



INDIA AND THE NON-PROLIFERATION SYSTEM

A REPORT OF THE WORKING GROUP ON AN EXPANDED NON-PROLIFERATION SYSTEM

TERESITA SCHAFFER WITH JOAN ROHLFING

November 2011

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THE NUCLEAR THREAT INITIATIVE

NTI is a non-profit, non-partisan organization with a mission to strengthen global security by reducing the risk of use and preventing the spread of nuclear, biological, and chemical weapons, and to work to build the trust, transparency, and security that are preconditions to the ultimate fulfillment of the Non-Proliferation Treaty's goals and ambitions.

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—TERESITA SCHAFFER

Preface

INDIA AND THE UNITED STATES HAVE BEEN AT ODDS OVER NUCLEAR ISSUES

for more than three decades, and yet both countries' interests are powerfully affected by the spread of nuclear weapons. The Working Group on an Expanded Non-Proliferation System set out to answer the question, "What would be necessary to have India and the United States work together as active participants in the international non-proliferation system?" The working group, which consisted of a dozen members from India and the United States, with each group drawn about equally from nuclear experts and senior foreign policy figures, held three meetings and extensive consultations by phone and email between November 2009 and June 2011.

The group made one formal recommendation in a public statement dated June 30, 2010: the U.S. and Indian governments should work to bring India into full membership in the export control groups that form part of the larger non-proliferation system. This proposal was endorsed by both governments when U.S. President Barack Obama visited India in November 2010. In addition, the group developed several proposals for enhancing India-U.S. collaboration on three aspects of global non-proliferation: nuclear security, nuclear disarmament and the possibilities for U.S.-India cooperation in improving the possibilities for real progress; and Indian participation in non-proliferation institutions other than the Nuclear Non-Proliferation Treaty (NPT) itself.

This report describes the deliberations of the group, outlines the ideas it has developed for strengthening India's participation in global non-proliferation, and puts forth some thoughts on where non-proliferation is headed in the coming years. Six additional working papers were prepared to focus the group's discussions; they are available on the NTI website at www.nti.org/India-working-group.

The members of the working group all agreed to the joint statement of June 2010, and they are in broad agreement that the proposals in this report will strengthen progress toward a safer world. The working papers reflect only the views of their respective authors, and any other errors in this report are the responsibility of its principal author.

—TERESITA SCHAFFER

India's Integration into an Expanded Non-Proliferation System

STATEMENT FROM THE WORKING GROUP ON AN EXPANDED NON-PROLIFERATION SYSTEM

The following is a statement, released on June 30, 2011, from the Working Group on an Expanded Non-Proliferation System, established as part of a project sponsored by the Center for Strategic and International Studies (CSIS) and the Nuclear Threat Initiative (NTI). The group includes experts in international nuclear affairs and in foreign policy from both India and the United States. This statement represents the views of the working group members whose names are listed on page 34. It does not necessarily represent the views of CSIS or NTI, or of the institutions to which the signers belong.

IN 2008, INDIA AND THE UNITED STATES, with the concurrence of the Nuclear Suppliers' Group (NSG), completed a path-breaking agreement that made possible civilian nuclear commerce with India. This agreement was intended to put India's civilian nuclear facilities under safeguards and end India's nuclear isolation.

It also aimed to bring about more complete Indian participation in the non-proliferation system. The Working Group on an Expanded Nuclear Non-Proliferation System believes it is time to move toward this goal by bringing India into the export control groups and other arrangements that are a vital part of the non-proliferation system.

The Indo-U.S. civil nuclear agreement included significant changes in U.S. law and policy that were possible only because of India's strong record of preventing its own nuclear materials from being illegally exported or otherwise used for proliferation. India and the United States agree that it is vital to prevent the spread of nuclear weapons and associated technology. Both countries agree, in other words, on the importance of non-proliferation. India's nuclear weapons prevent it from joining the Non-Proliferation Treaty (NPT) as a non-weapons state, and the language of the treaty precludes India's adhering as a weapons state. In light of the frictions generated by India's anomalous status, the working group believes it is more useful to focus on other institutions and mechanisms that can help strengthen the international non-proliferation system.

The working group urges the Indian and U.S. governments to give high priority to reaching agreement in principle on this issue in the context of U.S. President Barack Obama's planned trip to India in November 2010. Specifically, the group recommends that the two governments:

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- Agree in principle to bring India into the four non-proliferation export control groups (the NSG; the Missile Technology Control Regime (MTCR); the Wassenaar Arrangement, which addresses armaments trade; and the Australia Group, which deals with chemical weapons).
 - Begin working together to harmonize India's export control regime with those of the Australia Group and the Wassenaar Arrangement. Harmonization with the MTCR and NSG export control guidelines was already accomplished in the context of the U.S.-India civil nuclear agreement.
 - Initiate consultations with the other members of the export control groups to make possible India's swift accession.
 - Start addressing the obstacles to India's membership in the Proliferation Security Initiative (PSI).

A policy that followed these recommendations would have clear benefits for both countries and for the world. For India, membership in these institutions would acknowledge India's essential role in preventing proliferation of nuclear and other weapons of mass destruction. It would fulfill the promise implicit in the U.S.-India nuclear agreement of treating India as a responsible state with advanced nuclear technology. It would bring India into the process of creating export control standards for the future, a particularly important point in light of India's rapidly growing economy and expanding footprint in international trade in sophisticated technology.

For the United States, this policy would strengthen the global non-proliferation system that has been a high priority for administrations of both U.S. political parties for several decades. It would strengthen the export control systems of a potentially significant supplier of sensitive items, and ensure that there are no hurdles in India's implementing future changes to export control regimes. Indian membership would bring its major nautical presence into the PSI. This would be especially important in the critical sea lanes of communication in and near the Indian Ocean. These actions would also strengthen the U.S. partnership with India.

The world at large, finally, would benefit from a stronger non-proliferation system. This objective has strong and broad support around the world. It would underline India's commitment to the global non-proliferation system.

Implementing the working group's recommendations will involve policy adjustments and a great deal of hard work, both within the Indian and U.S. governments and in consultations with other members of the organizations in question. Most of the organizations expect their members to be NPT signatories, although in some cases this has not always been a condition of membership, and it is not enshrined in law. Bringing India in would require adjusting that practice. The working group notes in this context that India, like the other members of the export control organizations, has a longstanding commitment to working in good faith toward nuclear disarmament.

We believe that India's membership would support the fundamental purposes for which the non-proliferation export control groups were established, and that such a

change would be desirable. The working group believes that India's membership would give India additional responsibilities for managing global safety and security, even as it recognized India's increasingly important participation in global nuclear commerce.

In the year since it was first formed, the working group has had useful discussions on nuclear issues that figure in the official U.S.-India dialogue, including nuclear security and the prerequisites for nuclear disarmament. The group will continue to explore the issues that touch on non-proliferation, in the hope of adding to and deepening the U.S.-India conversation on a subject both countries care deeply about.

I. Introduction

INDIA AND THE UNITED STATES have been at odds over nuclear issues for more than three decades, and yet both countries' interests are powerfully affected by the spread of nuclear weapons. The Working Group on an Expanded Non-Proliferation System set out to answer the question, "What would be necessary to have India and the United States work together as active participants in the international non-proliferation system?" The working group, which consisted of a dozen members from India and the United States, with each group drawn about equally from nuclear experts and senior foreign policy figures, held three meetings and extensive consultations by phone and email between November 2009 and June 2011.

The group met against the background of dramatic changes in the non-proliferation environment as it affected India and the United States. The U.S.-India nuclear agreement put India into a new and unique category. It created the basis for Indian civil nuclear cooperation not only with the United States but also with other Nuclear Non-Proliferation Treaty (NPT) members, including France and Russia. Despite periodic references to the NPT's hope of true universality, U.S. policy recognizes that Indian accession to the treaty has in practice become impossible, and that the future U.S.-India nuclear relationship needs to be based on this reality. Side by side with these benefits for U.S.-India relations, the U.S.-India civil nuclear agreement has created something of a backlash, primarily from states that gave up their nuclear weapons options to join the treaty. There has also been a negative reaction from Pakistan, which seeks a similar dispensation, and from China, which had been opposed to the India deal, although it did not block the Nuclear Suppliers' Group (NSG) consensus and which now seeks to help Pakistan match it. This inevitably complicates the politics of finding bridges between India and the non-proliferation system.

The U.S.-India nuclear agreement...created the basis for Indian civil nuclear cooperation not only with the United States but also with other NPT members.

A second change in the context for the current U.S.-India non-proliferation dialogue is President Obama's decision to make nuclear disarmament a focus of U.S. policy, and hence a common ideal for both countries, however difficult it may be to put it into practice. This was articulated especially in his Prague speech in April 2009.

During the working group's deliberations, the United States released a nuclear posture review that sought to begin the process of reducing the centrality of nuclear weapons in the U.S. strategic posture. Although it did not adopt a "sole purpose" policy—whereby the United States would declare that the "sole purpose" of its nuclear arsenal was to deter the use of nuclear weapons by other countries—it did

state that the United States “will work to establish conditions under which such a policy could be safely adopted.”¹ The United States hosted a Nuclear Security Summit in April 2010, with the participation of 47 countries, and Indian Prime Minister Manmohan Singh chose that occasion to announce India’s intention to create a Nuclear Energy Center. This event and a second planned summit in 2012 focused the attention of the world on the need to work together to bring nuclear materials under better control. Shortly after President Obama’s visit to India in November 2010, the United States ratified the New START treaty with Russia, the first U.S.-Russian arms control treaty in eight years. Russia ratified the treaty in late January 2011. And after the working group’s principal work was done, the tsunami and nuclear problems in Japan focused the world’s attention on nuclear safety issues.

The working group began by acknowledging that India and the United States fundamentally agree on the importance of stemming the spread of nuclear weapons. They also recognized the historical and policy background of the two countries’ divergent views of what the non-proliferation system is and where India fits into it. For the United States, the NPT is the centerpiece of a global effort to stop the spread of nuclear weapons. All but three countries in the world have joined it. But in India, that treaty with its two-tier system of “nuclear weapons states” and “non-nuclear weapons states” remains a byword for discrimination, and has left a legacy of mistrust of international non-proliferation institutions. The working group recognized that it was unlikely to be able to reconcile these dramatically different perspectives, and that the option of amending the NPT was not practicable. Consequently, the working group decided to sidestep the issue of the NPT and focus primarily on the threats that both India and the United States are concerned about, and on the policy response to those threats.

This report will focus first on the working group’s discussions of the three principal topics it covered: nuclear security; nuclear disarmament and the possibilities for U.S.-India cooperation in improving the possibilities for real progress; and Indian participation in non-proliferation institutions other than the NPT itself.

In this last area—non-proliferation institutions—the working group publicly urged, following its June 2010 meeting, that India and the United States agree in principle to support India’s membership in the export control groups that form part of the non-proliferation system. This recommendation was reflected in the joint statement by President Obama and Prime Minister Singh during the former’s visit to India. This very welcome development provides the occasion for the group to consider what ought to be the next steps in crafting U.S.-India cooperation in this area, and in bringing India into a closer relationship with the global non-proliferation effort. Accordingly, the report concludes by discussing next steps and reflecting on how the emerging non-proliferation system might look.

II. Common Threats

THE WORKING GROUP TOOK AS ITS STARTING POINT THE DANGERS that are most salient to both India and the United States. At its initial November 2009 meeting, the group began by identifying the principal nuclear threats that the world needed to address. It focused on four principal dangers:

- Spread of nuclear weapons technology to new governments, overtly or clandestinely;
- Expansion of existing nuclear arsenals;
- Nuclear terrorism or acquisition of nuclear materials, weapons, or technology by non-state actors, which could also involve spread to new countries;
- State collapse, loss of control, or extremist takeover.

Within the working group, there was strong consensus that the third and fourth of these threats were especially urgent and evoked the greatest level of agreement between India and the United States. On the Indian side, the principal example that came up in the discussion was Pakistan; on the U.S. side, there was also serious concern about Iran and North Korea.

If these are the threats, what does the global system need to do and what are the threat reduction objectives? Here, four specific objectives had particular salience:

- To prevent the use or threat of use of nuclear weapons;
- To secure weapons and materials, with the highest possible standard of security (more than 36 countries have a significant quantity of highly enriched uranium or separated plutonium);
- To reduce, consolidate, and secure fissile material stockpiles;
- To find effective tools for preventing or dealing with nuclear terrorism.

Looking specifically at the issue of securing materials, the group noted some steps that could make it easier to reach this goal and some cautions that should guide their implementation:

- Preventing the misuse of civilian nuclear technology, without making such technology unavailable to legitimate and responsible users. Some especially important means include:
 - Maintaining and enforcing export controls to international standards,
 - Accounting for and tracking nuclear materials,
 - Keeping tighter and more effective control of stocks.
- Developing proliferation-resistant mechanisms for supply of fuel to those who need it. This might include, for example, fuel banks, which would need to be established on a basis that is non-discriminatory and also prevents proliferation.
- A proliferation-resistant and non-discriminatory fuel cycle, if this can be developed.

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- Reducing and better controlling stocks of fissile materials: India and the United States have agreed to participate in negotiating a Fissile Material Cutoff Treaty (FMCT), which would ban the production of fissile material. The United States remains committed to its moratorium on the production of fissile material, which has been in place since 1992. India strongly opposes making an advance commitment to stop production before the treaty has been concluded and questions whether a Chinese moratorium on fissile material production is really in place, as the United States assumes.
 - Reducing nuclear weapons arsenals and making serious progress toward nuclear disarmament was regarded as an essential context for this discussion.

The continuing disarmament debate will influence the two countries' continuing discussions. India's policy continues to strongly favor global nuclear disarmament.

The continuing disarmament debate will influence the two countries' continuing discussions. India's policy continues to strongly favor global nuclear disarmament. The Indian participants argued, however, that major changes in India's policy on such issues as the size and management of its nuclear stockpile, participation in weapons reduction, or reduction in the supply of fissile materials would not be feasible until China had begun to reduce its stockpile—which in turn would not happen until the Russian and U.S. arsenals had made further significant reductions.

Against this background, the group decided to devote its future meetings primarily to three issues: security of nuclear materials and installations; nuclear disarmament, in particular how India and the United States might be able to work together despite being at very different points in the disarmament debate; and India's relationship to the non-proliferation institutions other than the NPT itself. Two working papers—by George Perkovich and T. P. Sreenivasan—present different visions for the working group to consider and accompany this report online.²

III. Nuclear Security

AT THE START OF THEIR DELIBERATIONS, the working group members had agreed that nuclear security was critical to the future security of the world. They recognized that the potential problems ranged from the dramatic (the risk of break-ins to and theft from nuclear facilities) to the technical (e.g., discrepancies in accounting for nuclear materials that could make it possible for substantial amounts of fissile material to “disappear”). The Indian participants regarded the International Atomic Energy Agency (IAEA) as the most important institutional framework for nuclear security discussions. U.S. participants focused on the need to supplement the IAEA’s vital role with new mechanisms for international cooperation that might go beyond its consensus-based system to share and popularize best practices. The group had briefings on the World Institute of Nuclear Security (WINS), a new mechanism linking nuclear facility operators, and on proposals for a nuclear fuel bank.

WORLD INSTITUTE OF NUCLEAR SECURITY

Corey Hinderstein, NTI’s Vice President of International Program, briefed the group at its February 2010 meeting about WINS. WINS was officially launched in October 2008 in Vienna by a partnership of NTI, the U.S. Department of Energy, and the Institute of Nuclear Materials Management with the cooperation of the IAEA and has been operating since January 2009. Its primary goal is to develop and promulgate nuclear material security “best practices,” and it aims to complement and supplement the IAEA’s nuclear security program. The nuclear community, Hinderstein explained, has proved relatively slow to engage in best-practice exchanges, which are widely practiced in the responsible management of other industries. Exchange of information is seen by some as difficult, because nuclear security is viewed as a national responsibility and security practices have historically been considered too sensitive for international sharing. She argued, however, that WINS has had considerable success in sharing experience at a level of detail that is meaningful to the operators without compromising the integrity of security measures. In addition, the practitioners—those responsible for nuclear security on the ground—have a responsibility to improve their own practices and assist others in doing the same, because there would be a negative effect on the entire world if a serious breach or a nuclear terrorist event were to occur.

WINS’ 500-plus members include official nuclear authorities, government-owned nuclear facility operators, private operators, and individuals knowledgeable in the field. Perhaps half of the members are individuals rather than institutions. Membership does not involve fees and does not impose any specific obligations. There is nothing to prevent an organization or an individual from joining and simply observing WINS to see whether it is useful. Similarly, it is possible to attend most

WINS events as an observer, in order to get a better sense of the organization before joining. Several members initially joined without expecting to get involved, but most have found the activities useful enough to get more deeply involved. One member of the group described the results of a workshop he had attended on “design-based threat assessment,” the concept that security measures should be driven by the particular threats that are plausible at a particular facility, rather than on generic physical security standards.

The Indian members of the group commented that WINS was little known in India but thought that based on this discussion it deserved a closer look. The executive director of WINS was in India on other business in 2010 and has conducted a series of ongoing engagements with government, scientific, and security leaders in the hope of encouraging a more productive consideration within the Indian government of

India...noted that “as a country with advanced nuclear technology, [it] would like to participate as a supplier state in such initiatives.”

the possible value of membership by some of the government nuclear managers or institutions. As a result of these engagements, planning is underway for a WINS event to be hosted in India in 2011.

FUEL BANKS

Hinderstein initiated a discussion of fuel banks. She described the fuel bank proposal then under consideration in the IAEA³ in general terms. The United States saw the question of supply assurances in terms of a three-tier market: at the

outside, a well-functioning commercial marketplace; then, national fuel assurance mechanisms; and finally, an international fuel bank that would serve as a last-resort back-up for any interruption of supply to a nuclear power program for political reasons. NTI had pledged \$50 million to fund an international fuel bank under IAEA control with the provisions that one or more member states of the IAEA would match this grant with an additional \$100 million in cash or in kind and that the Board of Governors would take the necessary steps to authorize the operation of the fuel bank. The \$100 million in matching funds was reached in March 2009 and the IAEA Board of Governors approved the fuel bank on December 3, 2010. The IAEA will own the material, and will dispense it according to specified standards to be determined by the IAEA Secretariat.⁴

The Indian members of the group noted that India expects to continue with its own independent arrangements for securing fuel, although there was nothing in the IAEA fuel bank proposal that constrained any country’s options for fuel supply. States were not required to “join” or indicate in advance that they would like to be eligible for the fuel bank. The context of the discussion, therefore, was not so much potential Indian use of an international fuel bank as India’s possible political support for a fuel bank. It was noted that India had abstained in the vote on an earlier proposal for a Russian

fuel bank in 2009.⁵ India voted, however, in favor of the IAEA low-enriched uranium (LEU) Bank in December 2010, noting that “as a country with advanced nuclear technology, India would like to participate as a supplier state in such initiatives.” An Indian member of the working group expressed possible interest in India being considered an eligible host for a nuclear fuel bank.

The group agreed on the vital importance of continuing to implement the most effective possible measures to promote nuclear security. Indian members of the group agreed that Indian participation in new initiative such as WINS and the IAEA fuel bank was worth a fresh look. In particular, they raised the possibility of encouraging Indian observers at WINS events as a way to examine the operation of the group before making a formal commitment.

IV. Nuclear Disarmament

INDIA AND THE UNITED STATES COME TO THE NUCLEAR DISARMAMENT ISSUE

from very different historical and policy backgrounds. India's formal policy of support for nuclear disarmament long predates its development of nuclear weapons. Then Prime Minister Rajiv Gandhi proposed a nuclear disarmament plan in 1988,⁶ and this has been the touchstone of India's formal disarmament policy ever since. A non-official group in India headed by former Minister Mani Shankar Aiyar is currently reviewing the Rajiv Gandhi Action Plan to make it more applicable to present times and circumstances. India has presented calibrated step-by-step proposals built on the foundation of universal applicability and non-discrimination, the two key principles for India.⁷

For the United States, nuclear disarmament had for many years been seen in two ways. The first was partial disarmament through rigorous negotiations with Russia and before it the Soviet Union. These agreements provided the means for these countries to take concrete steps to reduce their arsenal sizes but left very substantial stockpiles of weapons in both countries. Total disarmament was a distant goal with no concrete means of attainment defined.

The second was a vision of complete disarmament. A seminal statement by four distinguished former public servants—former U.S. Secretaries of State George P. Shultz and Henry Kissinger, former U.S. Secretary of Defense William Perry, and the former Chairman of the U.S. Senate Armed Services Committee Sam Nunn—broke with this idea that complete disarmament was a distant and impractical goal. This group embraced it as an objective the United States should pursue. President Obama picked up this spirit in his speech in Prague in April 2009.

The expanded strategic relationship between the United States and India, in the judgment of the working group, ought to make possible a more serious exploration of how the United States and India could work together toward nuclear disarmament. Taking complete disarmament as a serious objective makes it more, not less, important to identify the steps that will lead in that direction. A critical part of this effort, of course, involves U.S. arms reduction negotiations with Russia, in which India is not a participant. Results of negotiations will affect India's ability to participate in actual arms reductions at some future point.

Recognizing the different points from which analysts and policymakers in the two countries start, the working group considered several possible areas for cooperation and consultation, which could advance the international disarmament discussion. The group's discussion drew on papers written by Scott Sagan, the Caroline S. G. Munro Professor of Political Science at Stanford University, and Lt. General (Ret.) V. Raghavan, Director, Delhi Policy Group, which accompany this report online.⁸

COMPREHENSIVE TEST BAN TREATY AND FISSILE MATERIAL CUTOFF TREATY

The United States has long regarded the Comprehensive Test Ban Treaty (CTBT) as a key step on the path toward disarmament. India participated in the negotiations on the treaty but decided not to sign. This decision reflected widespread Indian concerns that the requirements for the treaty's entry into force were intended to put India in a box. The provisions in question required ratification by 44 countries possessing nuclear research and/or power reactors at the time of the treaty's negotiation for the treaty to enter into force. These countries, which were designated in Annex 2 to the treaty, included India. Following India's 1998 nuclear tests, then-Prime Minister Atal Bihari Vajpayee made a carefully drafted statement at the 1998 United Nations General Assembly that India would not prevent the entry into force of the CTBT.⁹ The U.S. Senate rejected the treaty in 1999.

The Obama administration has described the CTBT as a top disarmament priority. The administration, however, had great difficulty obtaining Senate ratification of New START in December 2010—another key disarmament step—and most observers believe that the composition of the Senate since January 2011 will make it even more difficult to obtain ratification of the CTBT, which is a more politically controversial measure.

Members of the working group thought that if the United States and China ratified the CTBT, it would appear in a different light in India. There is little point in pressing India for signature on the treaty until the United States has ratified it.

There is little point in pressing India for signature on the CTBT until the United States has ratified it.

India has publicly committed to participating in negotiations for an FMCT. FMCT negotiations remain stalled, however, and have been for some time. Indian and U.S. positions on the substance of a treaty are closer now than in the past; in particular the two countries now agree on the need for verification. **Forward movement on the FMCT would be a useful step.**

DISCUSSION OF NUCLEAR DOCTRINES

India and the United States develop their nuclear doctrines internally, in response to their unique threat environments. Consultations on what their nuclear doctrines mean and how they relate to perceived threats and to the disarmament environment could be enlightening, however, especially in light of the increasingly important strategic relationship between the two countries. One example: India has a doctrine of no first use, with caveats for threats from chemical and biological weapons. This doctrine is bolstered by a non-mated posture for its nuclear weapons that builds in a longer crisis reaction time. The United States does not have a no first use doctrine, but in the 2010 Nuclear Posture Review it pledged not to use or threaten to use

nuclear weapons against non-nuclear weapon states party to the NPT who are “in compliance with their nuclear nonproliferation obligations.”¹⁰ **Discussing how these doctrines might work, especially in an environment in which the threat comes both from states and from non-state actors, could both build confidence and possibly point the way toward further steps to reduce the salience of nuclear weapons.**

TRANSPARENCY

The U.S. announcement of the size of its nuclear weapons stockpile was a major step toward transparency. U.S. participants suggested that India might enhance its transparency by announcing its nuclear force and materials inventories. The Indian participants demurred, arguing that the Indian government could not move in this direction unless China did so as well.

The group thought there was value in developing a forum that included all states that possess nuclear weapons and are prepared to discuss non-proliferation and disarmament seriously.

BILATERAL CONSULTATIONS ON SCIENTIFIC ISSUES

The U.S.-India nuclear standoff made scientific consultations impossible for decades. In light of the U.S.-India nuclear agreement, **members of the working group thought it would be useful to try to establish active communication among scientists, focusing in particular on accident prevention and**

on issues that could advance both non-proliferation and disarmament. Examples might include better seismic capabilities; developing a transparent regime for dismantling warheads; forensics; verification challenges, including the problem of verifying the destruction of warheads rather than just delivery vehicles; and nuclear security cooperation.

A BROADER INTERNATIONAL FORUM

Rather than pigeonhole disarmament- and non-proliferation-related international discussions into treaty-recognized nuclear weapons states and others, **the group thought there was value in developing a forum that included all states that possess nuclear weapons and are prepared to discuss non-proliferation and disarmament seriously.** The possibility of such a forum was suggested in the joint statement issued by President Obama and Prime Minister Singh during the former’s November 2010 visit to Delhi. This group could be a mechanism for mobilizing both treaty signatories and non-signatories to support the fundamental objectives of the NPT and specific steps for threat reduction and disarmament.

One Indian participant noted that India had “bound itself” to the NPT obligations as they apply to nuclear weapons states. **Some members of the group believe that a more**

formal Indian statement to that effect would have an important and positive impact on India's dealings with the different parts of the non-proliferation system.

WHAT TYPE OF COMMITMENTS?

Most global non-proliferation initiatives in the past have sought universal adherence to the key non-proliferation agreements, such as the NPT. In looking at the path toward nuclear disarmament, **members of the group suggested that we should consider elements of an “a la carte approach.”** In two recent international meetings—the 2009 United Nations Climate Change Conference in Copenhagen and the April 2010 Nuclear Security Summit in Washington—participants made commitments that were not necessarily identical or even parallel. There might be scope for different participants in the disarmament debate to consider customized commitments.

V. Non-Proliferation Institutions

INDIA'S RELATIONSHIP WITH GLOBAL NON-PROLIFERATION INSTITUTIONS

emerged as the primary action point in the working group's discussions. The group's deliberations began with consideration of two papers that had been written by participants to set the stage. Both papers accompany this report online.¹¹

Lisa Curtis's paper, "Enhancing India's Role in the Global Non-Proliferation Regime," provided carefully researched background on the history of each of the export control groups that are part of the non-proliferation system: the Australia Group, which deals with chemical weapons and their precursors; the Wassenaar Arrangement, which deals with arms transfers; the Missile Technology Control Regime (MTCR); and the NSG. Curtis argued that bringing India into these organizations would be a way of connecting India more fully with the non-proliferation system, despite its not being an NPT signatory. She further argued that the United States and other international participants in these groups needed to "develop fresh ways of thinking" about India and the non-proliferation system. She discussed how the history and character of each of these groups would affect an effort to bring in India.

Raja Mohan took a somewhat broader look at the same general topic, starting from the proposition that India is a "supporter of the nonproliferation system but not a signatory of the NPT." He argued that despite India's early misgivings about the PSI, India's approach could and should change in the aftermath of the U.S.-India nuclear agreement, and that "Delhi must find a way to emerge as a more vocal and practical supporter of the nonproliferation system."

A strong consensus emerged among the members of the working group that the United States and India should work together to bring about Indian membership in the four non-proliferation export control groups mentioned above, including harmonizing India's export control regime where necessary, and to address India's concerns about membership in the PSI. Accordingly, the working group issued a statement on June 30, 2010, urging the governments of India and the United States to work toward agreement in principle along these lines, to be announced during President Obama's visit to Delhi in November 2010. The statement noted that this move would have important benefits. It would acknowledge India's essential role in preventing proliferation of nuclear and other weapons of mass destruction and bring India into the process of creating export control standards for the future. For the United States and the rest of the international non-proliferation community, this policy would strengthen the global non-proliferation system and invigorate the export control systems of a potentially significant supplier of sensitive items. It would also

ensure that there are no hurdles in India's implementing future changes to export control regimes. See the full text of the statement at the beginning of this report.

Working group members, who remained in close touch with their respective governments over the next few months, were delighted to note that the joint statement by President Obama and Prime Minister Singh stated that "the United States intends to support India's full membership in the four multilateral export control regimes."¹² This action was to take place in a phased manner, and the organizations would need to adapt their membership criteria accordingly. This joint decision represents a major opportunity to bring India and the non-proliferation system closer together, with benefits for all concerned.

Since the Obama-Singh statement was issued, the two governments have worked on implementing it. There has not yet, however, been any action toward bringing India into the PSI. In this case, the obstacle is not the institutional charter, because the PSI is by design not an institution. Rather, India's principal concern, well described in Raja Mohan's paper, is whether India would be considered a participant in the system or a potential target. At issue is the language in an amendment to the Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation (SUA Convention) that excludes from enforcement actions shipments between signatories to the NPT. Indian members of the working group who were familiar with the issue thought that it should not be difficult to draft an explanatory note or side agreement that would remove any implication that shipments to or from India were "potential targets." **The working group continues to believe that it would be desirable to move ahead in this direction.**

The United States and India should work together to bring about Indian membership in the four non-proliferation export control groups... including harmonizing India's export control regime.

VI. Looking Ahead

OF THE ISSUES THE WORKING GROUP FOCUSED ON, the relationship between India and the non-proliferation export control groups has the clearest near-term sense of direction. Disarmament and nuclear materials security are both on the international agenda, but for different reasons, it is likely to be more difficult to obtain agreement from the Indian and U.S. governments on a road map for cooperation. As for nuclear security, both countries plan to continue working together in areas where their cooperation is already established, such as India's Center for Nuclear Energy and the planned 2012 Nuclear Security Summit, but there is still no structure in place for working at a more practical level on problems of materials security as they come up at nuclear installations. The following section provides some suggestions from members of the working group about how to move forward in each of these areas.

INTEGRATING INDIA INTO NON-PROLIFERATION INSTITUTIONS

The governments of India and the United States are moving ahead, as promised during President Obama's trip to India, to promote Indian membership in the export control groups connected with the non-proliferation system: the Australia Group, the Wassenaar Arrangement, the MTCR, and the NSG.

Doing this involves two steps: aligning India's export controls with the requirements of those organizations with which India is not yet aligned; and obtaining the required consensus within each of the organizations.

Aligning India's export controls with the four organizations' guidelines is basically a job for India, although it will involve international consultations to satisfy the organizations that India's regulations, in fact, do the job. The NSG decision authorizing its members to carry out civil nuclear cooperation with India specifically notes that India has established a national export control system "capable of effectively controlling transfers of multilaterally controlled nuclear and nuclear-related materials, equipment and technology." It also notes that India has already aligned its export regulations with those of the NSG and the MTCR. These actions were requirements for obtaining the blessing of the NSG for the U.S.-India civil nuclear agreement. India followed up its declarations to the NSG with formal notifications both to the NSG (through the IAEA) and to the MTCR that India was "adhering" to the export control guidelines of both organizations, a formulation that included a commitment to continue to abide by future amendments to the guidelines. In both cases, the organizations undertook to "consult" with India about changes to the guidelines. India's actions were also formally acknowledged by the U.S. government in its 2008 report to Congress as required by the Hyde Act.

India has not yet aligned its export controls with the remaining two organizations, the Australia Group and the Wassenaar Arrangement. It has formally notified the

United Nations of its relevant export control laws and regulations, including those covering chemical weapons, pursuant to the requirements of Security Council Resolution 1540. India has begun to put together a munitions control list. As we know from the process of bringing India's export controls into line with the NSG and the MTCR, reviewing the full panoply of India's export regulations and the mechanisms for enforcing them is a laborious, glacial process and involves multiple authorities and a complicated regulatory process within the government of India. As with any change in regulations in a democratic system, alignment with the remaining two organizations is bound to involve complicated consultations with stakeholders outside the government, principally in the business community.

Obtaining a consensus in favor of Indian membership will have to be done separately in each organization. The statement by President Obama and Prime Minister Singh referred to a "phased approach." There are slight differences in membership and in the operating charters of each organization. In those organizations that do not have a formal, legal link with the NPT, there is an expectation built up over the years that the organization's members will also be NPT signatories, and the membership will need to be persuaded that the organization's goals can better be addressed by waiving or amending this requirement in the case of India. Ironically, the two organizations whose export controls India has already adopted, the NSG and the MTCR, are likely to be the most difficult ones from the perspective of obtaining a membership consensus. The NSG's 2008 decision to allow civilian nuclear trade with India was an important first step in this direction, however.

Obtaining a consensus in favor of Indian membership will have to be done separately in each organization. The statement by Obama and Singh referred to a "phased approach."

At this writing, the two governments are working together to refine the arguments the United States will present to the formal meetings of each of the non-proliferation export control groups, and to prepare the ground for discussion with the full membership. The expectation is that the issue of Indian membership will be joined first in the Australia Group and the Wassenaar Arrangement. Indeed, the Obama-Singh joint statement noted that the United States considered that India would meet the criteria for membership in these two groups once its export controls had incorporated their requirements.¹³

The MTCR and NSG membership process is expected to move more slowly, reflecting the greater political difficulty of moving toward consensus in these institutions. The Indian government is concerned that this gradual strategy not run out of steam, and that there not be a long delay between India's meeting the export control criteria for membership and its actual accession. The MTCR held its annual plenary meeting April 11–15, 2011, in Buenos Aires, Argentina.

The NSG met in June 2011 in the Netherlands. At its meeting, members agreed to strengthen their guidelines for the export of enrichment and reprocessing technology.¹⁴ This action led to concern in India that the “clean” waiver permitting NSG members to supply equipment and technology to civilian facilities in India was being undercut. Both the United States and the Indian Foreign Secretary have publicly stated that the United States had assured India the NSG’s action did not contradict any U.S. commitments to India.¹⁵ The United States in any event has a policy of not exporting enrichment or reprocessing technology to any country. The NSG’s action will undoubtedly generate continuing discussion and some controversy, but it does not preclude a successful bid to move India toward NSG membership.

The nature of the export control groups may make it impossible to move a package deal forward all at once. Success in the one or two groups will make the others easier.

The working group urges the two governments to keep the focus on all four as they work in the individual institutions, and to emphasize that this represents a mutually beneficial change in India’s relationship with the non-proliferation system.

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The final organization mentioned in the working group’s public recommendation is the PSI. President Obama’s November 2010 statement in Delhi said nothing about the PSI, and this has not figured significantly in the U.S.-India official dialogue since then. The PSI, however, is an important part of the international community’s effort to prevent leakage of nuclear materials and equipment to users bent on developing nuclear weapons. North Korea has been one of the principal targets of enforcement actions undertaken through the PSI and has figured in at least one bilateral operation in which India and the

United States have worked together. The working group member most familiar with India’s earlier consideration of PSI believed that India’s objections could be dealt with relatively easily in a side letter in the context of PSI accession. Joining the PSI would be another useful step toward India’s integration in the larger non-proliferation system and should strengthen its standing to become one of the rule-makers in the system. **The working group recommends that the U.S. and Indian governments take up the question of PSI membership at an early date and explore ways of resolving India’s concerns about the interaction between the PSI and the Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation (SUA Convention).**

COOPERATION ON PREPARING FOR GLOBAL DISARMAMENT

From the U.S. perspective, current work on disarmament has four principal strands. Two of them—the CTBT and future U.S.-Russian arms control negotiations—offer little current potential for U.S.-India cooperation, although it would certainly be desirable for the two governments to keep in touch regarding both. The other two, negotiations toward an FMCT and consultations with a broader range of countries about laying the groundwork for disarmament, offer greater promise for the United States and India to work together.

The CTBT has 182 signatories as of March 2011, of whom 153 have ratified. The 44 states in “Annex 2,” whose ratification is required for the treaty to come into force, include both the United States and India. Of the Annex 2 states, all but three (India, North Korea, and Pakistan) have signed, and all but six of the signatories (including the United States) have ratified.

The treaty has strong support from the Obama administration. The United States continues to participate in the work of the Preparatory Commission of the CTBT Organization, and has included in its 2012 budget funding for this organization’s work in building up the international monitoring system on which treaty enforcement will eventually depend. The question, however, of signature on or ratification of the treaty is not likely to be taken seriously by India until the United States ratifies it. This would require a two-thirds vote in the U.S. Senate; in other words, based on the Senate’s membership as of early 2011, it would require the support of at least 14 Republican senators. This makes it a very long shot. Accordingly, there will be no practical possibility of U.S.-India cooperation on the CTBT unless the politics of ratification change in the United States.

The second strand, arms control negotiations, has until now involved only the United States and Russia, whose nuclear arsenals represent an overwhelming majority of the world’s nuclear armaments. Arms reduction received a boost from the ratification of the New START Treaty by both the United States and Russia in late 2010 and early 2011, respectively. U.S. officials have publicly cited the establishment of an updated regime of monitoring and information exchange as the next step.¹⁶ Observers in the arms control community note that the United States would like to negotiate a follow-on agreement that limits both strategic and tactical warheads. Several analysts believe that the next agreement may be the last one that can be negotiated exclusively between the United States and Russia. Once the number of U.S. and Russian strategic warheads gets below 1,000, the expectation is that some kind of multilateral setting would be needed to pursue further reductions. Some Indian members of the working group had observed that 1,000 strategic weapons was the threshold at which China might be willing to be engaged in arms reduction negotiations. If this happened, it could change India’s relationship to the arms reduction process, because the size of India’s arsenal is related to its perceptions of the threat from China. Until China is engaged, there seems little likelihood that India will become an active

participant in the arms reduction process, although it remains important to keep the Indian government in the loop on progress toward arms reduction.

The two remaining aspects of disarmament-related work are much more promising avenues for U.S.-India cooperation. The FMCT is under active discussion in the Commission on Disarmament (CD). The IAEA Board of Governors was then considering, and has since approved, an LEU bank to be managed under the auspices of the IAEA. In 2009, the IAEA Board of Governors also approved a fuel bank of material owned by Russia but available to the IAEA upon request. The Obama-Singh statement expressed regret at the delay in moving to actual negotiations.

Both India and the United States favor an FMCT that bans only new production, whereas others, such as Pakistan, favor a treaty that addresses past production as well. Yet continued delay in beginning FMCT negotiations is not in India's interest. Pakistan is currently increasing its fissile material inventories while its capacity to produce fissile materials is also growing.

The work of the CD remains hamstrung by its procedural requirement that a program of work can only be adopted by consensus agreement among the group's 65 members, which in effect allows any one member to block potential negotiations. After a long period of being dormant, the CD briefly agreed to a work plan in 2009. At present, Pakistan is blocking consensus, arguing that the U.S.-India civil nuclear agreement will accentuate the asymmetry between India and Pakistan, especially if the treaty only covers future production and does not touch fissile material stockpiles.

U.S. National Security Advisor Thomas Donilon announced on March 29, 2011, that the United States “will begin consultations with our allies and our partners to consider an alternative means to begin FMCT negotiations.” Some states—such as China, Pakistan, and Russia¹⁷—have publicly opposed doing so. UN Secretary General Ban Ki-Moon, in a speech to a UN conference on May 31, 2011, said “The credibility of the [CD] is at risk...if [members of the CD] do not do their job...Member States may need to find some alternative place to discuss these nuclear issues... The future of the CD is in the hands of Member States. But the disarmament and non-proliferation agenda is too important to let this forum decline into irrelevancy, as States consider other negotiating arenas.”¹⁸ Prime Minister Singh said in 2006 that “India is only committed to negotiate a Fissile Material Cutoff Treaty in the Conference on Disarmament in Geneva.”¹⁹ **Circumstances have changed since 2006. The working group believes that India and the United States should work together to find a forum where FMCT negotiations can actually move forward.**

Another potentially useful supplement to the work now taking place on global nuclear disarmament would be to establish a forum that would include all countries that possess nuclear weapons and are interested in disarmament, in which they could discuss the issues raised by moving toward disarmament and the contributions they all could make. The two national leaders appeared to have something like this in mind in their joint statement, in which they “affirmed the need for a meaningful

dialogue among all states possessing nuclear weapons to build trust and confidence and for reducing the salience of nuclear weapons in international affairs and security doctrines.”

As already noted, Lt. General (Ret.) V. Raghavan recommended creating such a forum in a paper he prepared for the working group. In addition, the report of the International Commission on Nuclear Non-Proliferation and Disarmament (ICNND) made a similar recommendation. It urged that a mechanism be found for India, Israel, and Pakistan to make formal non-proliferation and disarmament commitments similar to those undertaken by the nuclear weapons state parties to the NPT. This, the report further argued, should lead to including these states in multilateral disarmament negotiations on the same basis as the NPT-recognized weapons states.²⁰

One new initiative under development that could constitute this type of multilateral forum is a “Verification Pilot Forum” currently under development. The Verification Pilot Forum will bring together technical and policy experts from both nuclear and non-nuclear weapon states, without regard to NPT membership, to jointly develop solutions to key verification challenges. The Forum is being created under the leadership of NTI in consultation with a range of governments. The Forum is seeking the participation of Indian experts. A similar group might be set up to discuss the issues suggested in Lt. General Raghavan’s paper.

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NUCLEAR SECURITY

Philosophically, nuclear security ought to be the easiest subject for U.S.-India cooperation. Both governments—and more broadly both countries—see theft or diversion of nuclear materials as the most urgent nuclear danger they face, and recognize the vital stake they have in strong security systems at nuclear facilities. But the history of U.S.-Indian disagreements on broader nuclear matters has left a residue of suspicion. It has been difficult to turn our agreement on the ultimate goal of nuclear security into strong practical collaboration.

India participated in the Nuclear Security Summit in April 2010 in Washington, and both India and the United States are expected to join the next summit in Seoul in 2012. At the first summit, India announced the creation of a Global Center for Nuclear Energy Partnership. When President Obama visited India in November 2010, India and the United States signed an agreement pledging cooperation in this venture. Land has been allocated for constructing the center, which will be an academic institution with four schools, one of which will focus on nuclear security,

and other parts of which will be devoted to utilization of thorium, a nuclear material that India has in abundance. Other international partners whose participation is envisaged include France, Japan, Russia, and possibly Britain. It is unclear how important nuclear security will be in the work of the center. **The working group urges the government of India to move ahead with creating this center.**

The working group had an extended discussion of WINS, which members of the group thought should be reexamined by India. Because WINS allows observers to attend its meetings without commitment, **members of the working group believe that participation in WINS would offer considerable benefits to India with few, if any, disadvantages, and that India could also offer assistance to WINS. To start a serious**

The working group urges the Department of Atomic Energy to engage with WINS and observe... international best practices discussions and assess the value of full membership.

examination of WINS membership, the working group urges the Department of Atomic Energy to engage with WINS and observe upcoming workshops to get the benefit of international best practices discussions and assess the value of full membership in the organization.

One of India's concerns is that private organizations like WINS may dilute the importance of the IAEA, the world's premier universal organization in the nuclear field. The IAEA conducts a very successful nuclear security program that supports states in their efforts to improve nuclear security by providing guidance, training, advisory missions, and technical

assistance. There are, however, many people managing, designing, and operating nuclear facilities or activities in IAEA member countries who have little opportunity to take advantage of these opportunities and are not aware of the international guidance and activities of the IAEA. This is an important gap that WINS aims to fill by providing an international forum for these nuclear security professionals and practitioners to discuss and exchange best security practices and to learn from one another. Close consultation has taken place with the IAEA during the development of WINS and this constructive relationship is continuing. WINS seeks to support and enhance the IAEA's work, wherever possible. The location of both organizations in Vienna facilitates a continuing constructive relationship with periodic planning meetings between staff and management.

The United States is strongly committed to the universality and mandate of the IAEA but is acutely conscious that nuclear security is a moving target. When there is an accident—involving either safety or security—the operators of the concerned facility, and the rest of the world, almost always learn about unanticipated problems requiring new solutions. However good today's security systems are, they will come up short if they are looked on as a static answer to a dynamic problem. The

nuclear crisis that followed the tragic earthquake and tsunami in Japan is only the latest reminder of that basic fact. It is noteworthy that India created an independent nuclear regulatory authority shortly after these events. **The working group urges the governments of India and the United States—together with other countries that have sophisticated nuclear facilities—to consult informally on how to strengthen the IAEA security guidelines, programs, and budgets, and on how to facilitate international consultations on the effectiveness of nuclear safety and security systems.**

The working group's discussion of nuclear cooperation focused chiefly on government-to-government discussions. It is important, however, not to overlook the potential for private channels to exchange expertise and experience in these areas. WINS is a non-governmental organization with both private and public sector members, which distinguishes it from the exclusively government makeup of the IAEA. The Global Center for Nuclear Energy Partnership that India is setting up is a public sector institution. A truly vibrant set of international relationships could usefully include private academic and industrial partners, not just from the United States and India but from other countries with advanced nuclear facilities as well. Other Indian public sector research institutions have done this to good effect. The Public Health Foundation of India comes to mind: it has an international advisory group that includes public health schools from all over the world—both public and private. **The working group urges India to bring the non-government talent that exists in India and elsewhere into a working relationship with the Global Center.**

VII. Conclusion: Whither Non-Proliferation?

THE PREMISE OF THIS PROJECT is that it is possible to advance the goal of nuclear non-proliferation, and U.S.-India cooperation toward that goal, without taking the NPT as the sole center of the system for international cooperation. For the United States and for most other countries, the NPT may well remain the most important single non-proliferation agreement. It is out of reach for India, Israel, and Pakistan who have never signed and are unwilling to give up their nuclear weapons in order to sign (or at least are unwilling to do so in the absence of worldwide elimination of nuclear weapons). But the system also depends on various other organizations that can mobilize the countries of the world without regard to whether or not they have signed the NPT, and these institutions and other mechanisms are the means for including the three non-NPT signatories who have nuclear weapons into the global effort.

In practice, then, a broader system is evolving to serve the goal of preventing the spread of nuclear weapons and countering the nuclear dangers the world faces. What is the outlook for the different parts of the system?

THE NON-PROLIFERATION TREATY

Global nuclear disarmament is one of the three essential pillars of the NPT, and has been the focus of much discussion among treaty signatories. The non-weapons states that have been dissatisfied with the pace of movement toward disarmament have taken some heart from the Obama administration's approach.

At meetings of signatories, such as the 2010 Review Conference, there are usually calls for the non-signatories to join. They will not do so without global nuclear disarmament—including both nuclear weapons states recognized by the treaty and possessors of nuclear weapons that are outside the treaty. In practice, that means that in order to achieve disarmament and through it the universality that treaty signatories consider a goal, it will eventually be necessary to bring non-treaty signatories with nuclear weapons into disarmament discussions. This will need to happen through a non-NPT forum. This report argues for creating such a forum now as a consultative mechanism. In a very real sense, we are arguing that achieving the full range of NPT goals requires creating a non-treaty forum.

The other long-term challenge for the NPT is erosion from within. One signatory, North Korea, has developed and tested nuclear weapons and declared its withdrawal from the treaty; another, Iran, is widely believed to be working on a nuclear weapon. These developments could at some point spark interest in nuclear weapons among

these two countries' neighbors. There is no reason to assume that either of these countries fully subscribes to the goals of the NPT, despite their having signed the treaty.

THE NON-TREATY PARTS OF THE SYSTEM

This vulnerability of the NPT makes it all the more important to fill in gaps in the system and shore up the elements that can operate independently of the NPT. The CTBT, FMCT, and fuel cycle management proposals were intended to do this.

The export control organizations as well as mechanisms like the PSI bring countries together to tackle specific and concrete aspects of preventing the spread of weapons of mass destruction. These institutions will be most effective if they include all the countries that are capable of exporting or handling the goods that they regulate. However, they face a tension between inclusiveness and “like-mindedness” among their members. The working group believes India has a clear interest in preventing the spread of these weapons and has the capacity to define and enforce their standards of behavior.

The argument is occasionally made that India wants to join these organizations in order to loosen their standards. We reject that argument. India has conflicting interests where export controls are concerned: it has an interest in stopping the spread of dangerous technologies, especially within their own region; it also has commercial interests, which have strong political constituencies. But the same is true of all the organizations' other members, including the United States. Moreover, the integrity of the global system for stopping the spread of technologies for mass destruction will be weakened if countries with the potential to become significant producers of the technologies are kept outside the tent.

This vulnerability of the NPT makes it more important to fill in gaps in the system and shore up the elements that can operate independently of the NPT.

WHAT IS AT STAKE

This working group began its deliberations with a discussion of the nuclear dangers that were most important both for the United States and for India, starting with nuclear terrorism, state collapse, or acquisition of nuclear materials, weapons, or technology by additional countries or non-state actors. This is the touchstone for both India and the United States when they consider the future of non-proliferation. The two governments and politically aware citizens in both countries have different priorities but start from a common broad concern. For the United States, making the non-proliferation effort universal remains an important consideration. For India, being one of the rulemakers is important, but there remains a reluctance to take on

internationally binding constraints. For both countries, the next stage in developing their partnership will need to include the tools for working together in a broader multilateral setting.

We hope both governments will continue to seek ways to build further bilateral and multilateral mechanisms for collaboration to reduce the dangers and risks associated with nuclear weapons.

ENDNOTES

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Working Group Members

THE WORKING GROUP ON AN EXPANDED NON-PROLIFERATION SYSTEM

was formed in the summer of 2009 to identify goals for the non-proliferation system on which India and the United States might be able to agree, and to develop a workable road map for a revived non-proliferation system that could integrate India. Members joining the final statement follow.

FROM THE UNITED STATES

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C. Raja Mohan, Strategic Affairs Editor, *Indian Express*

Lt. General (Ret.) V. Raghavan, Director, Delhi Policy Group

K. C. Singh, former Secretary, Ministry of External Affairs, New Delhi

T. P. Sreenivasan, former Governor for India of the IAEA, Vienna, and Director General, Kerala International Centre, Trivandrum

M. R. Srinivasan, former Chairman, Indian Atomic Energy Commission

Author Biographies

TERESITA C. SCHAFFER

Teresita C. Schaffer is an expert on economic, political, security, and risk management trends in India and Pakistan, as well as on the region that extends from Afghanistan through Bangladesh. She is a Non-Resident Senior Fellow at the Brookings Institution, and serves as a Senior Advisor to McLarty Associates, a Washington-based international strategic advisory firm.

In a 30-year career in the U.S. Foreign Service, Ambassador Schaffer was recognized as one of the State Department's leading experts on South Asia, where she spent a total of 11 years. Her other career focus was on international economic issues. She served in U.S. embassies in Pakistan, India, and Bangladesh, and from 1992–1995 as U.S. Ambassador in Sri Lanka. During her assignments in the State Department in Washington, she was Director of the Office of International Trade and later Deputy Assistant Secretary of State for the Near East and South Asia, at that time the senior South Asia policy position in the State Department.

Ambassador Schaffer created a South Asia program at the Center for Strategic and International Studies and directed it from 1998–2010. Her book *How Pakistan Negotiates with the United States: Riding the Roller Coaster*, which she co-wrote with her husband, Ambassador Howard B. Schaffer, was published in 2011. She is also the author of *India and the U.S. in the 21st Century: Reinventing Partnership*, widely recognized as the leading work on the post-2000 U.S.-India relationship and its future prospects, published in 2009. Earlier writings included *Pakistan's Future and U.S. Policy Options* (2004); *India at the Crossroads: Confronting the Challenge of HIV/AIDS* (2004) and a series of other studies on HIV and public health issues in India; and two studies on women in development in Bangladesh (1985).

Ambassador Schaffer is a Trustee of the Asia Foundation, and serves on the Board of Directors of the American Academy of Diplomacy. She received a B.A. from Bryn Mawr College and studied at the Institut d'Etudes Politiques in Paris. She did graduate work in economics at Georgetown University. She speaks Hindi, Urdu, French, Swedish, German, and Italian; and has studied Bangla and Sinhala.

JOAN ROHLFING

Joan Rohlfling became President and Chief Operating Officer of the Nuclear Threat Initiative in January 2010, after nine years as NTI's Senior Vice President for Programs and Operations. She is responsible for managing all NTI programs and operations, overseeing an annual operating budget of approximately \$20 million.

While providing leadership to all NTI programs, she also personally directs the secretariat for the Nuclear Security Project, led by former U.S. Secretary of State

George P. Shultz, former U.S. Secretary of Defense William J. Perry, former U.S. Secretary of State Henry A. Kissinger, and former U.S. Senator Sam Nunn in their effort to galvanize global action to reduce urgent nuclear dangers and build support for reducing reliance on nuclear weapons, ultimately ending them as a threat to the world.

During the last 10 years, Rohlfing has played a critical role in guiding the organization. She was part of the original team that created the mission and scope for NTI in 2000. Once the organization launched in 2001, she played strategic roles in key programs, including the design and launch of several of NTI's hallmark projects, such as the World Institute for Nuclear Security, the Middle East Consortium on Infectious Disease Surveillance, and the Nuclear Security Project.

Before joining NTI, she held senior positions with the U.S. Department of Energy, as Senior Advisor for National Security to the Secretary of Energy and as Director of the Office of Non-Proliferation and National Security. In 1998, when India and Pakistan tested nuclear weapons, Rohlfing was selected for a nine-month assignment in New Delhi to advise the U.S. ambassador on nuclear security issues. Earlier, she served on the staff of the U.S. House Armed Services Committee and at the U.S. Department of Defense.

Rohlfing holds a master's degree from the University of Maryland and a bachelor's degree from the University of Illinois. She was awarded a Council on Foreign Relations International Affairs Fellowship in 1993 and received the Department of Defense Civilian Service Medal in 1989.

About NTI

THE NUCLEAR THREAT INITIATIVE is a non-profit, non-partisan organization with a mission to strengthen global security by reducing the risk of use and preventing the spread of nuclear, biological, and chemical weapons. Founded in 2001 by former Senator Sam Nunn and entrepreneur Ted Turner, NTI is guided by a prestigious, international board of directors.

NTI is focused on closing the gap between global threats from nuclear, biological, and chemical weapons and the global response to those threats. Recognizing that governments have most of the resources and authority in the large-scale work of threat reduction, NTI emphasizes leverage. It's not just what NTI can do throughout the world. It's what we can persuade others to do. We use our voice to raise awareness and advocate solutions, undertake direct action projects that demonstrate new ways to reduce threats, and foster new thinking about these problems.

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Exploring India's Role in an Expanded Non-Proliferation System

INDIA AND THE UNITED STATES have been at odds over nuclear issues for more than three decades, and yet both countries' interests are powerfully affected by the spread of nuclear weapons. The Working Group on an Expanded Non-Proliferation System set out to answer the question, "What would be necessary to have India and the United States work together as active participants in the international non-proliferation system?"

The group made one formal recommendation in June 2010: the U.S. and Indian governments should work to bring India into full membership in the export control groups that form part of the larger non-proliferation system. This was endorsed by both governments in November 2010. In addition, the group developed several proposals for enhancing India-U.S. collaboration on three aspects of global non-proliferation: nuclear security; nuclear disarmament and the possibilities for U.S.-India cooperation in improving the possibilities for real progress; and Indian participation in non-proliferation institutions other than the NPT itself.



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