

Preventing Nuclear Terrorism

BACKGROUND

Nuclear terrorism is a real and dangerous threat. Some terrorist organizations, particularly Al Qaeda, are seeking nuclear weapons. While the overthrow of the Taliban and the disruption of Al Qaeda's old central command structure certainly reduced Al Qaeda's chances of pulling off such a complex operation, Al Qaeda is reconstituting in the tribal areas of Pakistan. Making nuclear bomb material from scratch is beyond the plausible capabilities of terrorist groups, but if a sophisticated group got enough highly enriched uranium (HEU) or separated plutonium, it might well be able to make a crude nuclear bomb. Indeed, the U.S. intelligence community assesses that an Al Qaeda nuclear bomb effort probably would not require the involvement of more than the number of operatives who carried out the September 11, 2001 attacks, and could be just as compartmented, making it extraordinarily difficult for the intelligence community to detect and stop.

Nuclear weapons or their essential ingredients exist in hundreds of buildings in dozens of countries, but there are no specific and binding global standards for how these stockpiles should be secured. Hence security measures range from excellent to appalling. Thefts of small amounts of HEU and plutonium have already occurred. While delivery of a terrorist nuclear bomb would not be trivial matter, the diversity of means of transport, the vast scale of legitimate traffic across national borders, and the ease of radiation shielding all operate in favor of the terrorists delivering a nuclear bomb to the United States.

By MATTHEW BUNN, *Associate Professor of Public Policy, Harvard University, and Co-Principal Investigator, Project on Managing the Atom*, and ANDREW NEWMAN, *Managing the Atom Research Associate*. REVIEWED BY CHARLES FERGUSON, *Fellow for Science and Technology, Council on Foreign Relations*.

But there is good news as well. There is no convincing evidence that any terrorist group has yet gotten a nuclear weapon or the materials needed to make one—or that Al Qaeda has yet put together the expertise that would be needed to make a bomb. Making and delivering a nuclear bomb—or detonating a stolen nuclear bomb—would be the most challenging operation terrorists have ever carried out, and there are many steps on the pathway to the bomb where the terrorists might make a mistake, or government efforts might succeed in stopping them.

Moreover, programs to reduce the risk are making real progress. An alphabet soup of programs and initiatives—Cooperative Threat Reduction (CTR), the Materials Protection, Control, and Accounting (MPC&A) program, the Global Threat Reduction Initiative (GTRI), the Global Initiative to Combat Nuclear Terrorism (GI), the International Atomic Energy Agency's Office of Nuclear Security, the Department of Homeland Security's (DHS) Domestic Nuclear Detection Office (DNDO), and many more—are each making real contributions. In the former Soviet Union, by the spring of 2008, U.S.-funded comprehensive upgrades had been completed at roughly 60 percent of the buildings with weapons-usable nuclear material; 85 percent of these buildings had at least rapid upgrades in place. Similarly, all planned U.S.-funded security upgrades were completed by then for 65 percent of the nuclear warhead sites in Russia. Security upgrades are scheduled to be completed for most Russian nuclear warhead and nuclear material sites by the end of 2008. The Department of Energy's National Nuclear Security Administration (NNSA)—as well as other U.S. government agencies—has undertaken a large effort to work with Pakistan to improve nuclear security, though details of the progress made are classified. As of mid-2008, the DHS reported that it was screening 96 percent of all containerized cargo entering the United States for nuclear and radiological material. In addition, the NNSA intends to install radiation detectors at 450 border crossings and 75 “megaports” in

key countries around the world by the end of 2014 (by the end of FY 2007, such detectors were installed and operating at 162 of border crossings and 12 megaports in Russia). Intelligent adversaries, however, may choose to use routes not covered by these large, highly visible detectors, and neither current nor planned detectors are likely to be able to detect shielded HEU metal; ultimately, success may depend more on improving counterterrorism and border control efforts than on new detection technologies.

The United States needs a total system of interlocking efforts to prevent nuclear terrorism. But the single highest-priority part of that system is to improve security for nuclear stockpiles around the world, to reduce the chance that nuclear weapons or materials could ever be stolen and fall into terrorist hands. Every subsequent step on the terrorist pathway to the bomb is easier for the terrorists to take, and harder for us to stop.

TALKING POINTS

- **The next administration should have no higher priority than keeping nuclear weapons and the materials to make them out of terrorist hands.** The next president should aim to eliminate nuclear material entirely from the world's most vulnerable nuclear sites and ensure that effective security is put in place for the remainder during his first term in office.
- **The terrorist networks scheming to attack the United States are global, and our response must be global as well.** We need redoubled intelligence and police cooperation around the world to find and defeat terrorist groups with nuclear ambitions.
- **A combination of extremism, instability, and nuclear weapons makes ensuring nuclear security in Pakistan one of our highest priorities.** The next president should strengthen cooperation with Pakistan to ensure that its nuclear stockpiles are secure and to stop terrorist conspiracies and operations and also work to ensure that nuclear cooperation with India includes cooperation on nuclear security.
- **The new administration must do everything it can to prevent Iran from acquiring the world's most dangerous weapons, and to eliminate North Korea's nuclear capabilities.** Both these countries' nuclear programs pose grave risks of their own, and the more countries that have nuclear weapons and the materials to make them (and the greater the likelihood of instability or even collapse of central

authority in such countries), the greater will be the risk that terrorists might someday be able to get them. The administration should seek a diplomatic solution through direct engagement with both of these regimes, with international packages of carrots and sticks large enough and credible enough to convince these states that it is in their national interests to abandon their nuclear weapons ambitions.

- **Preventing nuclear terrorism must be on the front burner at the White House every day.** Preventing nuclear terrorism involves efforts that are spread across more than a dozen agencies, making it easy for important opportunities to slip through the cracks. The president should appoint a senior White House official whose sole responsibility is to see that everything that must be done to prevent a nuclear terrorist attack is being done.
- **The entire budget for all programs to prevent nuclear terrorism currently comes to less than one-quarter of one percent of the defense budget.** The new administration should increase the program budgets to ensure that the speed at which we get these jobs done is not limited by lack of money, and seek a Congressional appropriation of approximately \$0.5–\$1 billion of no-year money that can be used flexibly to address new opportunities as they arise.

PREVIOUS ACTION BY CONGRESS

During the Bush administration, Congress more than doubled funding for programs to improve controls over nuclear weapons, materials, and expertise around the world, from roughly \$600 million in FY 2001 to over \$1.3 billion in FY 2008. Congress also removed the certification requirements that slowed CTR progress, and authorized new CTR programs to address key proliferation threats worldwide. In addition, Congress:

- Passed legislation in 2004 authorizing the establishment of the GTRI, enabling key authorities to provide incentives to convince vulnerable sites to give up their nuclear material;
- Passed legislation in 2007 establishing a senior White House coordinator for preventing nuclear, chemical, and biological proliferation and terrorism. The Bush administration, however, has not yet appointed anyone to this position;
- Passed legislation in 2007 requiring that by 2012, 100 percent of cargo containers entering the United

States be scanned for radiation before they arrive (though with waiver provisions if that proves impractical). The legislation did not specify who should do the scanning, the quality of the scanning, or what action should be taken if the scanners detect something; and

- Passed legislation in 2007 requiring the administration to prepare a comprehensive plan to ensure that all nuclear weapons and all significant caches of plutonium and HEU worldwide are protected against the kinds of threats terrorists and criminals have shown they can pose by the end of 2012.

RECOMMENDATIONS FOR 2009

Actions The President Can Take

- Work with other countries to launch a fast-paced global campaign to put effective security in place for all nuclear stockpiles worldwide (and reduce the number of places where such stockpiles exist, particularly cleaning out the most vulnerable sites) as rapidly as practicable.
- Seek to gain agreement on effective global nuclear security standards, ensuring that all nuclear stockpiles are protected against the threats terrorists and criminals have shown they can pose.
- Build an international consensus to reduce and ultimately end the civilian use of HEU.
- Launch a major effort to convince policymakers and nuclear managers around the world of the urgency of the nuclear terrorism threat, and the need for them to address it.
- Beef up efforts to strengthen sustainability and security culture, working with countries around the world to ensure they put in place the resources, organizations, and incentives to sustain effective nuclear security for the long haul.
- Strengthen cooperation with Pakistan both to improve nuclear security and to counter extremist threats, limiting likely insider and outsider dangers.
- Seek agreement on deep reductions in nuclear arms, including placing most dangerous weapons (such as tactical weapons without effective electronic locks) in secured monitored storage pending dismantlement. Progress on fulfilling the weapon states' disarmament obligations would improve the chances for getting

non-nuclear weapons states to agree to strengthened nonproliferation and nuclear security measures.

- Seek to place all plutonium and HEU beyond the minimum required to support reduced warhead stockpiles (and modest reserves for naval fuel) in secure, monitored storage, and ultimately eliminate these stocks; also seek a fissile cutoff agreement to end further production of plutonium and HEU for weapons, an end to all HEU production for any purpose, and a phase-out of plutonium separation.
- Directly engage Iran and North Korea to keep Iran from acquiring the world's most dangerous weapons and to eliminate North Korea's nuclear capabilities.
- Put in place a comprehensive system of efforts to prevent nuclear terrorism, including prioritized plan with identified goals and metrics.
- Strengthen intelligence, terrorist finance tracking, police, border control, and radiation detection cooperation domestically and internationally to defeat terrorist groups with nuclear ambitions; direct the intelligence community to make stopping nuclear terrorism, and particularly supporting efforts to prevent nuclear theft, top priority.
- Improve planning for response to a nuclear terrorist attack.
- Appoint a senior White House official to coordinate all U.S. efforts to prevent nuclear terrorism.

Actions The President Can Take Requiring Approval From Congress

- Increase nuclear terrorism prevention program budgets to ensure that progress is not limited by lack of money.
- Establish a broader program of targeted incentives to convince sites to give up weapons material, including (a) working with all states to put in place effective regulations requiring high levels of security for HEU and separated plutonium, creating serious costs for maintaining such materials; (b) reducing or eliminating fees for return of HEU to the United States; (c) incentives to convince little-used HEU-fueled research reactors to shut down (often cheaper and quicker than conversion); (d) a user fee on all medical isotopes produced with HEU, with revenues used to help producers convert to low-enriched uranium.

- Establish a broader effort to ensure that all potential source and transit states have effective intelligence and police capabilities to cope with nuclear smuggling, and laws in place making nuclear theft, smuggling, and terrorism crimes comparable to treason or murder
- Streamline oversight, reduce the number of reports required, establish regular informal oversight and mechanisms including nuclear security task force comparable to the former arms control observers' group, eliminate unnecessary certification requirements, eliminate unnecessary constraints, such as limits on program direction vs. program funds at DOE; pass budgets on time, rather than requiring programs to run on continuing resolutions
- Reinvest in nuclear security and accounting research and development, and beef up nuclear forensics research and development

ADDITIONAL RESOURCES

Contacts

Matthew Bunn, Associate Professor of Public Policy, Harvard University, (617) 495-9916, matthew_bunn@harvard.edu

Laura Holgate, Vice President for Russia/New Independent States Programs, Nuclear Threat Initiative, (202) 296-4810, holgate@nti.org,

Frank von Hippel, Professor, Woodrow Wilson School of Public Policy, Princeton University, (609) 258-4695, fvhippel@princeton.edu,

Michael Levi, Science and Technology Fellow, Council on Foreign Relations, (212) 434-9495, mlevi@cfr.org

William C. Potter, Director, James Martin Center for Nonproliferation Studies, Monterey Institute of International Studies, wpotter@miis.edu, (831) 647-4154

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