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Nuclear Terrorism: The Unthinkable Nightmare

ISIS Issue Brief

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The September 11, 2001 terrorist attacks against the United States are unprecedented in the history of the world. These attacks, which have resulted in thousands of deaths and injuries, have raised concerns that the constraints on terrorists against committing mass murder have been breached, and that next time terrorists may use nuclear weapons or other weapons of mass destruction.

This concern leads to two questions: First, can terrorists make nuclear weapons? Second, would terrorists use them, given the enormous casualties that would result?

The first question has been addressed by many governments and by nongovernmental groups. Nuclear materials, technologies and know-how are more widely available today than ever before. Small quantities of fissile materials are actively traded on the black market. Although terrorist groups are not known to currently possess fissile materials in sufficient quantities to make nuclear explosives, they are known to have made attempts to acquire fissile materials.

We have attached an unpublished draft ISIS report prepared in 1997 by Kevin O'Neill. This report, which has also been posted to the ISIS web site, drew upon a several year effort at ISIS in the mid-1990s to understand the threat of nuclear terrorism better, and it contains much information and many references on the issue of whether terrorists can make nuclear weapons or radioactive dispersion devices. The fundamental conclusion is that terrorists would find obtaining the wherewithal to make nuclear weapons a difficult task. Nonetheless, terrorist organizations could over time develop such a capability, likely requiring the theft of sufficient nuclear explosive material.

Terrorist groups are not believed capable of building the facilities necessary to make fissile materials.

The ability of a terrorist group to weaponize the fissile material into a nuclear weapon is difficult to assess. Even without direct state support, a well-funded, technically competent terrorist group could assemble the necessary skills and facilities to weaponize fissile material. Terrorist groups that are safely established within states would have a far easier time in researching and developing nuclear weapons, whether or not the state provided direct assistance to their nuclear efforts. Without the opportunity to work uninterrupted for a significant period of time, a terrorist group may find the task beyond its reach. If the terrorist group succeeded in obtaining fissile material, it would then be in the position to rapidly make a nuclear weapon.

The necessary weaponization facilities can be small, as the case of South Africa illustrates. South Africa's initial nuclear weapons effort in the 1970s used small, rudimentary facilities that were extremely difficult to detect by overseas intelligence agencies. We have attached a review of South Africa's early efforts to build gun-type nuclear explosives, and posted this information on the ISIS web site. A terrorist group would need only a subset of the facilities South Africa built in the 1970s.

The second question about whether terrorists would use nuclear weapons is much more difficult to assess. Opinions on terrorism, however, are changing. In the past, analysts have regarded nuclear terrorism as unlikely, given the likely international backlash against such an attack. Today, a new breed of terrorists, motivated by religious rather than political goals, seem less concerned with the consequences of creating large numbers of casualties. Such groups might use nuclear weapons if given the chance.

The lack of nuclear terrorist incidents to date suggests that "traditional" terrorist groups face political constraints to doing so. In the mid-1990s, the CIA concluded that "terrorist groups with established sponsors probably will remain hesitant to use a nuclear weapon, for fear of provoking a world-wide crackdown or alienating their sponsors."¹ The detonation of even a small nuclear device in an urban area would likely produce casualties on a scale rarely seen outside modern warfare.

The growing fear is that "non-traditional" terrorist groups, such as the network of groups backed by Osama bin Laden, increasingly do not face such constraints. Attacks attributed to the bin Laden network since the mid-1990s, including the September 11 attack and a February 1993 attempt to topple at least one of the World Trade Center towers, have been characterized by large numbers of casualties and increasing sophistication. The terrorists behind the September 11 attacks—which, for all their sophistication, were conventional in nature—either did not fear a "world-wide crackdown," or badly miscalculated the anticipated U.S. response.

Some groups have already tested the waters of using weapons of mass destruction. In March 1995 the Japanese cult Aum Shinrikyu released sarin gas into the Tokyo subway in an attack that left 12 people dead and more than 5,000 injured. The

cult, which sought to bring down the Japanese government and precipitate Armageddon through a war with the United States, also allegedly attempted to purchase nuclear weapons from Russia.² In November 1995, Chechen rebel leader Shamil Basayev claimed that his forces had access to nuclear weapons and materials. To prove his claim, he guided a Moscow television crew to Izmailovsky Park in Moscow, where a container of radioactive cesium was discovered. Following the June 1996 attack on U.S. troops stationed in Saudi Arabia, then Defense Secretary William Perry warned that military personnel had to prepare for an attack by terrorist groups using radiological weapons.³

Whether or not terrorist groups will obtain or use nuclear weapons is unknowable, but the risks cannot be ignored. Until September 11, the complete destruction of the twin towers of the World Trade Center was an unthinkable nightmare. It is imperative that steps be taken to ensure that the international community does not awake one day to the unthinkable nightmare of nuclear terrorism.

¹ John Deutch, Director of Central Intelligence, "The Threat of Nuclear Diversion," Hearing on the *Global Proliferation of Weapons of Mass Destruction- Part 3*, Senate Permanent Subcommittee on Investigations, Government Affairs Committee, U.S. Senate 104th Congress, 2nd session, March 20, 1996.

²"Global Proliferation of Weapons of Mass Destruction: A Case Study of the Aum Shinrikyu," Staff Statement, *Global Proliferation of Weapons of Mass Destruction Part I*, Permanent Subcommittee on Investigations, Committee on Governmental Affairs, United States Senate, 104th Cong., 1st sess., October 31, 1995, S. Hrg. 104-422; p.72.

³ DOD News Briefing, Wednesday July 17, 1996 9:45 AM (EDT)