



# Combating Nuclear Terrorism

## Lessons from Aum Shinrikyo, Al Qaeda, and the Kinshasa Reactor

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The threat of terrorist groups acquiring nuclear weapons or material is greater today than ever before. Subnational groups such as al Qaeda and the Aum Shinrikyo religious cult have had both the motivation and the resources to purchase or build nuclear weapons. Similarly, the nuclear weapons inventory and production complex of the former Soviet Union and elsewhere remain a vast potential source of supply. If successful, nuclear-armed terrorists would pose a grave threat to U.S. national security and to the United States' friends and allies.

To develop an effective strategy to prevent nuclear terrorism, the United States needs a thorough understanding of how terrorists have attempted to acquire nuclear capabilities in the past. Fortunately, few groups have made a systematic effort to make, buy, or steal nuclear weapons or materials. Within this relatively small set, three cases stand out as instructive: Aum Shinrikyo's attempt to purchase nuclear weapons from high-level Russian officials in the 1990s, al Qaeda's alleged efforts to purchase nuclear weapons and material from various sources throughout the 1990s, and the 1970s theft of nuclear material from the Kinshasa research reactor in the Congo and attempt to sell it on the illicit market in the 1990s. RAND Project AIR FORCE (PAF) studied these cases to better understand the supply and demand for nuclear materials and why these attempts failed. Researchers reached two major conclusions:

### Nuclear Acquisition Remains Relatively Difficult for Terrorist Groups

Acquiring a nuclear weapon requires access to specialized material and a high level of technical expertise that has historically been beyond the reach of terrorist groups. Throughout the 1990s, Aum Shinrikyo tried without success to hire Russian nuclear experts, to purchase Russian nuclear technology and data, to mine uranium, and to steal sensitive nuclear power plant information. These efforts were thwarted by Russian officials' refusal to cooperate and by the lack of technical expertise within the group. Similarly, al Qaeda has been exposed to numerous scams involving the sale of radiological waste and other non-weapons-grade material. These difficulties may lead terrorists to conclude that nuclear acquisition is too difficult and too expensive to pursue.

### Controlling Access to Nuclear Material Is Key to Preventing Future Terrorist Acquisition

Despite the difficulty of terrorist groups acquiring nuclear material, the United States and its friends and allies should take greater steps to control the supply side of the nuclear marketplace. Even with inspections and safeguards, the International Atomic Energy Agency could not prevent the disappearance of two reactor rods from the Kinshasa research reactor in the Congo in the 1970s. One of these rods appeared on the black market in the 1990s. The other rod may yet wind up in the hands of terrorists, who could extract enriched uranium for a nuclear weapon. This case suggests that the United States and the international community should make strengthening the control of nuclear material a high priority in the fight against nuclear terrorism. ■

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