American Bar Association Task Force on Nuclear Non-Proliferation and president of the Global Security Institute;*
- *Paul Ingram, executive director of the British American Security Information Council; and*
- *Peter Weiss, president of the Lawyer's Committee on Nuclear Policy and vice president of the International Association of Lawyers Against Nuclear Weapons.*

What is the Nuclear Non-Proliferation Treaty? What does “non-proliferation” mean? When and why was the treaty created?

PAUL INGRAM: Non-proliferation means halting the spread in numbers of warheads and countries that deploy them. The Nuclear Non-Proliferation Treaty was first signed in 1968 and came into force in 1970. It was an attempt to halt the spiraling nuclear arms race and to prevent new countries from acquiring nuclear weapons. It grew out of the global shock of the Cuban Missile Crisis. It bans the transfer of nuclear weapons technologies, protects the ‘inalienable’ rights of states to develop nuclear power, and mandates its members to engage in disarmament negotiations.

PETER WEISS: I might add that, according to some historians, the perceived desire of Germany to become a Nuclear Weapons State played a role in the creation of the treaty.

JONATHAN GRANOFF: The Nuclear Non-Proliferation Treaty is a key pillar of world security. President John F. Kennedy truly feared that nuclear weapons might well sweep all over the world. In the early 1960s, there were credible intelligence reports that by the late 1970s there would be 25-30 nuclear weapon states in the world with nuclear weapons integrated into their arsenals. But such proliferation did not happen and

the principal reason that it did not was the negotiation of the treaty and its entry into force in 1970.

What is a Nuclear Weapon State? What legal significance does that term carry?

PAUL INGRAM: A Nuclear Weapon State is usually defined under the terms of the 1968 Nuclear Non-proliferation Treaty as having conducted a nuclear test prior to January 1, 1968.

Which countries are nuclear weapon states? What others are considered to have nuclear weapons or are “de facto” nuclear weapon states? Which states might acquire nuclear weapons?

PAUL INGRAM: The legally recognized Nuclear Weapon States are: United States, Russia (formerly the Soviet Union), United Kingdom, France, and China. They are not to be confused with the unofficial states that deploy nuclear weapons—Israel, India, and Pakistan—and a state that lies outside the treaty and that has conducted a couple of tests, North Korea.

PETER WEISS: Any state that can manage to acquire or produce the hardware (missiles and triggers), the technology (nuclear reactions are thoroughly documented and detailed), and the raw material (weapons grade uranium) may produce a

nuclear weapon. Also, of course, any state which can manage to acquire complete “loose nukes” on the black market. That’s why non-proliferation is so important, but none of that is as easy as it sounds.

JONATHAN GRANOFF: I would like to point out that the Canberra Commission, an Australian commission of 17 world leaders appointed in 1995, agreed that “the possession of nuclear weapons by any state is a constant stimulus to other states to acquire them.”

North Korea ratified the Nuclear Non-Proliferation Treaty in 1985, but became the first state to withdraw from it in 2003. Why? Has its leaving the treaty had any affect on the other countries still honoring it?

PETER WEISS: It’s hard to figure out North Korea’s motives about anything. But it’s generally believed that the withdrawal was a tactic intended to bring about a nonaggression pact and substantial economic assistance, including with “peaceful” nuclear energy. So the effect was to demonstrate the use of nuclear weapons as diplomatic bargaining chips, as well as the fragility of the treaty.

What legal issues and responsibilities do Nuclear Weapon States typically face?

PETER WEISS: Whole books have been written in answer to this question. However, to answer as briefly as possible, by acceding to the Nuclear Non-Proliferation Treaty, Nuclear Weapon States undertake:

- Not to transfer to any recipient nuclear weapons or other nuclear explosive devices or control over such weapons or devices (Article I);
- Not to provide to any Non Nuclear Weapon State source or special fissile material or equipment or material for the processing of such material except under the safeguards administered by the International Atomic Energy Agency (Article III, Section 2);
- To facilitate the exchange of equipment, materials and technology for the peaceful use of nuclear energy (Article IV, Section 2); and
- To “pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control” (Article VI).

JONATHAN GRANOFF: Nuclear Weapon States are also obligated to obey international humanitarian laws. The International Court of Justice prohibits Nuclear Weapons

States from using weapons that would likely cause unnecessary suffering to combatants, are incapable of distinguishing between civilian and military targets, violate protections of neutral states through fall-out or nuclear winter, or permanently damage the environment.

Nuclear Weapons States are obligated to “pursue negotiations” toward nuclear disarmament, but many signatories still retain stockpiles. Is this a projected goal or more of an aspiration?

PETER WEISS: It is a binding treaty obligation, reinforced by the International Court of Justice in an advisory opinion.

JONATHAN GRANOFF: But this legal duty does not contain an enforceable timeline. The treaty’s nonproliferation requirements are recognized as serious and weighty; however, the nuclear disarmament commitments will not be accomplished without greater political pressure. The American Bar Association passed a policy resolution urging the U.S. government to “work to satisfy the treaty obligation to work towards nuclear disarmament.” Representing the American legal profession, the ABA believes that the U.S. should set an example for other nations around the world, and reaffirm American commitment to the rule of law, without nuclear weapons.

What is the Comprehensive Test Ban Treaty, and when will it enter into force?

PETER WEISS: The Comprehensive Test Ban Treaty, if in force, would prohibit all nuclear explosions. Previous treaties banned explosions above ground, in the sky, and under water, but allowed for underground testing and explosions. This treaty would ban all explosions. It would enter into force 180 days after 44 designated countries, which either have nuclear weapons or are “nuclear capable,” have ratified it. As of now, 151 countries have ratified, but some of the critical 44, including the United States, have not. President Obama has announced his intention to have the U.S. ratify, but nobody knows when that will happen.

JONATHAN GRANOFF: The U.S. has argued historically that nuclear arsenals deter international security threats, and that deterrence is essential to national security, therefore nuclear weapons *must* be legal. President Obama is the first American president to commit to “seeking[ing] the peace and security of a world without nuclear weapons.” He believes the United States has a “moral responsibility to act,” and announced intentions to “take concrete steps toward a world without nuclear weapons.” President Obama recognizes that without U.S. leadership, heads of state in the world will remain unwilling and unable to address proliferation issues through diplomacy.

Have nuclear stockpiles been reduced since the end of the Cold War? How are nuclear weapons actually dismantled? What legal and safety issues are involved?

PAUL INGRAM: Stockpiles have been reduced significantly since the end of the Cold War, but still number over 23,000 globally. Warheads are detached from their delivery vehicles (usually missiles), transported to a facility to be dismantled, where the components are taken apart and redeployed or destroyed separately. This is a complex and dangerous procedure. Unwanted fissile materials are then stored before being blended down for use in nuclear power reactors.

JONATHAN GRANOFF: The process has slowed down significantly over the last few years, though. The commitments that produced consensus lost the support of the United States, with the withdrawal of North Korea from the treaty, the criticisms of Iran's fuel production program, and the Bush administration's push to advance the nuclear "bunker buster" weapon, which penetrates soil to destroy underground concrete bunkers. At the last review conference in 2005, the states party to the treaty were unable to generate even a timely working agenda. The mayor of Hiroshima (Japan) gravely stated that "we stand today on the brink of hyper-proliferation and perhaps of repeating the third use of nuclear weapons." As an eyewitness, I saw a level of cynicism that was nothing short of shocking.

What is the impact of dismantling these weapons on the environment? Have there been legal challenges to the placement of facilities, such as Pantex in Amarillo, Texas?

PETER WEISS: If done properly, there should be no impact on the environment, but there is always the possibility of accidents, as well as the basically unresolved problem of safe long-term storage of nuclear materials. There has been lots of nuclear-related environmental litigation, the classic case being that of the now decommissioned Hanford site. But most of the environmental damage, there and elsewhere, was caused by production rather than dismantling.

How much does it cost to dismantle one of these weapons? Does cost prohibit a nuclear free world?

JONATHAN GRANOFF: Between 1940 and 1996, the United States spent \$5.5 trillion developing, testing, and maintaining the nuclear weapons program. Projected future costs for storing and dismantling nuclear weapons and waste are approximately \$320 billion, plus an additional \$20 billion to actually dismantle warheads.

PETER WEISS: Those costs, however, are less than the cost of undoing the damage caused by one nuclear explosion. It is also important to remember that dismantling and cleanup provide employment for thousands of workers and professionals in the nuclear weapons industry. That is an economic factor which must be taken into consideration.

PAUL INGRAM: It may be added that fissile material from weapons has been blended down to be used as fuel in nuclear power reactors. It certainly does cost money to decommission the warheads, and there is a limit on the number of weapons facilities can handle, as the process is complex and potentially highly dangerous.

What is the possibility that non-state actors could acquire nuclear weapons? What would be the consequences?

PAUL INGRAM: It is generally assumed that non-state actors would be unable to make their own nuclear warheads, at least to make their own fissile materials. However, it may be possible that they could steal fissile material and construct a crude device that could produce a nuclear explosion, or spread nuclear material (a so-called dirty bomb).

Nuclear warheads are usually secured by codes and permissive action links that prevent unauthorized use, but there are variations in the strength of these facilities and even exceptions. Some Russian tactical nuclear weapons, for example, present a particular risk, being more portable and having fewer controls. If non-state actors were to acquire a warhead and threaten to use it, it would be a very serious threat. If they were to succeed in detonating a warhead in a major city, it could have globally disastrous consequences for economies and for world confidence, not to mention the immediate horrific casualties and damage.

PETER WEISS: I agree with Paul. The Russian portable devices that he mentions are sometimes referred to as "suitcase nukes."

Who are the possible non-state actors who could acquire nuclear weapons?

PETER WEISS: Terrorists, misguided idealists, black marketers looking to make a killing by reselling them to either state or non-state actors. You could watch any number of movies for plausible scenarios.

There is a nuclear weapons black market. What is being bought or sold? How have states tried to shut down the market, if at all?

PETER WEISS: Anything and everything may be bought or sold on the nuclear weapons black market, including triggers, parts of triggers, missiles, parts of missiles, centrifuges, enriched and non-enriched uranium. States have implemented extensive intelligence and customs regulations to stop black market sales and product entry. Efficient international cooperation is essential. This very question will be a hot topic at the international non-proliferation conference, which President Obama is going to convene.

JONATHAN GRANOFF: I recommended to a U.S. House of Representatives subcommittee that reform policies be integrated globally to control exports and mandate that all states take steps to prevent trafficking in nuclear, biological, and chemical weapons by terrorist and other non-state actors. Effective non-proliferation requires a robust multilateral global system.

Are there any other current “hot button” issues regarding nuclear weapons and nuclear weapons states?

PETER WEISS: Two of the hottest issues are:

1. How serious are President Obama, British Prime Minister Gordon Brown, Russian President Dmitri Medvedev and other world leaders about their commitment to a nuclear weapons free world? If they are serious, why don't they start negotiating with the rest of the world to eliminate nuclear weapons, as suggested by UN Secretary General Ban Ki-moon?
2. The Nuclear Non-Proliferation Treaty is based on a triad of undertakings: Two by the Nuclear Weapon States, making nuclear technology available to non nuclear weapon states for peaceful purposes and negotiating in good faith for total nuclear disarmament, and one by the non nuclear weapon states, not to seek to acquire or develop nuclear weapons. After a period of quiescence about “peaceful nuclear energy” there is now a resurgence of interest in the subject, fueled partly by global warming and the position taken by many environmentalists—and by the nuclear industry lobby—that nuclear power is the answer to clean energy. But nuclear weapons abolitionists are asking how long any country—take Iran as an example—can proceed on the path of nuclear energy without succumbing to the temptation to develop nuclear weapons.

PAUL INGRAM: There are also regional issues. For example, Americans have to take a major part of the responsibility for turning a blind eye to the case of Israel, a state that has clearly introduced nuclear weapons to the most conflict-ridden part of the world. Israel's neighbors see the case as an acute example of the hypocrisy at the heart of the regime, an injustice that still looks highly likely to bring the whole edifice down.

Do you think states not already in the “nuclear club” should be prohibited from acquiring nuclear weapons? Why or why not?

PAUL INGRAM: All states are either Nuclear Weapon States under the treaty, states possessing nuclear weapons outside the treaty, or states that have committed themselves to the treaty as non-nuclear weapon states. All Nuclear Non-Proliferation Treaty states are committed to achieving a world free of nuclear weapons, and to using a variety of implements to achieve this. There should be clear and strong incentives created to encourage states outside of this framework or who challenge it to desist, and those with nuclear weapons already to engage in more serious efforts to negotiate them away.

PETER WEISS: Non Nuclear Weapons States should be prevented by all legitimate means from becoming Nuclear Weapons States because, in the words of former Secretary of Defense Robert McNamara, nuclear weapons are “illegal, immoral, militarily useless and unbelievably dangerous.”

JONATHAN GRANOFF: The two nations with over 96 percent of the weapons, the United States and Russia, have never fully addressed their fundamental dilemma: they want to keep their nuclear weapons and at the same time condemn other who would attempt to acquire them. It is as if parents are telling their children not to smoke while puffing on cigars themselves. It is simply not effective.

As teachers think about these issues, what are the most important ideas that they should pass on to their students?

PETER WEISS: In 1996, the International Court of Justice held that nuclear weapons are not just another type of weapon, but that their unique characteristics render them “potentially catastrophic.” “The destructive power of nuclear weapons,” said the court, “cannot be contained in space or time. They have the potential to destroy all civilization and the entire ecosystem of the planet.”

JONATHAN GRANOFF: There is inadequate public understanding of the political, scientific, legal, ethical, moral, and military dimensions of nuclear weapons. Such difficulty may arise because the weapons' effects actually outstrip our imagination. A description from former Director of the Central Intelligence Agency Stansfield Turner explains that “the fireball created by a nuclear explosion is hotter than the surface of the sun and a thousand times brighter. The intense heat will carbonize skin and make sand particles explode like popcorn while blistering metal at least four miles away.” All of this is difficult to imagine and awesome to contemplate. The policies

that govern nuclear weapon arsenals are not always amenable to common sense or our normal uses of language.

PAUL INGRAM: Nuclear weapons continue to present a severe and present danger to the future of the world and our civilization. This is a man-made threat, and with tensions between great powers much reduced, it ought to now be possible to rid the world of this threat. The status quo is not sustainable, because nuclear weapons currently are perceived to grant their possessors status, security, and independence—and so they are attractive to others, and the current discriminatory system seen as unjust. This is the essence of the crisis in trust at the heart of the Nuclear Non-Proliferation Treaty. 🌐

Discussion Questions

1. *Is the Nuclear Non-Proliferation Treaty the most effective way to regulate nuclear weapons around the world? If not, what would be a more effective way? Should nuclear weapons be regulated at all? Why or why not?*
2. *Do you think countries not already in the “nuclear club” should be prohibited from acquiring nuclear weapons? Why or why not?*
3. *In April 2009, President Obama announced that the United States has a ‘moral responsibility’ to move toward nuclear disarmament. Why might he suggest this? Do you agree or disagree?*

ADDITIONAL RESOURCES

Cirincione, Joseph. *Bomb Scare: The History and Future of Nuclear Weapons*. New York: Columbia University Press, 2008.

Reed, Thomas, and Danny Stillman. *The Nuclear Express: A Political History of the Bomb and its Proliferation*. Osceola, Wisconsin: Zenith Press, 2009.

“Tracking Nuclear Proliferation.” The Online *NewsHour* (October 27, 2009), available at www.pbs.org/newshour/indepth_coverage/military/proliferation/index.html.

“Treaty on the Non-Proliferation of Nuclear Weapons.” United Nations (2009), available at www.un.org/Depts/dda/WMD/treaty/.

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Nonproliferation in America’s Backyard

As part of nonproliferation policies, nuclear weapons are often recycled to produce civilian nuclear power. The Megatons to Megawatts™ program is one example of how nuclear non-proliferation has found its way into everyday American homes—quite literally. The Megatons to Megawatts™ program was established in the United States and Russia following the fall of communism in the Soviet Union in 1991. Bomb-grade uranium from dismantled American and Russian nuclear warheads is recycled into low enriched uranium used to produce fuel for nuclear power plants. One ton of recycled nuclear material produces 40 million kilowatt hours of electricity, or power for 800,000 homes for one year.

The first shipment of warhead-derived uranium from Russia arrived in the United States in 1995. Since then, 375 metric tons of bomb-grade uranium has been recycled into 10,868 metric tons of low-grade uranium. All of that adds up to 15,000 nuclear warheads no longer part of stockpiles. Currently 45 percent of the fuel that produces American nuclear power comes from recycled Russian warheads, according to the Nuclear Energy Institute.

American utility companies have been hesitant to publicize the Russian uranium supply line for fear of spooking post Cold War consumers: the fuel from missiles that may have once been aimed at American cities are now helping to light them.

Megatons to Megawatts™, however, is set to expire in 2013, and American utilities are pushing to continue the agreement or struggling to find a substitute. Raw uranium is more expensive to produce and buy than weapons-grade uranium that can be recycled. Without a new agreement in place, utility companies could be forced to buy raw uranium, and then pass the costs on to consumers.

Federal agencies confirm that they are negotiating a new agreement with Russia, but details are not yet available. Critics claim that such recycling programs, in shipping weapons, leave them vulnerable to theft and threaten national security. Domestic weapons recycling programs are active at sites in Tennessee and South Carolina, but are smaller in scale and incapable of replacing international programs.

Timeline of Events Relating to Nuclear Proliferation

1898	French physicists Pierre and Marie Curie discover the element radium, which emits radioactive energy.
1911	Ernest Rutherford develops the current model for atomic structure when he discovers positively charged protons and neutral neutrons in a nucleus, surrounded by negatively charged electrons.
1932	British physicists John Cockcroft and Ernest Walton split an atom for the first time.
1934	Hungarian physicist Leo Szilard proposes the idea of a nuclear bomb, using a chain reaction following the separation of an atom. He later becomes a fierce opponent of nuclear weapons.
1942	Enrico Fermi conducts the first successful sustained nuclear reaction at the University of Chicago, and Manhattan Project physicists explore how to harness such reactions in weapons.
1945	United States conducts the world's first nuclear test explosion at Alamogordo, N. Mex., then uses nuclear weapons on the Japanese cities of Hiroshima and Nagasaki. World War II ends soon afterward.
1946	At the first meeting of the Atomic Energy Commission, the U.S. delegate proposes a plan to internationalize control of atomic energy. The Soviet Union delegates reject the plan.
1949	Soviet Union tests its first nuclear weapon at Semipalatinsk, Kazakhstan.
1952	United Kingdom conducts its first nuclear test in Western Australia, and the United States explodes the first hydrogen bomb.
1957	United Nations creates the International Atomic Energy Agency (IAEA) to promote "peaceful" uses of nuclear energy.
1958	Gerald Holtam designs the now-universal peace symbol as the logo for the Campaign for Nuclear Disarmament in Great Britain.
1960	France joins the nuclear weapons "club" by testing an atomic weapon in Algeria.
1963	The Limited Test Ban Treaty is signed by the United States, Soviet Union, and Great Britain. It bans nuclear weapons testing in the atmosphere, outerspace, and underwater, but not underground.
1964	China becomes the fifth nation to possess nuclear weapons. U.S. presidential candidate Lyndon B. Johnson releases a campaign video, "Peace Little Girl (Daisy)," which juxtaposes a little girl counting flower petals with the countdown to nuclear explosion.
1968	The United States, Soviet Union, and Great Britain sign the Treaty on Non-Proliferation of Nuclear Weapons (NPT), and it goes into effect in 1970.
1971	Nuclear weapons facility Hanford Nuclear Reservation near Hanford, Washington, is officially decommissioned, leaving behind what would be the nation's most contaminated radioactive site and result in the nation's largest cleanup effort.
1974	India conducts its first nuclear test near its border with Pakistan, while the United States and the Soviet Union ratify the Strategic Arms Limitation Talks (SALT I) and Anti-Ballistic Missile treaties.
1982	The Strategic Arms Reduction Treaty (START I) is signed by the United States and the Soviet Union, cutting nuclear warheads by 15% in the United States.
1983	The movie <i>The Day After</i> creates controversy by telling a story of nuclear war in the western United States.
1984	START II increases the reductions to 50%.
1990	The Radiation Exposure Compensation Act allows for compensation claims from people living near or working in nuclear testing facilities in the United States.
1995	More than 180 nations meet and agree to indefinitely extend the Nuclear Non-Proliferation Treaty.
1996	United Nations adopts the Comprehensive Nuclear Test Ban Treaty, which will gain enforcement 180 days following its ratification by 44 designated signatories. It bans all nuclear weapons testing and explosions.
1998	India tests two atomic bombs and one hydrogen bomb, insisting that Pakistan is a nuclear threat. Pakistan follows suit, implementing five nuclear tests.
2000	The 2000 Review Conference of the NPT issues the Thirteen Points, or practical steps to complete nuclear disarmament, which include test bans and complete elimination of nuclear weaponry.
2003	North Korea becomes the first nation to withdraw from the NPT.
2009	U.S. President Barack Obama announces plans to pursue nuclear disarmament.
2010	The 2010 Review Conference convenes in New York in May, and is viewed as critical to consolidating the world nuclear nonproliferation regime.
2040	Estimated year that the 53 million gallons of radioactive waste left from the Hanford Site's nuclear weapons production will be stabilized and removed as part of the site cleanup.