



REDUCING THE THREAT OF NUCLEAR THEFT AND SABOTAGE

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The appalling events of September 11, 2001 make clear that the threat of well-organized global terrorist groups bent on causing mass destruction is not hypothetical but real. There can be little doubt that if the attackers had had access to weapons of mass destruction, they would have used them, with even more horrifying results. Indeed, there is evidence that Osama bin Laden's Al Quaida organization is seeking weapons of mass destruction, and has attempted to purchase stolen nuclear material from the former Soviet Union for use in nuclear explosives. Ensuring that the technologies and materials of weapons of mass destruction – especially weapons-usable nuclear materials, whose acquisition is the most difficult part of making a nuclear bomb – do not fall into the hands of terrorist groups or hostile states must therefore be a central element of the coming global battle to prevent mass-destruction terrorism. At the same time, nuclear facilities and radioactive materials – along with a wide range of other especially hazardous facilities and materials – must be protected from mass-consequence sabotage.

Limited access to fissile materials—the essential ingredients of nuclear weapons—is the principal technical barrier to nuclear proliferation in the world today. If they could get enough of such material, most states, and conceivably some particularly well-organized terrorist groups could make at least a crude nuclear explosive, capable of obliterating the heart of any major city in the world. Those seeking to acquire nuclear material will go wherever it is easiest to get, and the terrorists of September 11 have demonstrated global reach. Hence, vulnerable weapons-usable nuclear material anywhere is a threat to everyone everywhere. The international community has an overwhelming interest in seeing that all such material is secure and accounted for.

These events highlight the urgent need to:

Dramatically expand international cooperation to upgrade security and accounting for weapons-usable nuclear material, in the former Soviet Union and worldwide, with the goal of ensuring that all such material is protected to stringent standards within a few years;

Ensure that all nuclear facilities and materials (and other particularly hazardous facilities) are secure from mass-consequence sabotage;

Strengthen national and international standards for security of nuclear materials and facilities;

Greatly expand international efforts to interdict nuclear smuggling, including the difficult but essential task of strengthening efforts to share intelligence in this critical area;

Reduce the number of sites where significant quantities of weapons-usable nuclear material exist, and the size of the stockpiles of such materials (through measures such as using these materials as fuel, blending down highly enriched uranium, or immobilizing plutonium);

Reconsider the design basis threat used in designing and analyzing security systems, in the light of the magnitude of the threat demonstrated on September 11;

Provide greatly increased international training in security for nuclear materials and facilities – including emphasizing the crucial role of such security in preventing the spread of nuclear weapons and stopping nuclear terrorism.

Many of these steps have been blocked or slowed in recent years because of lack of political priority, bureaucratic obstacles, penny-pinching budgets, reluctance to make commitments that would cost money, and the like. In the aftermath of September 11, governments and industry should work together to sweep these obstacles aside and take the steps needed to ensure that nuclear materials and facilities do not become the tools of terrorists. This paper analyzes each of these areas and provides recommendations for specific steps that should be taken toward the goal of a world in which all weapons-usable nuclear material is secure and accounted for, and all nuclear facilities secured from sabotage, with sufficient transparency that the international community can have confidence that this is the case. Over the long term, the paper concludes, the goal should be to attempt to come as close as possible to the “stored weapon standard” proposed by a committee of the U.S. National Academy of Sciences in 1994 -- that is to say, to protect and account for weapons-usable nuclear materials as rigorously as the nuclear weapon states protect and account for nuclear weapons themselves. The road to that objective is a long one, however.