

Countering Chemical/Biological Terrorism in the Former Soviet Union: The Need for Cooperative Efforts

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The Aum Shinrikyo terrorist act in the Tokyo subway has transformed overnight what was a somewhat hypothetical threat into a deadly reality. The article by Jonathan B. Tucker presents a comprehensive expert analysis of the problem, as well as some specific policy options. To a certain extent, the article already touches upon the existing situation in the ex-USSR, but it may be useful to contribute some additional thoughts on that matter as well as on possible international cooperative efforts.

The breakup of the Soviet Union and the emergence of fifteen new independent states caused widespread concerns about the proliferation of weapons of mass destruction, as well as of dual-use technologies and materials. Denying possible access by terrorist states and terrorist groups to such weapons, technologies, and materials became an important task.

For that purpose, first of all, it was necessary to establish a legislative base. Thus, a number of legal measures were undertaken in Russia. The Presidential Decree N 390 of April 11, 1992 prohibited the activities that are in contradiction with the provisions of the 1972 Biological Weapons Convention. On April 29, 1993, a law was passed, providing strong disincentive against illegal activities, under which the following articles were added to the Penal Code of the Russian Federation:

Article 67 (Note 1)

- Part 1. The use of biological weapons shall be punished by a prison term of 8 to 12 years.
- Part 2. The same offense resulting in manslaughter shall be punished by a prison term of 10 to 15 years.

Article 67 (Note 2)

- Part 1. The development, production, acquisition, possession, sale, or transportation of biological weapons shall be punished by a prison term of up to 5 years.
- Part 2. The same offense resulting in manslaughter, harm to human health or other serious consequences, or accomplished through conspiracy by a group of persons, or by a person who was entrusted with handling biological agents or toxins by the nature of his work or who had access to them in connection with his professional activities, shall be punished by a prison term of 3 to 10 years.
- Part 3. Providing assistance to a foreign State or organization in development, production, acquisition, possession, sale, or transportation of biological weapons shall be punished by a prison term of 5 to 8 years.

Control over the production, storage, and movement of hazardous materials is also crucial in preventing and fighting chemical/biological (C/B) terrorism. To this end, the Russian Federation established sanitary norms and regulations, approved by the Executive Order N 011 of May 4, 1994 of the State Committee of Sanitary and Epidemiological Control, governing all activities in handling hazardous biological materials.

The security of the CW stockpile is, of course, a major issue. At the time of its breakup, the USSR had all its CW arsenal stockpiled on Russian territory. So, unlike the situation with the nuclear weapons, there was no immediate threat of emergence of new "chemical-weapon-states." It also appears now that the only option available for the Russian chemical demilitarization program is to proceed with the destruction of these weapons at their storage sites, since the local authorities and the public in a number of regions categorically oppose the transportation of CW through their territory. While this option will most probably complicate and increase the cost of destroying these

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weapons, it makes the CW stockpile less vulnerable to possible terrorist attacks since it excludes long-distance transportation of chemical munitions.

At the same time, increasing physical security at the storage sites should be a priority. Important assistance can be provided to Russia in this respect within the Cooperative Threat Reduction (Nunn-Lugar) Program by the United States, as is being done with the nuclear weapons. Unfortunately, the U.S. Congress is withholding the Nunn-Lugar US\$60 million in funding that may be available for this purpose (*CWC Bulletin*, 1996).

Of major concern is the danger of unregulated chemical and biological exports from the former Soviet republics. Since nearly all of the Soviet Union's export control structures and personnel were inherited by the Russian Federation, it was probably better equipped from the very beginning than other former Soviet republics to regulate sensitive exports. In 1992, the Russian government passed a number of decrees aimed at setting up a countrywide export control system. The main challenge was to leave behind the old totalitarian-style system and to democratize export controls, making them more market-oriented and transparent, but no less effective.

In April 1992, President Yeltsin signed a decree establishing Russia's interagency mechanism—the Russian Federation Export Control Commission, involving 13 departments and agencies. The Export Control Commission is chaired by a deputy prime minister, and the central coordinating office is one of the departments in the Ministry of Economics. The export control system is operating on the basis of five national control lists, including one on chemicals and technologies that may be used for developing chemical weapons and another on biological agents and equipment that may be used for developing biological weapons. These lists resemble those of the Australian Group. Russia has also been conducting consultations regarding joining the Australian Group, which should have produced results by now if it had not been for the attempts to introduce issues with no relevance to export controls.

A serious proliferation threat arises from the fact that while Russia's borders with other CIS states remain transparent, not all of them have strict export controls and customs regulations. Russia's own customs system is under constant criticism. With the aim of improving the situation in these matters, an agreement on export control coordination was signed by most CIS states (Armenia, Belarus, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Ukraine, and Uzbekistan) in Minsk on June 26, 1992. Another important mechanism in this respect can be the Customs Union established by Russia and Belarus in the beginning of January 1995, and joined later by Kazakhstan, Kyrgyzstan, and Tajikistan.

The problem of possible "brain drain" of former Soviet scientists and technicians engaged in weapons development has been recognized in Russia and abroad. Job insecurity, low wages, political and social turmoil, and lucrative offers

from abroad may attract some of them. The situation is acquiring grave proportions. An official of the State Committee for Defense Industries said in an interview that Russia's defense complex had lost two million workers since 1992, and 630,000 had lost their jobs in 1994 alone (Interfax, 1994).

Such a disturbing situation has led to a number of actions on the part of the Russian government and the international community. For instance, one of the draft laws in the package designed for the CWC implementation is "on measures designed to preserve qualified personnel taking part in the chemical weapons destruction programme in Russia." International Science and Technology Centers (ISTC) have been created in Russia and Ukraine whose objective is to engage scientists, previously employed in the design and production of WMD, in civilian research and development. A good example of their activities is the case with the Institute of Immunological Design in Lyubuchany (Moscow district), which has been granted US\$1 million from the ISTC to support a three-year civil research program (Rimington, 1995).

Russian law enforcement agencies undertake preventive measures against possible terrorist acts. The new laws mentioned above laid the basis for this work. Other important factors are bilateral and multilateral agreements between intelligence bodies of different countries, including Russia, that provide for information exchange, coordination of efforts, sharing of expertise.

It is clear that the entry into force of the CWC and the future verification regime under the BWC, as well as Russia's accession to the Australian Group, will have valuable nonproliferation and counterterrorist implications. The difficulties that Russia faces with the ratification of the CWC and the destruction of chemical weapons are primarily of financial and economic character. The cost of the destruction efforts will run into billions of dollars by different estimates, and they are not provided for by the budget. International efforts can play a major role here. Currently, assistance is being provided by the United States, Germany, Sweden, and The Netherlands. In the past, France, Japan, Italy, and Spain have also expressed their interest.

At the OPCW Prepcom in The Hague, Russia pursues satisfactory solutions to the problems concerning conversion of its former CW production facilities for civilian use and covering the cost of future international inspections at the chemical weapons storage, production, and destruction facilities, which, according to some estimates, may amount annually to US\$50 million (Sutkin, 1995). These concerns need to be taken care of by the member states in the Prepcom.

Of course, many of the above-mentioned problems cannot be seen isolated from the general economic and political situation in the Commonwealth of Independent States. The cure for these problems to a large extent will be found as new market-oriented systems come into place and the economic situation improves. International efforts aimed at

improving the socioeconomic situation in the CIS and those specifically targeted to provide assistance for the implementation of the arms control agreements and nonproliferation regimes, as well as for counterterrorist measures, will be of primary importance. A large variety of international factors and the general security environment are also essential for progress in these matters.

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Preparing for Biological Terrorism: First, Do No Harm

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Jonathan Tucker's well-balanced article on chemical and biological (C/B) terrorism provides all of us working at the interface between the policy and technical communities much sobering material for analysis. Indeed, as the specter of nonconventional terrorism increases, the options for preempting an attack or dealing with the disaster certain to follow such use remain very limited. It is my personal belief that terrorist use of chemical weapons (CW) will become, or already is, *passé* due to the ready availability of equipment, technology, and minimal obfuscation necessary to manufacture biological weapons (BW). Thus, I will limit most of my comments to the biological terrorist threat.

Terrorist use of biological weapons is likely to make the recent Japanese subway attack appear pale by comparison. It is important to have our technical facts correct before considering policy options. In this vein, Tucker has served us well in his article, with the exception of the following points regarding weaponized biological materials.

- Biological weapons are probably no less certain in their effects than chemical weapons; indeed, many biological toxins mimic the time-course of chemical weapons, although dispersal is somewhat different (though not necessarily more difficult). While it is true that the symptoms from BW exposure (particularly infectious agent

exposure) have a wide normal distribution, these effects are quite well known and may increase the utility of such weapons.

- BW production requires very little technical know-how, and access to such knowledge is probably no longer an impediment to BW use.
- Unlike chemical weapons, which tend to have high vapor pressures, BW can be handled without much physical risk to the putative user.
- BW use, like CW use, would create mass casualties and would, despite Tucker's view to the contrary, create the "horrific images needed [by terrorist groups] to attract media attention." Further, the fear induced by the lack of experience with a BW attack could easily create much more public panic than a CW attack.
- The clinical effects of many potential BW agents (anthrax, smallpox, viral diseases, and numerous toxins) are almost completely untreatable, other than offering victims supportive care. Thus, the stockpiling of antibiotics for use in, let us say, an anthrax attack is nearly worthless once victims have become symptomatic (though it *may* be possible to treat exposed individuals who are in the incubation period for the disease). In addition, it is true that vaccines for anthrax prophylaxis (which, in any case, would have to be given weeks to months before exposure) may be hopelessly ineffective against certain specific, invasive strains of the disease. Similarly, there are no antidotes, vaccines, or other specific treatments for exposure to the vast majority of biologically based toxins.
- Finally, BW production is arguably *much* easier than CW production. The "basement manufacturing plant" is far more realistic for BW than CW. As Aum Shinrikyo's experience demonstrated, CW production involved hundreds if not thousands of pounds of various precursors and a large storage yard. For production of most BW, such a requirement for raw materials (let alone corrosion-resistant chemical vats) does not obtain.

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