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Proliferation Risk Reduction in Asia: The Role of Cooperative Science and Technology Exchanges

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Abstract

The changing strategic environment in Asia has profound implications for the non-proliferation policy of the United States. The risks of a nuclearized Korean Peninsula, and all the ramifications this development would imply for our bilateral relationships with South Korea, Japan, Taiwan, and China, as well as for strategic stability in Asia, warrant a thorough re-examination of U.S. policy options to restore the regional powers' confidence in non-proliferation regimes. There is a need for a U.S. program to reinforce Asia's commitments to nuclear non-proliferation policies and to develop science and technology (S&T) exchange programs that reduce proliferation risks—a program that explores the relationship between cooperation and proliferation risk reduction (CPRR).

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Introduction

The changing strategic environment in Asia has profound implications for the non-proliferation policy of the United States. One key dimension of this policy has been a long-standing commitment to bilateral initiatives that encourage cooperation with parties to the Nuclear Non-Proliferation Treaty (NPT) in order to reduce risks that new nuclear powers might emerge. The risks of a nuclearized Korean Peninsula, and all the ramifications this development would imply for our bilateral relationships with South Korea, Japan, Taiwan, and China, as well as for strategic stability in Asia, warrant a thorough re-examination of U.S. policy options to restore the regional powers' confidence in non-proliferation regimes.

There is a need for a United States program to reinforce Asia's commitments to nuclear non-proliferation policies and to develop science and technology (S&T) exchange programs that reduce proliferation risks—a program that explores the relationship between cooperation and proliferation risk reduction (CPRR). Implementing cooperative S&T exchange programs may provide the United States an opportunity to effect change in Asia's commitments to nuclear non-proliferation policies and at the same time reduce the risks associated with existing and developing nuclear programs in Asia.

S&T Exchanges and CPRR

The proliferation risks in Asia are serious, as underscored by the threat of terrorism in Southeast Asia and Afghanistan, the North Korean nuclear crisis, the nuclear tensions between India and Pakistan (and potentially between China and India), and the longer-term impact of the war against Iraq on regional stability. There is an urgent need to re-evaluate current nonproliferation policies and to shape a long-term strategy for engaging Asian powers on critical proliferation management issues in the region. Such a strategy needs to be formulated for China and other Asian partners simultaneously, since there is a high probability that our management of dialogue with China will have direct consequences for how the rest of Asia perceives proliferation risks in the region.

At this time, U.S. officials are offering practical assistance to improve China's nuclear S&T program and its export control systems. In August 2002 the United States and China held a workshop on nuclear technology cooperation to officially recognize their continuing commitment to the 1998 Peaceful Uses of Nuclear Technology agreement signed by both countries. U.S. officials have continued to engage China on export control issues. "The U.S. has taken modest steps to help the Chinese identify problems in their export control systems. The Department of Commerce (DOC) has conducted a seminar on U.S. export control regulations for the Ministry of Trade and Economic Cooperation (MOFTEC), the Ministry of Foreign Affairs (MFA), and the U.S. and Chinese business communities in China. It has also brought MOFTEC officials to the U.S. to exchange views with DOC export control officials."¹ The U.S. Department of Energy also has worked with China to reach agreements related to the export of nuclear technologies for commercial application.

What these types of efforts illustrate is a willingness to sustain engagement. However, what they lack is a longer-term framework in which to monitor and assess their effective contribution to changing

¹ John S. Wolf, Assistant Secretary of State for Nonproliferation, testimony to the Senate Governmental Affairs Committee, Subcommittee on International Security, Proliferation, and Federal Services, June 6, 2002. Another official calls China "a problematic proliferator and the largest potential future market for the United States," in the prepared statement of Lisa Bronson, Deputy Under Secretary of Defense for Technology Security Policy and Counterproliferation, to the United States-China Commission on "U.S. Export Control Policy Toward China," January 17, 2002, <www.nti.org/db/china/engdocs/Bron01_02.htm>, p. 4.

the way the Chinese government and quasi-government officials think about proliferation risks and proliferation risk management. As a recent U.S. government report acknowledged:

“The United States Government is poorly organized to manage our increasingly complex relationship with China. We are not adequately informed about developments with China and about their leaders’ perceptions of the U.S. and we dedicate insufficient resources to understand China. Because Chinese strategic thinking and analysis of military planning differ markedly from our own, our incomplete understanding enhances the possibilities for miscalculation, misunderstanding, and potential conflict.”²

A CPRR strategy offers a framework for designing, implementing, and evaluating S&T exchange programs with China and Asia that focus on proliferation risk management and risk reduction. Cooperative S&T exchanges are the kinds of political and economic tools that effectively complement other diplomatic options. It is the right time for a concerted effort like CPRR to explore how tailored and sustained S&T exchanges might change the attitudes about and practices for managing proliferation risks in Asia.

Why Focus on Asia?

CPRR offers a strategic framework for engaging the Asian powers in S&T exchange programs to accomplish the following goals:

- Develop a common understanding of the region’s nuclear proliferation risks;
- Consider the options for peaceful uses of nuclear technologies to reduce risks; and
- Evaluate the prospects for sustaining cooperative S&T initiatives in the event that more formal nonproliferation regimes in Asia are modified or abandoned.

Managing proliferation risks in “Nuclear Asia”³ requires the simultaneous application of policy levers, legal frameworks, educational exchanges, and selective S&T cooperation. One U.S. official has described nonproliferation policy as “the range of political, economic, and diplomatic tools to prevent, constrain or reverse the proliferation of weapons of mass destruction and their delivery systems.”⁴ CPRR leverages a combination of political and economic tools to reinforce the diplomatic efforts manifested in formal bilateral and multilateral treaties and agreements.

Addressing the urgent need to focus on proliferation risk reduction in Asia acknowledges the high probability of persistent nuclear proliferation risks with Asia’s current and possible future nuclear weapons powers; current and future sites of nuclear power plants or research reactors; and current buyers of nuclear materials and technologies. It is also an implicit admission that U.S. programs undertaken to

² Executive Summary, p. 2, of the Report of the U.S.-China Security Review Commission, C. Richard D’Amato, Chairman, and Michael Ledeen, Vice Chairman, submitted to the President Pro Tempore of the U.S. Senate and the Speaker of the House of the U.S. House of Representatives, July 15, 2002, <www.uscc.gov/excsum02.htm>.

³ “Nuclear Asia” refers to the phenomenon where multiple Asian powers now possess an operational capability to deliver nuclear weapons, including Russia, China, North Korea, India, and Pakistan, and many Asian states operate nuclear power plants that generate radioactive waste. Both weapons-grade material and radioactive waste pose serious nuclear proliferation concerns for the region and the international community at large.

⁴ Prepared statement of Lisa Bronson, Deputy Under Secretary of Defense for Technology Security Policy and Counterproliferation, to the United States-China Commission on “U.S. Export Control Policy Toward China,” January 17, 2002, <www.nti.org/db/china/engdocs/Bron01_02.htm>.

date may individually have been well-designed and managed, but collectively have not reduced the proliferation risks in Asia.

We recognize that bilateral S&T engagement with China, and potentially with other Asian countries, occurs during a period when the United States is undergoing a fundamental reassessment of a broad range of policy relations with China. A review of China's nonproliferation policies and practices found that China's "proliferation activities with terrorist-sponsoring and other states, despite commitments to the U.S. to cease such activities, present serious problems for U.S. national security interests, particularly in the Middle East and Asia."⁵ As one U.S. official testifying to Congress in 2002 stated: "We continue to have concerns about Chinese nonproliferation behavior. In particular, we want to ensure that Beijing fully lives up to its May 1996 commitment not to provide assistance to any unsafeguarded nuclear programs and facilities."⁶

CPRR initiatives would leverage experience and findings obtained from ongoing U.S. Government (USG) programs that are designed to reduce the threat from the proliferation of weapons of mass destruction (WMD). New cooperative strategies to enhance non-proliferation regimes are a priority for U.S. Senator Richard Lugar, Chairman of the Senate Foreign Relations Committee. He has recently written about the need to "globalize" the Nunn-Lugar Nuclear Threat Reduction program. Senator Lugar not only has called for an expanded G-8 initiative in the former Soviet Union, but also has proposed an extension of the concept to create a permanent and proactive global non-proliferation program. Lugar's proposal to extend U.S. nuclear non-proliferation programs to regions outside of the former Soviet Union would provide the United States with another tool to combat the proliferation of weapons of mass destruction (WMD).

Measuring the Contributions of S&T Exchanges to Nonproliferation Goals

For nearly 15 years, U.S. policy has endorsed scientific-technical, educational, and policy exchanges as tools to promote nonproliferation policies and behaviors among our allies and adversaries. These types of programs are critical complements to the more formal diplomatic commitments captured in treaties and international agreements.

By definition, an international S&T exchange program—whether conducted under U.S. government auspices or as a private sector initiative—shares information and technical knowledge with a foreign entity. All facets of the exchange are therefore subject to the prohibitions and constraints stipulated in U.S. technology transfer and export control laws and regulations. Scientific and technical exchange programs conducted as part of U.S. nonproliferation policy make valuable contributions to U.S. national security interests principally in three ways:

- They help shape the attitudes of our foreign counterparts about the risks associated with proliferation.
- They have the potential ability to influence how countries implement formal technology transfer and export control treaty terms and conditions, bringing some transparency for the United States into the processes and effectiveness of international proliferation controls.

⁵ Executive Summary, p. 5, of the Report of the U.S.-China Security Review Commission, C. Richard D'Amato, Chairman, and Michael Ledeen, Vice Chairman, submitted to the President Pro Tempore of the U.S. Senate and the Speaker of the House of the U.S. House of Representatives, July 15, 2002, <www.uscc.gov/excsum02.htm>.

⁶ Testimony of Assistant Secretary of State for Nonproliferation, John S. Wolf, in June 6, 2002.

- Their contribution to proliferation risk reduction may be measured both quantitatively and qualitatively by evaluating the impact of sharing knowledge, expertise, and technologies with countries whose own proliferation management programs are still in nascent stages of development.

Although many regimes may define policies and enter into international commitments to reduce the risk of WMD proliferation, not all parties to these treaties and agreements have in place the institutions, processes, and procedures that are needed to implement a nonproliferation policy effectively. Implementation efforts are required to enforce compliance across the government, industry, and quasi-government communities having roles to play in protecting against proliferation risks.

Countries that commit to international standards relating to proliferation or any form of arms control need corresponding plans and programs domestically to ensure that the stated policy is implemented. “Multilateral export control arrangements are voluntary, nonbinding agreements under which countries that produce the technologies used to develop weapons of mass destruction agree to restrict the transfer of these technologies.”⁷ Without a comprehensive proliferation management strategy that becomes an integral part of both a government’s and private sector’s domestic operations and programs in countries possessing expertise and technologies related to WMD, the more likely is a situation where compliance with international treaties and agreements becomes haphazard and unpredictable.

Implementing Strategies

A principal focus of CPRR efforts must be to assist the U.S. policy community in organizing authorized S&T exchanges and transfers with China and other Asian partners; monitoring how these programs are implemented; and evaluating their role in contributing to proliferation risk management and risk reduction. Specific actions include but are not limited to:

- Examining how Asian countries perceive the value of cooperative nonproliferation programs
- Identifying of the types of cooperative agreements that need to be developed in order to augment or clarify current agreements that govern S&T exchanges, and help tailor these agreements to be compatible with legal and institutional processes in Asian countries
- Implementing new nonproliferation S&T projects to bolster regional nonproliferation efforts
- Developing a framework to assess whether cooperative nonproliferation programs are successful in meeting the U.S. administration’s nonproliferation objectives in the region

⁷ GAO-02-226T, p.3