How should the nuclear, chemical and biological weapons facilities, materiel, weapons stockpiles and expertise in the Former Soviet Union be managed for national and world security?

The former Soviet Union remains one of the two foremost nuclear powers in the world, despite its destabilized political environment and poor economic outlook. The world discovered in the early 1990s that the Soviet Union produced enormous stockpiles of chemical and biological weapons, including weaponized smallpox virus, a species-threatening disease. What can be done to contain the weapons of mass destruction stockpiled in the former Soviet Union, as well as the expertise that created them?

When the Soviet Union broke up in 1991, its careful, centralized military control over its nuclear and biochemical arsenal (capable of destroying all life on the planet) disintegrated. However, the weapons, fissionable material, viral, bacterial and chemical stockpiles, the facilities for creating these weapons and the scientists remain, spread among the 15 independent countries of the former Soviet Union. In some cases, the new republics do not even know what they have. Although weapons were produced and stored in outlying regions of the former Soviet Union, records about them have disappeared, or never existed outside of the central Soviet government. The new governments struggle to identify all that is now in their custody. For example, Project Sapphire was an effort to remove all significant quantities of highly enriched uranium from Kazakhstan. However, after the project ended in 1995, another 205 kilograms of uranium were found. Additionally, the infrastructure for storing the weapons and fissile materials is not being well maintained, increasing the risk of accidental deployment or leakages.

The Soviet Union’s role as one of two major nuclear powers during the cold war era is well known. However, the massive but clandestine biological and chemical weapons program is less understood. In the early 1970s, shortly after the termination of the U.S. biological weapons program, the Soviet Union began an extensive biochemical weapons program cloaked behind its civilian biotechnology program. This organization, Chief Directorate for Biological Preparations, better known as Biopreparat, consisted of 52 sites employing thousands of scientists engaged in weaponizing and genetically engineering diseases such as smallpox, anthrax and plague. Kanatjan Alibekov (also known as Ken Alibek), former First Deputy Director of Biopreparat, defected to the United States in 1992 and has provided books, articles and interviews on the continuing danger of the Biopreparat program. He stated in a 1998 interview for the PBS program Frontline that he did not believe that Russia was continuing to stockpile biological weapons but that because the facilities remained intact and the tremendous technical expertise was readily available, that Russia could resume production of biological weapons with only two to three months’ preparation time. (1)
The technical expertise in weapons of mass destruction that remains available in the essentially closed societies of the former Soviet Union is perhaps as great a threat as any stockpiled materials. The countries of the former Soviet Union are experiencing great economic reverses. The scientists (who used to get the best of everything), now are paid little (and even that payment may be months late in coming) or have lost their jobs altogether. There are significant economic pressures that could lead to WMD materials, weapons and technological expertise being sold on the black market.

Some analysts believe the current threat of nuclear attack on U.S. soil is greater than it was during the cold war. The bombs would be smaller and probably focused on a single target, but terrorist groups or countries of concern, antagonistic to the United States, can much more readily acquire weapons of mass destruction. In addition, there is the potential for so-called “dirty bombs” which use conventional explosives to disseminate nuclear materials to contaminate a site and thus poison everyone in the attack zone. Furthermore, advances in information warfare may lead to the development of very high altitude nuclear bursts which would create a large electromagnetic pulse which would destroy satellites and other space weaponry as well as ground computer systems and vehicles in the target area below. Thus, nuclear weapons remain a clear threat to national security.

In addition, biological and chemical weapons have been developed in many countries and are presumed to be of great interest to terrorist organizations. Many analysts expect to see their use—in terrorist attacks or on the battlefield—within the next decade. Although it is widely believed that Iraq did not use biochemical weapons on U.S. troops because the U.S. promised swift, severe retaliation, General Charles A. Horner has stated that “Iraqi generals reported the reason they didn’t use chemical weapons was because if they used them…they would suffer many more casualties than we would.” (2) The expertise available in the Soviet Union, if purchased on the black market, could greatly increase the comfort level with biochemical weapons for countries of concern and terrorists.

Some U.S. and international sponsored efforts (such as the Nunn-Lugar program) have begun in the former Soviet Union to dismantle weapons and plants, increase security, purchase fissile material, convert weapon-producing plants to other uses, etc. Supporters would like to use U.S. funds to improve the economies of these countries as well, believing that ensuring the economic well-being of the people is the most substantial way to safeguard against sales of materials and knowledge to terrorist groups. For example, the Soviet scientists can be paid to convert their facilities to peacetime research and development projects.

It has been suggested that Soviet facilities could be used to develop vaccines and provide cancer and AIDS research, particularly as advances in genetic engineering are used to attack these diseases. Some analysts have suggested a
massive support program similar to the Marshall Plan to stabilize the former Soviet Union. Others have suggested increased immigration of Soviet scientists to Western countries where military and academic research and development could employ their expertise. General Horner has suggested developing shared ballistic missile defenses with Russia, arguing that the United States is no longer well served by the ABM treaty and that the most effective way to loosen or negate the treaty is in the development of shared missile defenses with Russia. (3)

Others, however, believe that U.S. monies should not be spent in the former Soviet republics. Russia was our enemy for so long that spending U.S. tax dollars to help them is not perceived as desirable. This mistrustful attitude can adversely impact programs to assist the former Soviet Union. For example, American contractors are hired to perform nuclear cleanup efforts in the former Soviet Union whenever possible. Little money actually gets into the Russian economy. There’s also concern that money that has been provided to the Russian government cannot be completely accounted for and thus may not have been completely spent on the purposes for which it was intended. Many politicians and analysts would prefer money were spent to improve controls at our borders and to enhance our counterintelligence to keep dangerous materials out of the United States. They point out that while there have been a few highly sensationalized incidents where a small amounts of Soviet nuclear material were sold on the black market, there actually have been few problems. They believe that the public’s fear of a WMD threat is worse than the threat itself.

Decisions are still being made concerning whether U.S. monies should be spent within the former Soviet Union to try to stop the sources of nuclear and biochemical weapons or should be spent to prevent those materials from being delivered to the United States as bombs. However, there is considerable commitment to the basic idea that the proliferation of weapons of mass destruction must stop.

Questions for Discussion

1. If a nuclear, biological or chemical weapon is used against the U.S. and its manufacture can be traced back to Russia, even though the Russian government had no knowledge of its sale or distribution, should Russia be held accountable for its use? If yes, what sorts of international sanctions or restitution should be required? Should such sanctions be put in place now, to encourage greater safeguarding of weapons of mass destruction stockpiles or will this just alienate a very volatile country?

2. If U.S. pharmaceutical and biotechnology research firms make use of Russian facilities and Russian scientists, should they be given tax breaks and other
incentives at home? Given that Russia is a volatile country, what sort of economic safeguards should the U.S. negotiate with Russia to insure protection of U.S. economic interests?

3. Biological weapons manufacture is frequently disguised through the use of “dual purpose” facilities, which perform both an acceptable public role (pharmaceutical manufacture, beer brewery, agricultural research) and a hidden biochemical warfare role. If we encourage the development of commercial products and research in Biopreparat facilities, are we providing a protective cover for further biochemical weapons research? Would it be better to pay Russia to raze the facilities? If yes, what can be done for the thousands of unemployed scientists with dangerous knowledge who remain unemployed?

4. A big concern is that Russia has still not openly acknowledged their biochemical weapons program. In particular, Russia still maintains that only one sample of smallpox virus remains although defectors have stated that the smallpox virus sample was shared with other Biopreparat labs and weaponized. It is also clear that former Prime Minister Yeltsin did not himself know the extent of Biopreparat activities and whether they were active during his governance. It is not clear what current Prime Minister Putin Knows. Our lack of knowledge about biochemical weapons stockpiles and research remains a serious national security risk. What steps should we take to promote Russian disclosure about the Biopreparat research and any biochemical weapons stockpiles?

5. Sensor technologies to detect nuclear, biological and chemical weapons are very expensive to produce and to distribute. Some believe that at a minimum airports in the largest U.S. cities and border sites should include such sensors. However, broad-spectrum sensors that can reliably detect a number of virus and bacteria samples do not currently exist and must be developed and tested at some degree of risk to the testers using actual samples. The sensors would add check-in delays at some of the country’s busiest airports and borders. How important do you feel this is? How much delay would you tolerate at your own local airport?