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The Future of the Nuclear Nonproliferation Regime

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Abstract

Following the 1998 nuclear tests in South Asia and later reinforced by revelations about North Korean and Iraqi nuclear activities, there has been growing concern about increasing proliferation dangers. At the same time, the prospects of radiological/nuclear terrorism are seen to be rising—since 9/11, concern over a proliferation/terrorism nexus has never been higher. In the face of this growing danger, there are urgent calls for stronger measures to strengthen the current international nuclear nonproliferation regime, including recommendations to place civilian processing of weapon-useable material under multinational control. As well, there are calls for entirely new tools, including military options. As proliferation and terrorism concerns grow, the regime is under pressure and there is a temptation to consider fundamental changes to the regime. In this context, this paper will address the following: Do we need to change the regime centered on the Treaty on the Nonproliferation of Nuclear Weapons (NPT) and the International Atomic Energy Agency (IAEA)? What improvements could ensure it will be the foundation for the proliferation resistance and physical protection needed if nuclear power grows? What will make it a viable centerpiece of future nonproliferation and counterterrorism approaches?

Introduction

Following the 1998 nuclear tests in South Asia and later reinforced by revelations about North Korean and Iraqi nuclear activities, there has been growing concern about increasing proliferation dangers. At the same time, the prospects of radiological/nuclear terrorism are seen to be rising—since 9/11, concern over a proliferation/terrorism nexus has never been higher. In the face of this growing danger, there are urgent calls for stronger measures to strengthen the current international nuclear nonproliferation regime, including recommendations to place civilian processing of weapon-useable material under multinational control. As well, there are calls for entirely new tools, including military options. As proliferation and terrorism concerns grow, the regime is under pressure. The temptation to consider fundamental changes to the regime, which is beginning to be voiced at a level not heard before, is understandable. But is it possible to create something better? Current institutions and treaties still command significant international support, and the existing regime, with all its flaws, probably cannot be replaced without tremendous political and other costs. A more promising approach may be to modify the regime rather than construct a new one. This might involve, inter alia: a reinterpretation of Article IV of the Treaty on the Nonproliferation of Nuclear Weapons (NPT) to ensure access to technology is consistent with nonproliferation goals; practical steps to limit fuel cycle risks; more responsible and effective export control; and new initiatives to control nuclear trafficking like the Proliferation Security Initiative (PSI). In this context, this paper will address the following: Do we need to change the regime centered on the NPT and the International Atomic Energy Agency (IAEA)? What improvements could ensure it will be the foundation for the proliferation resistance and physical protection needed if nuclear power grows? What will make it a viable centerpiece of future nonproliferation and counterterrorism approaches?

[1] The views and opinions of the authors expressed herein do not necessarily state or reflect those of The Regents of the University of California, the United States Government, or any agency thereof.

Proliferation and Terrorism Threats
The proliferation problem today is grave. There has been growing concern about increasing proliferation dangers, including rogue states; cooperation on weapons of mass destruction (WMD) among rogues; technology diffusion via the Internet as well as loose nukes, materials leakage, brain drain in the former Soviet Union, Pakistan and other states and non-state actors like the A. Q. Khan network; and problems with export controls. In the same vein, the prospects of radiological/nuclear terrorism are seen to be rising—concern over a proliferation/terrorism nexus after 9/11 has never been higher.

Against these problems, one can point to some successes—regime change in Iraq, Libya's commitment and actions to disarm, the ongoing, admittedly difficult 6-Party talks aimed at ending North Korea's nuclear program, wide support for President Bush's PSI and the like.

Pressures on the Regime
Despite the successes, nonproliferation efforts are under increasing pressure in the face of these challenges, some of which are unprecedented.

The NPT, the centerpiece of the regime, is challenged by:

- states acquiring weapons, which cannot be accommodated within the Treaty and which affect the views of key states such as Japan, Brazil;
- North Korea's withdrawal from the Treaty;
- Iranian programs that raise the troubling issue of noncompliance with the Treaty's provisions but, beyond that, demonstrate the Article IV "loophole"; and
- limited consensus on compliance enforcement.

The IAEA is also burdened by expectations that have been high, perhaps unduly high, for the Additional Protocol. The Protocol is an important new tool. However, the effectiveness of new measures, as well as of integrated safeguards, remains to be fully demonstrated in the field. Moreover, there have been a relatively limited number of states that have ratified the Additional Protocol to date, a situation the Agency and member States are trying to remedy.

Nuclear Suppliers Group rules need to be reinforced and strengthened. There is reason to be concerned about Russian, Chinese and other countries' exports. Technology diffusion, black markets and lateral proliferation also raise questions about the long-term relevance of the NSG.

A review of the UN Security Council (UNSC) reveals limited consensus on regime enforcement. It was paralyzed in Iraq and North Korea. How will it respond to the crisis in Iran if this issue is brought before it?

"Shocks" to the Regime
Beyond regime problems, there may be "shocks" to the regime, which could have positive as well as negative regime effects in the end and which may or may not appear likely today. These may include:

- nuclear use in South Asia—only a year ago this was a grave concern;

- Pakistani loose nukes, leaked materials and brain drain;
- an Islamist regime in Pakistan;
- nuclear weapon tests in South Asia or North Korea;
- sale of fissile material or nuclear weapons by North Korea;
- a preemptive strike on Iranian facilities by Israel; or
- a dramatic rise in nuclear power growth—a so-called second coming of nuclear power.

There may be other such shocks that we do not even have on our radar screens.

The Future of the Regime

All of the problems that exist pose real threats to the regime and portend its collapse or increasing irrelevance. It would be foolish to act as if these problems did not exist, or that they could be adequately addressed using exclusively old measures and approaches or resolved merely by muddling through. It is also unlikely that US military action—alone or in coalitions of the willing—can address these matters entirely. In the face of these developments, do we need regime change—a change in the NPT/IAEA regime? It seems the calls for regime change, which are beginning to be voiced at a level not heard before, are rational. They are certainly understandable. But there is reason to be skeptical of this new interest in regime change.

Is it possible to create something better? This is not clear. Current institutions, treaties still command significant international support and consensus—such consensus as exists. But consensus is largely limited on tough issues and difficult cases. This suggests little prospect that entirely new institutions would more effectively deal with these issues.

The Prospect of Reform

As opposed to putting forward alternatives to the old regime, we believe the regime must be reformed. In the President's February 11th speech, there are initiatives to:

- reinterpret Article IV of the NPT to close the loophole that allows proliferants to develop the means for weapons legally;
- deal with noncompliance in part through reforming the IAEA's BOG;
- take practical steps to limit fuel cycle risks by a ban on new states from developing reprocessing and enrichment technologies;
- strengthen export controls, especially for sensitive technologies; and
- build on successful Cooperative Threat Reduction (CTR) and PSI actions.

Let us consider these initiatives in greater detail, with an understanding that they are put forward in the context of reforming the regime, not replacing it. The proposals do, however, involve extra-regime initiatives like PSI, but are designed to strengthen the regime.

Plugging the NPT Loophole

In his nonproliferation speech of February 11th, the President declared: "The world must create a safe, orderly system to field civilian nuclear plants without adding to the danger of weapons proliferation. ... Proliferators must not be allowed to cynically manipulate the NPT to acquire the material and infrastructure necessary for manufacturing illegal weapons."

The problem the President proposed to solve is clear. Article IV of the NPT allows states to develop virtual weapon capabilities by pursuing nuclear enrichment and reprocessing under the cover of peaceful programs. This problem was highlighted by recent revelations concerning Iran, but it is an issue that goes beyond Iran. The President did not call for an amendment to the NPT, which is in practice impossible. He also did not call for a global ban on reprocessing and enrichment, which would also have been impracticable. He proposed to deal with the problem through export controls.

In his speech, the President specifically proposed that the members of the NSG should:

- refuse to sell uranium enrichment or reprocessing equipment or technology to any state that does not already possess full-scale, functioning enrichment or reprocessing plants;
- allow only states that have signed the Additional Protocol, which requires states to declare a broad range of nuclear activities and facilities, to import nuclear or nuclear-related dual use equipment; and
- ensure that states which renounce enrichment and reprocessing technologies have reliable access, at reasonable cost, to fuel for civilian reactors.

These proposals, in principle, mark a reasonable way to proceed. Unlike other possible approaches, they do have a precedent. Such an approach was used before, in the 1970s, to reinterpret Article IV in the aftermath of the Indian nuclear test in 1974 via the creation of the NSG and the agreement on voluntary restrictions on nuclear supply. This effort created a firestorm that eventually dissipated, but more importantly established controls over supply that albeit imperfect, remains a key part of the regime. However, the proposals need elaboration to address such issues as:

- What is to be controlled additionally?
- Should non- NSG states be brought into this effort?
- To which states are the prohibitions to apply?
- What would be the form of fuel cycle guarantees?
- How might different options affect NA proliferation resistance and advanced safeguards R&D?

Reforming the IAEA Board

The Administration has been highlighting the importance of compliance with nonproliferation treaties and agreements. This has been key to arguments for war in Iraq and for multinational diplomacy in Iran and North Korea. In the context of broad support for the International Atomic Energy Agency—including ensuring that the IAEA has all the tools it needs to fulfill its essential mandate and supporting the Additional Protocol--the President called for:

- the IAEA BOG to create a special committee on safeguards and verification in order to improve the organization's ability to monitor and enforce compliance with nuclear nonproliferation obligations; and
- a prohibition on any state under investigation for proliferation violations to serve or continue serving on the IAEA BOG or on the new special committee.

The proposal calls for a special committee of the IAEA Board to be "made up of governments in good standing with the IAEA." The objective is to ensure the "IAEA is organized to take action when action is required." Does this idea have a reasonable chance of success? Given the recent cases of noncompliance, there is probably no better time for the United States to pursue the creation of a Board committee that "will strengthen the capability of the IAEA to ensure that nations comply

with their international obligations." The institutional risks of not acting would be unacceptably great for the Agency, and most key member states should understand that reality. Nonetheless, the prospects will depend, in large part, on the details of the committee. How will this new committee function? What additional powers should it have? How would it be staffed?

The President also argued that: "No state under investigation for proliferation violations should be allowed to serve on the IAEA BOG—or on the new special committee. And any state currently on the Board that comes under investigation should be suspended from the Board." The reasoning was clear. According to the President: "Allowing potential violators to serve on the Board creates an unacceptable barrier to effective action. The integrity and mission of the IAEA depends on this simple principle: Those actively breaking the rules should not be entrusted with enforcing the rules."

Although the logic is compelling in principle, the feasibility of this aspect of the President's proposal hinge on the following question: Is it possible to prevent a state from being selected to the Board, or to remove one from the Board?

Expanding CTR

The President proposed "to expand our efforts to keep weapons from the Cold War and other dangerous materials out of the wrong hands." Cooperative Threat Reduction efforts with the former Soviet Union are the basis for moving ahead. These efforts involve "dismantling, destroying and securing weapons and materials left over from the Soviet WMD arsenal," In addition, there is an effort to assist "former Soviet states find productive employment for former weapons scientists." The President declared: "We have more work to do there." He also noted that at the Group of 8 (G-8) Summit in 2002, "we agreed to provide $20 billion over 10 years -- half of it from the United States -- to support such programs." This step involves other states as well, both as donors and recipients of increased international funding. It offers an approach to addressing the long-term monitoring of countries that disarm, such as Libya.

This step is based upon the Administration's overarching view that all the nations of the world must cooperate to reduce and eliminate WMD threats, in this case, specifically, to "secure and eliminate nuclear and chemical and biological and radiological materials." To this end, this step builds on the G-8 Global Partnership cooperation, but would expand its scope via additional recipients and additional activities. It also does so by seeking more participants and funds in the cooperative effort. This step provides a basis for future activities in Libya, Iran and elsewhere. Could it be a basis for cooperation with Pakistan? Other states?

The President called for expanding cooperative efforts beyond the former Soviet Union. "We should expand this cooperation elsewhere in the world. The Partnership originally provided $20 billion in nonproliferation assistance to the former Soviet Union, it should now also work to reduce and secure dangerous materials elsewhere in the world. We will retrain WMD scientists and technicians in countries like Iraq and Libya. We will help nations end the use of weapons-grade uranium in research reactors." The President explicitly referred to assistance to the FSU, Iraq and Libya. But the list appears illustrative rather than exhaustive. There is an opportunity to expand

cooperation with other states, including China. What of Pakistan? In addition to expanding CTR-style programs to new states, there is also a commitment to new activities. Beyond the CTR activities carried out in cooperation with Russia and other Soviet successor states, the President tied US efforts in the RRTR program with this step. Here too the list appears illustrative rather than exhaustive. What other new activities may be contemplated? Lessons learned in Iraq and Libya may be useful in developing a list of additional activities.

The expanded scope requires expanded participation and recognizes the need for more funds. This step is an appeal for cooperation with additional donors and recipients. To ensure the nations of the world are doing all they can to secure and eliminate WMD and dangerous materials, the President proposed the expansion of the G-8 Global Partnership against the Spread of Weapons and Materials of Mass Destruction. He urged more states to contribute to these efforts, but he did not specify which ones were targeted. Even with more states, we may assume the G-8 will be the focus of future activities.

Expanding the PSI

The Proliferation Security Initiative, announced by President Bush in May 2003, is one response to the growing global threat the proliferation of weapons of mass destruction, delivery systems and related materials. Specifically, it is an effort to enforce compliance with export control regimes that are "gentlemen's' agreements." PSI participants are committed to taking steps to interdict shipments of WMD, delivery systems, and related materials at sea, in the air or on land. PSI currently focuses on rogue states and terrorists, not on NPT non-parties.

The expansion of this effort was envisioned from the outset and, following initial successes of the initiative, this step in the President's speech would realize its expansion. The President declared: "I propose that the work of the PSI be expanded to address more than shipments and transfers. Building on the tools we've developed to fight terrorists, we can take direct action against proliferation networks. We need greater cooperation not just among intelligence and military services, but in law enforcement, as well. PSI participants and other willing nations should use the Interpol and all other means to bring to justice those who traffic in deadly weapons, to shut down their labs, to seize their materials, to freeze their assets."

The heart of what the President's proposed is that "participants in the PSI and other willing nations expand their focus and use Interpol and other mechanisms for law enforcement cooperation to take additional actions to pursue proliferators and end their operations." This step builds on counter terrorism cooperation and on the PSI. It highlights the terrorism/proliferation nexus the Administration has argued in the context of Iraq and more broadly.

The United States is working with the G-8, the NSG and others to realize these initiatives. In addition, there is Secretary Abraham's announcement of the Global Threat Reduction Initiative—a new US initiative to secure, remove, or dispose of an even broader range of nuclear radiological materials around the world that are vulnerable to theft.

Nuclear Weapons and Arms Control

The President's initiatives did not include any directly related to arms control and the NPT's Article VI. That decision was not because this crucial aspect of the treaty was forgotten. The United States

is fully committed to the Nuclear Nonproliferation Treaty, and takes all of its obligations, including its Article VI obligations, seriously. No one should doubt the US commitment to reducing nuclear weapons and nuclear dangers.

The Nuclear Posture Review (NPR), which calls for dramatic reductions in the numbers of nuclear weapons and removes nuclear weapons from the center of deterrence, put forward earlier a revolutionary US nuclear policy. The NPR recognized that the strengthening of deterrence could be achieved by the growing ability to achieve certain nuclear missions with conventional capabilities.

If the NPR outlines a vision fully consistent with the spirit and obligations of the NPT, the record of action is also considerable. The Moscow Treaty reflects the reasoning of the NPR. It reduces the number of operationally deployed strategic nuclear forces to 1700-2200 by 2012. Under START I and the Moscow Treaty, the United States will have eliminated or decommissioned more than three-quarters of its strategic nuclear warheads over two decades.

US-Russian cooperative threat reduction (CTR) efforts to reduce dangers also constitute a real success story. With this effort, the United States has helped eliminate almost 900 ballistic missiles, over 100 strategic bombers and 26 ballistic missile submarines. As well, it has led to greater security for, and even partial elimination of, Russian weapon-origin material.

Conclusions

The international nuclear nonproliferation regime was created in a different time to deal with different threats. It has been the basis of international consensus and, for all its problems, it is likely to be with us as we think about dealing with today's and tomorrow's proliferation problems. With reforms, the regime can provide the foundation for all efforts to find institutional (extrinsic) means to enhance proliferation resistance. Efforts to strengthen it along lines of the President's February 11th initiatives and Secretary Abraham's Global Threat Reduction Initiative are critical if the regime is to meet the challenges of the future.

However, these are important steps, but not a panacea. The United States will need to continue efforts to strengthen the regime and will need to deal with difficult cases with all available means. It is imperative to ensure the regime is not further eroded, and that new difficult cases do not emerge out of flaws in regime.

The states with an interest in the existing regime—particularly the United States—must recognize regime problems and manage them—safeguards, export controls, compliance enforcement integrate regime into broader thinking about national and international security (force and diplomacy). And these states must offer the initiatives and build the consensus necessary to address increasing challenges.