Reform and Expansion of Cooperative Threat Reduction

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While America’s attention has been riveted on Iraq and the war on terrorism, the Nunn-Lugar cooperative threat reduction agenda has, with little fanfare, protected the nation against major nuclear, chemical, and biological weapons threats. Nunn-Lugar and related programs have been a critical defense against the proliferation of weapons of mass destruction (WMD) by reducing many of the dangers posed by the old Soviet Union’s massive Cold War arsenals.

During its 12-year span, threat reduction has posted some remarkable achievements. (See box.) These concrete accomplishments are all the more significant because they have been achieved under often difficult circumstances through cooperation with Russian ministries and institutes that for more than 40 years were America’s enemy.

Beyond the measurable rewards, these cooperative programs also have created equally important but less tangible benefits, including an improved Russian appreciation of nonproliferation; heightened levels of trust between U.S. and Russian officials, military officers, and scientists; and new political linkages and relationships not thought possible during the Cold War. These intangible benefits are hard to quantify in official reports, but they are a unique result of this work.

Last year’s Group of Eight (G-8) pledge to provide up to $20 billion over the next decade under the Global Partnership Against the Spread of Weapons and Materials of Mass Destruction has provided an opportunity to further catalyze and accelerate progress on this nonproliferation agenda and to bring in new allies to share the threat reduction burden.

### Threat Reduction Accomplishments

Despite facing some major obstacles, threat reduction programs have had significant successes that enhance security of the United States and the world. Some of the program’s results in the former Soviet states include:

- Removal of roughly 7,000 nuclear warheads from deployment
- Destruction of more than 400 missile silos
- Elimination of more than 1,400 ballistic missiles, cruise missiles, submarines, and strategic bombers
- Enhancement of storage and transportation of nuclear material and weapons
- Elimination of 150 metric tons of weapons-grade uranium
- Elimination of a major biological weapons production plant
- Support of approximately 50,000 chemical, biological, nuclear, and missile scientists in peaceful research

With construction of the first wing of the Mayak Fissile Material Storage Facility, the nuclear components from more than 12,500 dismantled nuclear weapons will be safely stored in coming years.

### Remaining Challenges

Although these are impressive results, much of this agenda remains to be completed. Roughly two-thirds of Russia’s weapons-grade material remains inadequately secure, the destruction of chemical
The need for strong coordination will become more essential in the future as threat reduction’s
results become less tangible. To date the most popular activities have centered on highly observable developments, such as elimination of missiles, bombers, and submarines. Activity in these high-profile areas will continue, but other issues, such as weapon-scientist redirection and weapon-complex infrastructure downsizing, must become more prominent in the coming decade if the roots of the proliferation danger are to be addressed. These issues, however, have an uneven track record of political support and require longer timelines for implementation and achievement of their goals.

**Excess WMD Scientists**

A fundamental source of instability within the former Soviet WMD complexes is economic in nature. Therefore, addressing the economic dimensions of threat reduction is essential. The downsizing of WMD production plants and related infrastructure will continue to displace thousands of scientists and workers skilled in the details of weapon design, manufacture, and maintenance.

However, the re-employment programs currently in place for weapon scientists, while essential, are not providing many career-changing opportunities in any of the WMD complexes in the former Soviet Union. The two main strategies for the redirection of the scientists that have been pursued by governments—research-contracting and technology-driven commercialization and business development—are inadequate. New approaches and new attitudes are required to meet this challenge.

The science-contracting approach remains an essential lifeline for many weapons scientists, but the duration of most projects does not exceed three years, and many of these scientists still maintain their weapons-related employment during that time. Indeed, a recent analysis by the International Science and Technology Center (ISTC), which provides former Soviet weapons scientists with opportunities to redirect their talents to peaceful activities, has shown that many of the scientists working on its projects are not being converted completely from weapons work but are mostly being detoured temporarily.²

At the other end of the re-employment spectrum, government investments in commercialization have had some successes but yielded few real results, often because the projects have not adequately conformed to market needs. Creating successful commercial enterprises is difficult enough in Russia due to the systemic barriers to business creation. When the additional impediments posed by the Russian weapons complex are added, it becomes a daunting challenge.

Western governments must be willing to accept these realities and lower their expectations that commercialization in the WMD complexes will completely solve the problem of excess scientists. Russia must also curtail its unrealistic economic expectations and recognize that systemic problems in that country impede commercial progress.

A more comprehensive, integrated, and effective strategy for addressing the re-employment of scientists across the WMD spectrum needs to be developed and implemented. A positive first step would be harnessing the experience and knowledge of the excess weapons scientists to solve real world problems in the areas of environmental remediation, energy technology development, life sciences, and nonproliferation. Such an approach would provide global benefits as well as a path to sustainable, peaceful career change for these scientists.

Governments must also begin to distinguish between the redirection needs of the scientists and engineers in these complexes and the need to identify suitable nonweapons work for the production workers displaced by the complex downsizing process. A recent analysis has estimated that excess fissile material and nuclear weapons production workers account for roughly 20,000 to 25,000 of the total 35,000 projected excess employees in the Russian nuclear complex.³ These workers have knowledge of the physical, chemical, and metallurgical properties of the various weapons materials and components, and that makes them a proliferation risk. Re-employment strategies must be developed to make use of their unique skills.

**Funding**

Funding for threat reduction has been considered the litmus test of support; indeed, robust funding
for this agenda is necessary. Some key programs, however, are now experiencing funding backlogs because implementation difficulties are holding back progress. Implementation problems, in turn, are festering because of the lack of political attention to solving them. Funding could be spent rapidly, however, and the goals of threat reduction achieved earlier if these political problems were solved.

Although more than $1 billion per year is being made available for international threat reduction programs by the United States and other countries, there are a number of lower-profile threat reduction efforts within this total that are overshadowed by larger activities and which could be accelerated if additional funding was made available. These include programs for redirecting weapons scientists; eliminating additional quantities of highly enriched uranium (HEU); implementing plutonium disposition; ending the production of weapons-grade plutonium; expanding the scope of the program designed to convert research reactors that use HEU; and improving border, export, and customs control.

Threat Reduction Expansion

Threat reduction is facing some very difficult challenges, but its unquestioned successes have made it a candidate for expansion. (See Sidebar.) During the past two years, there has been more attention focused on multilateralizing the threat reduction effort, expanding its scope beyond the former Soviet Union, and assessing its applicability to new arms control and security agreements.

### A Short History of Threat Reduction

The U.S. Congress, in bipartisan action in 1991, laid the foundation for the cooperative threat reduction agenda by enacting what became known as the Nunn-Lugar program, named for its primary co-sponsors, Senators Sam Nunn (D-GA) and Richard Lugar (R-IN). This initiative has since developed into a broad set of programs that involve a number of U.S. agencies, primarily the Departments of Defense, Energy, and State. The government now provides these programs with approximately $900 million to $1 billion per year. In the past 10 years, roughly $7 billion total has been spent on cooperative activities to secure and eliminate WMD and related materials, expertise, and technologies at their source in Russia, in other former Soviet Republics, and in other locations around the world.

During this time, this cooperation has yielded indisputable results that have made a real, tangible difference in global security. Among the highlights:

1. The first success came in 1992, when Ukraine, Belarus, and Kazakhstan agreed to return to Russia the nuclear weapons they had inherited from the Soviet breakup and to accede to the nuclear Nonproliferation Treaty as non-nuclear-weapon states. The same year, the United States helped establish two science centers designed to provide alternative employment for scientists and technicians who had lost their jobs and, in some cases, had become economically desperate because weapons work in the former Soviet Union was significantly reduced.

2. In 1993 the United States and Russia signed the Highly Enriched Uranium Purchase agreement, under which the United States would buy 500 metric tons of weapons-grade HEU that would be “blended down,” or mixed with natural uranium to eliminate its weapon usability, and be used as commercial reactor fuel. To date, 175 metric tons of Russian HEU, or the equivalent of approximately 7,000 nuclear warheads, have been eliminated under this program. The two countries also established the Material Protection, Control, and Accounting program, a major effort to improve the security of Russia’s fissile material, and they signed an accord to build a secure Russian storage facility for fissile materials.

3. In 1994, U.S. and Russian laboratories began working directly with each other to improve the security of weapons-grade nuclear materials, and the two countries reached an agreement to help Russia halt weapons-grade plutonium production. Assistance to the Russian scientific community also expanded, with weapons scientists and technicians being invited to participate in the Initiatives for Proliferation Prevention program, which is focused on the commercialization of non-weapons technology projects.

4. In 1995 the first shipments of blended-down Russian HEU began arriving in the United States. The United States and Russia also began to implement a new program to convert the cores of Soviet-designed research reactors that they no longer use weapons-grade uranium.

5. In 1996 the last nuclear warheads from the former Soviet republics were returned to Russia. In the United Sta...
Congress passed the Nunn-Lugar-Domenici legislation, which expanded the original cooperative initiative and sought to improve the U.S. domestic response to threats posed by weapons of mass destruction that could be on American soil.

In 1997 the United States and Russia agreed to revise their original plutonium production reactor agreement to facilitate the end of plutonium production. In March 2003, the United States and Russia signed the implementing agreements, under which the United States will finance the modernization and construction of replacement fossil fuel plants in exchange for a Russian commitment to shut down and decommission the three remaining reactors.

In 1998 the two countries created the Nuclear Cities Initiative, a program aimed at helping Russia shrink its massively oversized nuclear weapons complex and create alternative employment for unneeded weapons scientists and technicians.

In 1999 the Clinton administration unveiled the Expanded Threat Reduction Initiative, which requested increased funding and extension of the life spans of many of the existing cooperative security programs. The United States and Russia joined to extend the CTR agreement, which covers the operation of such Department of Defense activities as strategic arms elimination and warhead security.

In 2000 the United States and Russia signed a plutonium disposition agreement providing for the elimination of excess weapons-grade plutonium by each country.

In 2001, Congress increased the funds for critical threat reduction activities substantially above the requested amounts, including in the post-September 11 supplemental appropriations act.

In 2002 the G-8 agreed to expand the scope, funding, and timeline for WMD threat reduction activities in Russia and Congress again provided supplemental funding for key efforts.

The G-8 Global Partnership

Threat reduction has always been more than just a U.S.-Russian effort, and many other countries have contributed to various objectives, such as chemical-weapon destruction and scientist redirection. The creation of the G-8 Global Partnership, however, was a major step forward in the multilateralization of WMD threat reduction efforts. Under this initiative, the G-8 countries committed to provide up to $20 billion to support cooperative nonproliferation projects, initially in Russia.

The assumption is that the United States would bear the cost of about half the $20 billion because it is currently spending about $1 billion per year on threat reduction activities in the former Soviet Union. Another roughly $8.5 billion has been publicly pledged by the other G-8 states, the European Union, and a few non-G-8 countries to date. About 8 percent of this $8.5 billion amount has been committed to specific projects. This constitutes a major funding increase from the non-U.S. G-8 countries.

The major interests of the other G-8 states are in chemical weapons destruction, submarine dismantlement, plutonium disposition, and re-employment of weapons scientists. Additional areas of work will include Soviet-designed nuclear reactor safety projects and environmental remediation efforts.

The substantial increase in funding and commitment to threat reduction from countries other than the United States has provided a framework for thinking concretely about the future and expansion of this agenda.

Regional Expansion

Attention in the policy community recently has turned to whether and how threat reduction assistance can be extended to other countries outside of Russia and the other former Soviet republics that possess weapons of mass destruction and/or potentially vulnerable material stockpiles and weapons expertise.

A variety of ideas have been put forward as to how the United States could engage countries such as China, India, Iraq, Pakistan, and possibly even Iran and North Korea in threat reduction-type
activities. Some useful forms of nonproliferation cooperation with other countries that could be explored more intensively include:

- Rapid response to WMD emergency circumstances.
- Undertaking a program to develop alternative employment opportunities for scientists and workers previously engaged in Saddam Hussein’s WMD programs, in addition to accounting for and securing weapons of mass destruction and any related materials in post-war Iraq.
- Providing export control development and nuclear materials protection, control, and accounting (MPC&A) assistance to India and Pakistan.
- Resuming a dialogue on MPC&A cooperation with China and expanding cooperative U.S.-Sino WMD interdiction and anti-smuggling efforts.
- Assisting India in its commitment to eliminate its chemical weapons arsenal.
- Extending personnel reliability systems to Pakistan and India to effectively screen guard forces with access to warheads and sensitive materials.
- Contingency planning to assist dismantlement of North Korean nuclear weapons and disposal of related materials, should a dramatic breakthrough in the current crisis on the Korean Peninsula occur.

However, a number of complications and barriers exist that could prevent effective U.S.-led activities in these countries. These include the nuclear Nonproliferation Treaty, which limits cooperation between nuclear and non-nuclear-weapon states; U.S. laws and export controls; suspicions in the host country about possible assistance motives and intentions; and domestic policy attitudes that oppose any foreign assistance that is perceived as contributing to operational readiness or offensive capabilities of foreign military forces. Clearly, substantial political will must be summoned to establish meaningful threat reduction cooperation with other countries of concern.

Moreover, congressional opposition has, to date, prevailed over most proposals to extend threat reduction to other corners of the world, at least when it comes to utilizing the resources of the Department of Defense’s Cooperative Threat Reduction (CTR) program.

Twice in the past year, proposals by Senator Richard Lugar (R-IN) and President George W. Bush to allow use of unobligated CTR program funds for nonproliferation activities outside of the former Soviet Union have been defeated in Congress. At present, CTR is limited under existing law to cooperation with states of the former Soviet Union.

The 2003 Iraq war supplemental appropriations bill, however, provided funds to the Department of Energy’s nonproliferation programs expressly for threat reduction assistance to countries beyond the former Soviet Union. In addition, Congress’ fiscal year 2004 defense authorization act may provide authority and funding for expansion of threat reduction to non-former Soviet Union states.

**Applicability to New Arms Control Agreements**

Threat reduction might also have a role to play in facilitating current and future arms control agreements. The implementation of the START I treaty has provided an essential rationale for a major portion of threat reduction activities. On the other hand, concerns about Russia’s fulfillment of obligations under the Chemical Weapons Convention and the Biological Weapons Convention have had the opposite effect, resulting in the suspension of threat reduction in Russia for much of 2002.

Other agreements, such as the Treaty of Moscow, the Comprehensive Test Ban Treaty, and regional nuclear weapons-free zones, currently have little or no relation to threat reduction, but threat reduction could be instrumental in facilitating the implementation of and strengthening support for these treaties. These linkages should be explored, as threat reduction cooperation between the United States and Russia moves through its second decade.

**A Threat Reduction Reform Agenda**

Many of threat reduction’s enduring problems can be solved if decisive steps are taken in the near future.
term to reform some key programs, create new ones, and make determined efforts to solve major obstacles. This will require focused attention and effort from the United States, Russia, and the other G-8 partners.

In the United States, there is a reform role for both the administration and Congress. A congressional threat reduction reform agenda, however, should not focus on additional expenditure restrictions and more onerous reporting requirements as a means of assuring accountability. Fiscal prudence is necessary, but these methods have produced limited results to date, and reliance upon them places risk aversion over threat elimination.

Steps that Congress can take include:

- Supporting the amendment of current law to give permanent authority to the president to waive the annual certifications required for CTR programs and Freedom Support Act nonproliferation programs. The president requested this action in the fiscal year 2004 budget request to Congress.
- Expanding and refocusing efforts designed to employ excess weapons scientists and specialists peacefully and eliminate WMD complex infrastructure irreversibly. Excess weapons scientists and workers are a major root cause of the proliferation threat given their expertise and access to weapons and materials. These efforts need more funding, greater flexibility, and new strategies in order to provide the career-changing opportunities that can further reduce, if not eliminate, the threat these scientists and their facilities pose.
- Supporting robust funding for key programs. The Baker-Cutler task force report, A Report Card on the Department of Energy’s Nonproliferation Programs with Russia, recommended that $30 billion be spent on nuclear security alone in Russia and other former Soviet states. To date, the United States has spent a total of about $7 billion on all nuclear, chemical, and biological weapons threat reduction activities. Critical threat reduction programs were cut in the fiscal year 2002 budget submission. Without congressional action, those cuts would not have been reversed, and additional funding to accelerate the security of WMD materials in the wake of the September 11 terrorist attacks would not have been provided. The fiscal year 2004 budget request again cuts some essential nuclear material security programs, although they are designed to pay for new and important initiatives.
- Although some of the programs targeted for reduction have funding backlogs, if implementation problems are resolved, those backlogged funds could be spent rapidly.
- Creating a new global initiative that would eliminate weapons-grade uranium from vulnerable facilities worldwide (similar to projects conducted in Georgia, Kazakhstan, and Serbia). The authority to undertake this effort needs to be clarified and the funding for it provided.

The Bush administration also should make changes in the way it approaches threat reduction by:

- Integrating cooperative threat reduction activities into the concept of homeland defense and the war on terrorism. These programs are a first line of defense against WMD threats to the United States and its allies, and they should be considered a high national security priority, not foreign aid. This could also provide a basis for the expansion of threat reduction beyond Russia and other former Soviet states.
- Creating a senior U.S. coordinator or focused coordination team that can prioritize, oversee, and expedite threat reduction activities. Currently the multiple threat reduction programs are run without a well-developed or coordinated strategy. This person or group must be more powerful than current interagency working groups and must have unfettered access to the president and his senior advisors.
- Proposing the creation of bi-annual, performance-focused meetings between high-level U.S. and Russian political officials to evaluate threat reduction progress comprehensively, receive reports from program managers on advances and impediments in each program, and negotiate solutions to implementation obstacles. There is no substitute for having both sides in the same room reporting to senior political officials on programmatic progress and problems.

In addition to the steps taken by the United States, it is vital for Russia to improve the environment...
for threat reduction activities by accounting for past WMD program activities, providing access to facilities where security improvements are required, offering financial transparency, and approving the legal protections that are needed to move this agenda forward. Resolving these problems would benefit from a much more intense political dialogue between the White House and the Kremlin than currently exists. If Russia is to be an equal partner in this process, however, it must be primarily responsible for addressing these key issues.

It is also important for the other G-8 countries to meet their financial obligations under the Global Partnership initiative and to focus their funding on priority proliferation issues. Intensified efforts also should be made to encourage the further involvement of non-G-8 states and to increase the total funding commitment to higher than $20 billion.

**Conclusion**

Cooperative threat reduction is a vital effort that is essential to reducing 21st century WMD threats. It needs to be updated, reformed, and expanded. Congress and the administration need to work together along with Russia and our other G-8 partners to make this reform a reality.

The dangers are acute. As President Bush has stated,

> The gravest danger our Nation faces lies at the crossroads of radicalism and technology. Our enemies have openly declared that they are seeking weapons of mass destruction, and evidence indicates that they are doing so with determination. The United States will not allow these efforts to succeed....We cannot defend America and our friends by hoping for the best....History will judge harshly those who saw this coming danger but failed to act. In the new world we have entered, the only path to peace and security is the path of action. 4

If terrorists or hostile regimes should gain access to the world’s largest exposed WMD stockpiles because of inertia, distraction, or risk aversion on the part of our leaders, our security will suffer despite other victories in the war on terrorism, and the judgment of history may indeed be harsh.

**NOTES**


