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Dismantling the Nuclear Weapons

Legacy of the Cold War

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Conclusions

The Greatest Disarmament Program in Human History

Nuclear arms reduction agreements and parallel commitments since 1987 will remove from active deployment about 27,000 former Soviet Union bombs and warheads. When START I and II are fully implemented, Russia will have eliminated 1,000 strategic delivery vehicles and removed from active deployment 4,500 strategic warheads. Ukraine will give up 176 SS-19s and -24s and 1,240 strategic warheads as well as cruise missile warheads. Kazakhstan will relinquish 104 SS-18s and 1,040 strategic warheads. The 81 SS-25 single-warhead missiles placed in Belarus by the Soviet Union will be withdrawn and probably redeployed on Russian territory. The United States will eliminate over 1,300 strategic delivery vehicles under the START agreements, and will remove from active deployment more than 6,000 strategic warheads.

These reductions, in terms of systems scheduled for elimination and the destructive potential they represent, amount to the greatest program of disarmament in human history. The process also signals a change in relations between Washington and Moscow, if only by dramatically reversing the trend to increase nuclear weapons targeted against each other's homeland.

The Nunn-Lugar Legislation: A Cooperative Approach to Security

Certain problems that arose from this unprecedented dismantlement program could not have been foreseen when Senator Lugar (R-IN) and Senator Nunn (D-GA) sponsored the Soviet Nuclear Threat Reduction Act of 1991 (PL 102-222). But the general shape of the problem was identified with considerable accuracy. The initial legislation showed that Congress supported actions to facilitate dismantlement of nuclear weapons in the Soviet Union and to encourage counter-proliferation. The scope was then broadened to apply to the newly independent states of the former Soviet Union, with useful cooperation coming from Belarus, Kazakhstan, Russia, and Ukraine--the countries where strategic nuclear weapons were still located.

This program has been known by several names--the Nunn-Lugar program, Safe and Secure Dismantlement (SSD), and Cooperative Threat Reduction (CTR). A remarkable feature of it is how Americans, Belarusians, Kazakhstanis, Russians, and Ukrainians have joined forces in a problem-solving style reminiscent of how General George C. Marshall said problems should be attacked: all of the players on one side of the table and the problem on the other. Within the constraints of legislation, funding, and Executive Branch procedures, the prospective partners analyzed what kinds of cooperative programs would best suit their needs. The dialogue led to joint conclusions and a series of agreements made possible by the resources provided under the Nunn-Lugar legislation.

Joint problem-solving began while the political-legal framework for cooperation was being developed, and it flourished throughout the implementation phase. The intent was to provide the basic legal foundations and a general outline of the areas of cooperation, while leaving open for subsequent development most of the specific description of goods and services to be provided.

For each country an umbrella agreement was negotiated addressing the scope of the cooperation, tying cooperation to objectives defined by U.S. legislation, and defining the general rights and obligations of the two parties. Implementing agreements were then negotiated identifying specific areas for cooperation and the maximum amount of Nunn-Lugar money to be made available for each agreement. As of December 1994, 36 implementing agreements were in effect.

Difficult issues included the auditing provisions needed to protect U.S. Government funds, the rights and privileges to be accorded to Americans working on these projects in each of the partner countries, and customs relief for U.S. equipment furnished in accordance with the agreements.

Ukraine

Nunn-Lugar funds played a vital role in gaining Ukraine's adherence to START I, the Lisbon Protocol, and the Nuclear Non-Proliferation Treaty (NPT). To facilitate implementation of the Lisbon Protocol, President Bush committed $175 million in Nunn-Lugar assistance to Ukraine in 1992. After lengthy discussion and debate, Ukraine signed its umbrella agreement October 25, 1993 during Secretary Christopher's visit to Kiev. In December 1993, Ukraine and the United States concluded an implementing agreement for dismantlement of the strategic offensive forces deployed in Ukraine, initially envisaging the expenditure of up to $135 million. Assistance to help offset Ukraine's cost of dismantling nuclear weapons was one of the conditions set by the Ukrainian Parliament for ratifying START I and the Lisbon Protocol. In December 1993, Ukrainian authorities also informed the U.S. negotiating team that their government had decided to deactivate all of their missiles, including their most modern missiles, the SS-24s. Deactivation of SS-24s, arrangements for Russian compensation to Ukraine for the value of the enriched uranium in nuclear warheads shipped to Russia for dismantling, and commitments to provide security assurances for Ukraine made possible the trilateral accord of January 14, 1994. Signed by Presidents Clinton, Kravchuk, and Yeltsin, the accord placed Ukraine on the road to adherence to the NPT as well as START I and the Lisbon Protocol.

Status of Cooperative Programs

There are two useful ways of evaluating how these cooperative programs are proceeding. One is to identify how the resources are being used. The other is to review the programs on a country-specific basis. Table 1 uses the first method and Table 2 the second. As Table 1 shows, there are three principal categories of cooperation:

- Destruction and dismantlement
- Chain of custody
- Demilitarization

Destruction and dismantlement includes heavy equipment for destroying nuclear delivery vehicles and silos, government-to-government communication links for transmitting data related to START elimination progress, chemical weapons destruction assistance, and elimination of strategic missile bases and site restoration.

Chain of Custody includes assistance in the safe and secure transport and storage of fissile material, material control and accounting, export controls, weapons security, and nuclear reactor safety.

Demilitarization includes cooperation in the transition from defense to civilian production, housing for demobilized strategic rock.

By the end of 1994 about $900 million had been committed to support cooperative programs between the United States and Belarus, Kazakhstan, Russia, and Ukraine, half to weapons dismantlement, a third to chain of custody, and most of the rest to demilitarization.

As Table 2 indicates, U.S.-Russian cooperative programs account for the largest share, $450.7 million. Ukraine has the second largest program at nearly $280 million. The Kazakhstani program is third with about $100 million, and the Belarus program is just over $70 million.

Table 2 also shows that assistance provided by the United States as of December 1994 has not caught up with the amount the United States has agreed to provide, but substantial progress was made during calendar 1994 in translating agreements into real goods and services. From not much over $100 million in January 1994, U.S. obligations rose to well over $450 million by December. (In U.S. budgetary practice, "obligations" refers to funds that have been transferred through contracts for goods and services.)

Solving an Old Problem, Confronting New Ones

The effort to eliminate a large part of the Cold War nuclear weapons legacy has surfaced several practical problems:

- finding resources for dismantling nuclear weapons systems rapidly
- managing rapid dismantlement while maintaining absolute control over the fissile materials released
- protecting fissile materials in a deteriorating security environment
- accommodating the economic and intellectual needs of displaced scientific and technical personnel
- coming to terms with economic problems in the former Soviet Union that make it more difficult to dismantle nuclear weapons systems in a sustained and vigorous manner
- dealing with the perceived security and political needs of newly independent countries where

Soviet nuclear weapons were deployed.

Paradoxically, removing warheads from deployment with missiles and disassembling missiles pose new dangers for the United States and other countries that did not exist when the warheads and missiles were kept in securely guarded missile sites. Transporting fissile materials and weapons components over great distances to storage and dismantling facilities operating in a difficult economic and security environment, then filling those facilities to capacity or beyond, creates problems for the safety and security of nuclear warheads. In societies under enormous stress, warheads, fissile materials, or missile components could become more vulnerable to "insider" thefts or criminal actions. These risks need to be addressed urgently by the United States and its partners in the process of dismantling nuclear weapons.

Evidence to date supports the thesis that the products of disarmament are safeguarded with great care by responsible agencies. So far, the smuggling attributed to leakages from within the former Soviet nuclear establishment appears to have come from civilian research centers and not from materials released by the process of dismantling nuclear weapons systems. Improvements in controlling fissile materials would greatly reduce the potential for trouble in the years ahead. Cooperative programs can develop and strengthen safeguards over fissile materials to prevent sub-state threats to effective government control. This is especially important in Russia, where the dismantling and storage of warheads and components are taking place in a difficult environment.

The Resource Crunch

Budget requests for dismantlement and related activities will face close scrutiny as they compete for funding, requiring priorities within the Nunn-Lugar program to be reviewed in the context of diverse threats to U.S. and international security.

Rapid nuclear weapons deactivations can proceed with a modest amount of additional assistance. Eliminating nuclear delivery vehicles will take more time and money, although perhaps not as much as in past years. Working with Russia, Kazakhstan, Belarus and Ukraine in chain-of-custody cooperation to improve fissile materials control and accountability systems, customs controls, storage facilities for dismantled nuclear warhead components, and safe and secure rail transport of fissile materials entails potentially much more support than has been allocated by the United States in the past. Special reciprocal monitoring and safeguards procedures also will be required if Russia and the United States can agree on how to assure each other that warheads are being dismantled and that excess fissile materials will not be re-used for weapons.

Whether the ratio between the nearly 50% devoted to dismantling nuclear delivery systems and the 30% devoted to chain of custody is the right proportion of Nunn-Lugar commitments to project into the future is a question deserving of special attention. If the greater relative need at present is to enhance the management and control of fissile materials, then a greater priority in funding should be attached to this task.

Are Nuclear Weapons Being Eliminated?

If the provisions of START II are fulfilled by Russia and the United States, by the year 2003 (or by 2000, with U.S. assistance) their deployed strategic forces will be reduced to levels corresponding to 3500-3000 nuclear warheads. Although the launchers and nuclear delivery vehicles not needed to reach these levels must be eliminated by prescribed and verified procedures, there is no

obligation on either party to eliminate nuclear warheads removed from active deployment status. Warheads, seemingly, are being dismantled in Russia as they are in the United States, but no agreed procedure is in place that enables either to know for sure that the other side is dismantling these warheads, nor that the dismantling process is irreversible.

In light of this gap in the arms control process, on September 28, 1994, Presidents Clinton and Yeltsin decided to "direct their joint working group on nuclear safeguards, transparency and irreversibility to pursue by March 1995 further measures to improve confidence in and increase the transparency and irreversibility of the process of reducing nuclear weapons."

Their joint working group will consider various methods of accomplishing these goals, including an exchange of data on inventories of fissile materials removed from dismantled warheads and reciprocal inspections of storage facilities containing plutonium and highly enriched uranium removed from weapons.

The working group will report its progress at the next summit meeting. These talks, a vital link in the process of eliminating nuclear weapons and safe-guarding fissile material, will need the sustained commitment of the most senior policy makers in both nations to succeed.

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