

**Nuclear Weapons, Energy,  
and Nonproliferation:  
Pressures on the Global Community**

**41st Conference on the  
United Nations of the Next Decade**

Sponsored by  
The Stanley Foundation

June 16-21, 2006  
Enchantment Resort  
Sedona, Arizona

---

## Executive Summary

*This conference—focusing on nuclear weapons, nuclear energy, and nonproliferation—was convened at a transitional moment for global nuclear policies, when world leaders are reevaluating the interplay between the three main nuclear policy fields for the first time in a generation. UN Disarmament Affairs Under-Secretary-General Nobuaki Tanaka was present, as well as a rich mix of UN ambassadors and nuclear experts. All discussions were informal and off the record. There was robust discussion on the following subjects:*

---

The current NPT regime is suffering from a crisis of legitimacy....

- *Identifying Shortcomings of the Existing Nuclear Regime*
- *Goals and Characteristics of an Effective Nuclear Regime*
- *Controlling Our Nuclear Weapons Legacy*
- *Nonproliferation and Counterproliferation*
- *Future of Nuclear Energy*
- *Managing the Fuel Cycle*
- *Obligations for Nuclear Weapon States*
- *Confidence-Building Measures*

### Identifying Shortcomings of the Existing Nuclear Regime

While the current nuclear regime is comprised of a set of overlapping and reinforcing elements, the fundamental structure since 1970 has been the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). At a time when the nonproliferation of weapons of mass destruction is a top international security goal, conference participants from 16 states and all regions of the world overwhelmingly agreed that for a variety of reasons, the entire regime, beginning with the NPT, is in serious trouble.

- As a product of the Cold War, the NPT arms control regime was regulated by the competition between the United States and the Soviet Union. Today the regime and the future of the NPT are less certain, and states inside and outside of the NPT have begun to make their own security decisions beyond the confines of the existing system.
- The current NPT regime is suffering from a crisis of legitimacy, stemming from a lack of leadership by the United States and Russia as well as an inability to function effectively. Many participants pointed out that current US policies in particular mark a shift to a position that is more “US-centric” and less multilateral.

- 
- Finally, the rise of nonstate actors poses a significant threat and many participants expressed frustration that not enough time, attention, or resources are being focused on this topic.

### **Goals and Characteristics of an Effective Nuclear Regime**

Aside from particular components, there was a great deal of consensus that for any regime to effectively deal with any of the nuclear issues there has to be a set of multilateral rules and norms that can be effectively implemented with the requisite political support.

- An effective regime will promote confidence in the existing NPT regime, led by the principal participants, most notably the United States and Russia.
- With the rising discussion of nuclear energy, participants discussed the need for a secure fuel supply system without the possibility of weaponization.
- This set of rules and norms would necessarily include a means of handling noncompliance.
- Participants formed consensus around the idea that a more effective means of verification is needed.
- Participants generally agreed that total disarmament is not a politically viable option at the present time, but that it should be a long-term goal.
- Participants strongly agreed that the immediate situations in Iran and North Korea present very serious problems for the existing arms control regime, and that any effective regime will likely depend greatly on the satisfactory resolution of these cases.

Despite broad agreement on these points, several participants expressed frustration with the lack of consensus on the overall goals of the nuclear regime and particularly the prioritization of these goals.

### **Controlling Our Nuclear Weapons Legacy**

Since the end of the Cold War, much work and substantial resources have been directed toward dealing with the nuclear legacy of the superpower rivalry, particularly “loose nukes” in Russia and related items. Participants

---

An effective regime  
will promote  
confidence in the  
existing NPT....

---

agreed that these threat reduction efforts have been only moderately successful. Despite significant investment, efforts have lacked focus and only 30 to 50 percent of the identified need has been addressed.

- More resources, better coordination, and higher prioritization within the United States, Russia, and the Group of 8 “Global Partnership” are needed.
- Strained relations between the United States and Russia are hampering threat reduction efforts. More than fifteen years after the end of the Cold War, both states are still preparing for mutually assured destruction, yet paradoxically also cooperating to reduce their holdings of nuclear weapons.

---

Strained relations between the United States and Russia are hampering threat reduction efforts.

### Nonproliferation and Counterproliferation

Participants were cautious in their support of counterproliferation efforts to date. Several participants observed that there have been notable successes including the interception of the *BBC China* and the uncovering of the A. Q. Khan terrorist network in Pakistan. However, participants also agreed that more is needed in the area of counterproliferation and in confidence-building measures to gain political support for counterproliferation activities.

- A majority of participants expressed support for UN Security Council Resolution (UNSCR) 1540, noting that it is the first legal document that declares proliferation by nonstate actors to be a threat to international security.
- Participants agreed that counterproliferation efforts should be strengthened and expanded.
- Some participants suggested that UNSCR 1540 overreaches and may be a threat to state sovereignty.
- Participants were hesitant to unequivocally support the Proliferation Security Initiative (PSI) and called for greater transparency of PSI activities.

### The Future of Nuclear Energy

Participants agreed that the effects of global warming and the rising energy needs of the developing world will drive an increased reliance on

---

nuclear energy. Participants identified it as a more environmentally safe means of energy production, but also identified several areas of concern.

- States will need assurances of access to the fuel supply. Participants agreed that a reliable international interdependent system is needed to guarantee states access to fuel supply.
- Nuclear energy brings significant inherent issues that must be addressed: economic feasibility, waste disposal, the potential for nuclear terrorism/safety issues, and proliferation dangers.

### Managing the Fuel Cycle

Usually couched within the cases of Iran and North Korea, there has been considerable discussion over whether all states are or should be allowed to pursue a complete nuclear fuel cycle—domestic control over the entire lifespan of nuclear materials from mining to enrichment, use, reprocessing, and waste storage.

- A majority of participants agreed that the goal should be a rules-based multilateral system that balances rights and responsibilities, includes robust inspection practices, allows for the operation of market forces, and ensures fairness and impartiality.
- Several participants suggested that the current situation be frozen, as the only way to stop proliferation.
- Many agreed that the security risks associated with enrichment and reprocessing support the creation of an international fuel bank, and that many states would choose not to pursue enrichment and reprocessing if they could be guaranteed access to adequate fuel supplies.
- Participants generally agreed that the Fissile Material Cut-off Treaty should be separated from others issues and presented for discussion, as an additional step toward strengthening the NPT regime.

### Obligations for the Nuclear Weapon States

Nuclear disarmament is still considered an essential long-term goal of the arms control regime, however, more work needs to be done to shore up international confidence in attention to Article VI of the NPT.

---

...a reliable international interdependent system is needed to guarantee states access to fuel supply.

---

A number of individual, concrete steps could be taken...to reinforce confidence in the arms control regime.

- While cognizant of the drastic reductions in overall numbers of weapons that have been made since the end of the Cold War, several participants noted that the pace should be increased and that there have been such drastic reductions only because of the vast number of weapons that existed.
- Many noted that the United States and Russia, as the two states with by far the largest nuclear arsenals, need to demonstrate a more aggressive leadership role.
- Many participants agreed that the nuclear weapon states could also stimulate further progress by improving their nuclear weapons postures. They strongly agreed that the development of new generations of nuclear weapons, both in terms of yields and processes involved, is not consistent with commitments to disarmament.

### **Confidence-Building Measures**

A number of individual, concrete steps could be taken, especially by the nuclear weapon states, to reinforce confidence in the arms control regime.

- **Security Assurances**

Participants agreed that credible security assurances, both positive and negative, provided by multilateral institutions are the best way to build confidence.

- **NATO Weapons in Europe**

Most participants agreed that the NATO nuclear weapons currently positioned in six European states, five of which are nonnuclear states, should be removed.

- **Comprehensive Test Ban Treaty**

A majority of participants agreed that the Comprehensive Test Ban Treaty (CTBT) is extremely relevant and should be ratified by all states. The US failure to ratify has endangered the future of the CTBT.

- **Nuclear-Weapon-Free Zones**

Participants agreed that nuclear-weapon-free zones are beneficial and that there should be coordinated efforts to promote, establish, and strengthen such zones in Africa, Latin America, Asia, and the Middle East.



---

Strong and creative  
leadership is  
urgently needed to  
strengthen the  
nuclear regime....

Front Row: (left to right) Michel Duclos, Hooshang Amirahmadi, Emyr Jones Parry, John D. Steinbruner, Richard H. Stanley, Nobuaki Tanaka, Andrew K. Semmel, Elizabeth A. Turpen

Second Row: Salman Haidar, Jeffrey Glenn Lewis, Edward C. Luck, Jeffrey G. Martin, Lawrence Scheinman, Joseph Cirincione, Douglas J. Roche, Alfredo Labbé, Shinichi Kitaoka, Julie L. Borchers

Third Row: Sergey Mikhailovich Rogov, Peter Burian, Mihnea Ioan Motoc, Pervez A. Hoodbhoy, Young-jin Choi, John Simpson, Thérèse Delpech, Anders Arvid Lidén, Matt Martin, Johan Ludvik Løval

## Participant List

### Chair

Richard H. Stanley, President, The Stanley Foundation

### Rapporteur

Julie L. Borchers, J.D. and M.A. Candidate in International Relations, Creighton University

### Participants

Hooshang Amirahmadi, President, American Iranian Council; Professor and Director, Center for Middle Eastern Studies, Rutgers University

Peter Burian, Permanent Representative of the Slovak Republic to the United Nations

---

**Young-jin Choi**, Permanent Representative of the Republic of Korea to the United Nations

**Joseph Cirincione**, Senior Vice President, National Security and International Affairs, Center for American Progress

**Thérèse Delpech**, Senior Research Fellow, Center for International Studies, France

**Michel Duclos**, Deputy Permanent Representative of France to the United Nations

**Salman Haidar**, Senior Fellow, Jennings Randolph Fellowship Program, US Institute of Peace

**Pervez A. Hoodbhoy**, Professor of Physics, Quaid-e-Azam University, Pakistan

**Emyr Jones Parry**, Permanent Representative of the United Kingdom of Great Britain and Northern Ireland to the United Nations

**Shinichi Kitaoka**, Deputy Permanent Representative of Japan to the United Nations

**Alfredo Labbé**, Deputy Permanent Representative of Chile to the United Nations

**Jeffrey Glenn Lewis**, Executive Director, Managing the Atom Project, Belfer Center for Science and International Affairs, John F. Kennedy School of Government, Harvard University

**Anders Arvid Lidén**, Permanent Representative of Sweden to the United Nations

**Johan Ludvik Løvald**, Permanent Representative of Norway to the United Nations

**Edward C. Luck**, Professor and Director, Center on International Organization, School of International and Public Affairs, Columbia University

---

Nuclear disarmament must be much more actively pursued by the nuclear weapon states.

---

**Jeffrey G. Martin**, Executive Vice President and Director of Programs,  
The Stanley Foundation

**Matt Martin**, Program Officer, The Stanley Foundation

**Mihnea Ioan Motoc**, Permanent Representative of Romania to the  
United Nations

**Douglas J. Roche**, Chairman, Middle Powers Initiative

**Sergey Mikhailovich Rogov**, Director, Institute for the USA and  
Canadian Studies, Russian Academy of Sciences, Russia

**Lawrence Scheinman**, Distinguished Professor, Center for  
Nonproliferation Studies, Monterey Institute of International Studies

**Andrew K. Semmel**, Deputy Assistant Secretary for Nuclear  
Nonproliferation Policy and Negotiations, Bureau of International  
Security and Nonproliferation, US Department of State

**John Simpson**, Director, Mountbatten Centre for International Studies,  
Division of Politics and International Relations, School of Social  
Sciences, University of Southampton, United Kingdom

**John D. Steinbruner**, Professor and Director, Center for International  
and Security Studies at Maryland, School of Public Policy, University of  
Maryland

**Nobuaki Tanaka**, Under-Secretary-General for Disarmament Affairs,  
United Nations

**Elizabeth A. Turpen**, Senior Associate, The Henry L. Stimson Center

**The Stanley Foundation Staff**

**Betty Anders**, Corporate Secretary and Assistant to the Chair and  
President

**Kristin McHugh**, Program Officer and Radio Producer

**Susan R. Moore**, Conference Management Associate

*Affiliations are listed for identification purposes only. Participants attended as individuals rather than as representatives of their governments or organizations.*



*The rapporteur, Julie L. Borchers, prepared this report following the conference. It contains her interpretation of the proceedings and is not merely a descriptive, chronological account. Participants neither reviewed nor approved the report. Therefore, it should not be assumed that every participant subscribes to all recommendations, observations, and conclusions.*

---

## Opening Remarks

by Richard H. Stanley

Welcome to the Stanley Foundation's 41st annual conference on the United Nations of the Next Decade. Since 1965 we have gathered policy experts to explore and develop solutions to important global concerns—solutions that would lead us toward a secure peace with freedom and justice.



*Richard H. Stanley, President  
The Stanley Foundation*

This year's subject, "Nuclear Weapons, Energy, and Nonproliferation: Pressures on the Global Community," comes at a critical time in strategic security thinking. Perhaps no one has done more in recent times to bring attention to this matter than UN Secretary-General Kofi Annan. Speaking a month ago at the University of Tokyo, Mr. Annan summed it up this way:

We seem to have reached a crossroads. Before us lie two very divergent courses. One path can take us to a world in which the proliferation of nuclear weapons is restricted, and reversed, through trust, dialogue and negotiated agreement, with international guarantees ensuring the supply of nuclear fuel for peaceful purposes, thereby advancing development and economic well-being.

The other path leads to a world in which rapidly growing numbers of states feel obligated to arm themselves with nuclear weapons, and in which non-state actors acquire the means to carry out nuclear terrorism. The international community seems almost to be sleepwalking down the latter path—not by conscious choice but rather through miscalculation, sterile debate and the paralysis of multilateral mechanisms for confidence-building and conflict resolution.

On a day-to-day basis, our attention is focused on the crisis *du jour*—can we roll back the North Korean nuclear weapons program? Where is Iran's program headed? But while we contemplate these immediate concerns, let us not forget some broader issues as well. What are the risks of nuclear terrorism? Why has there been so little action toward nuclear disarmament? Serious issues are at hand that are challenging the viability of the international nuclear regime we have created.

---

In many ways, the 1970 Nuclear Non-Proliferation Treaty (NPT) has served the world community well. Rather than US President Kennedy's dire predictions of dozens of nuclear-armed states, today we live with five declared nuclear weapon states under the NPT, the outlying cases of India and Pakistan, the "nuclear ambiguity" policy of Israel, and only one defection from the NPT—North Korea. Over the same period, several states have willingly chosen to give up their nuclear weapons or abandon their nuclear programs—including South Africa, Libya, Belarus, Kazakhstan, Ukraine, Argentina, Brazil, and Algeria.

Yet cracks in the regime have been recognizable for some time as a result of a variety of pressures. It seems useful to categorize the developments challenging our global nonproliferation regime into two baskets—technical and political—and then ask what we intend to do about it.

### Technological Developments

To say that we live in a technologically different world from that of 1970 is to state the obvious. In nearly every field of human endeavor, the spread of new and advanced technology is transforming our lives and the global community in ways that in the past seemed like science fiction.

This is certainly true in the nuclear field. The use of nuclear isotopes for medical diagnosis and treatment is nearly universal. Nuclear research reactors in 69 countries have spread knowledge and academic inquiry around the globe. Nuclear power, utilized in 30 countries, provides 16 percent of the world's electricity production, as of 2004. This is expected to increase dramatically as the need for electricity and energy in general grows in the rising states of China, India, and elsewhere, and as we are forced to deal with global warming issues.

Technology and the knowledge to harness it, as has been noted for all tools, are not intrinsically good or bad. Rather, it is the use that makes it so. In the realm of nuclear technology, this may be especially so. As one example, more than 100 research reactors around the globe are fueled with HEU—highly enriched uranium—a material that could be extracted for peaceful use by the host government or stolen by malevolent actors and then gathered together into enough material for a crude nuclear weapon. Many nuclear power reactors create, as waste byproduct, plutonium suitable for weapons use. And uranium enrichment technology for nuclear energy can directly produce material needed for nuclear

---

Technology and  
the knowledge to  
harness it...are  
not intrinsically  
good or bad.

---

weapons—it’s only a difference of degree of enrichment, material, and time. As of today, 11 countries operate active uranium enrichment facilities, while 6 are engaged in spent fuel reprocessing.

Our current nuclear regime, including its many elements, does not fully encompass the implications of the spread of nuclear technology. When President Eisenhower proposed his “Atoms for Peace” plan in 1953, he foresaw the spread of this technology, but concluded that it should be channeled into peaceful uses. Within the NPT, Article IV asserts the “inalienable right of all Parties to the Treaty to develop, research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with Articles I and II of this Treaty” while remaining silent on the question of whether to control or allow the spread of specific technologies that could lead directly to weapons development. And so the international regime remains hamstrung while the definition of *peaceful uses* blurs. The nuclear regime depends on a delicate balance between rights, responsibilities, and norms—while we press on in a very nonstatic world.

---

The nuclear regime depends on a delicate balance between rights, responsibilities, and norms—while we press on in a very nonstatic world.

### Political Challenges

Politically, there is a growing sense that the rights and responsibilities of the nuclear regime are applied unevenly and unfairly. While there is a rising acknowledgment that new solutions need to be found on the fuel cycle issue, there is growing discontent surrounding the pace of the declared nuclear weapon states in fulfilling their obligations under Article VI of the NPT. As a part of the negotiations to secure the



*The pictures throughout this publication depict several elements of the United Nations of the Next Decade Conference. The conference features informal roundtable discussion sessions, ample opportunity for individual conversations, and social events in a relaxed setting. Together these elements stimulate thinking and develop relationships that enhance understanding.*

---

indefinite extension of the NPT at the 1995 Review Conference, the nuclear weapon states agreed to a “program of action” for disarmament that included passage of the Comprehensive Test Ban Treaty, a fissile materials treaty, and the “determined pursuit” by the nuclear weapon states of “systematic and progressive efforts” to reduce nuclear arsenals. The 2000 NPT Review Conference went even further, laying out “13 Steps” that would act as guideposts for concrete determination of progress toward nuclear disarmament. Insignificant progress in these areas has caused deep resentment in the international community, and a growing doubt that nuclear weapon states ever intend to give up their arsenals—potentially leading nonnuclear states to revisit their own choices.

Even more alarming in the eyes of many, added to insufficient progress toward disarmament, there have actually been moves interpreted as regressive. Every nuclear weapon state within the NPT is rethinking its nuclear policies, variously considering new generations of nuclear weapons, revising nuclear doctrines to a more forward-leaning posture, upgrading delivery systems, or actually increasing the number of nuclear weapons in their stockpiles.

Other issues have arisen as well. Regional concerns—whether in the Middle East, Asia, or South America—have changed the dynamics and motivations of states seeking security assurance. And since the end of the Cold War, we have become increasingly concerned about the power and ability of nonstate actors to acquire, whether by theft or on the black market, the knowledge, materials, and components to assemble a crude nuclear weapon—if not to obtain an actual existing weapon.

Encompassing all these issues is the simple matter that, more than 15 years past the end of the Cold War, individual states and the global security community continue to consider nuclear weapons the ultimate guarantor of security, rather than the savage crutches of pariah nations and terrorists—as we now think of chemical and biological weapons. Mohamed ElBaradei, who heads the International Atomic Energy Agency, recently observed that, “No one has seriously taken up the challenge of developing an alternative approach to security that eliminates the need for nuclear deterrence.”

### Asking the Questions

Attempts to remedy these growing problems have been mostly haphazard and ad hoc, whether in the case of the “13 Steps” regarding disarmament,

---

“No one has seriously taken up the challenge of developing an alternative approach to security that eliminates the need for nuclear deterrence.”

---

agreed to during the 2000 NPT Review Conference, or the passage of UN Security Council Resolution 1540 holding states accountable for nonstate WMD developments inside their borders. Whether such an uneven approach can be successful or whether the global community needs to rethink the nuclear terms of the last 35 years is the question on the table.

Where do we go from here? What do we want to regulate? Can we still strike a balance between peaceful uses of nuclear technology and the increased threat of proliferation? Is nuclear disarmament still a goal?

What should be the future of the NPT? Should it be strengthened? Should it be maintained while parallel or complementary structures are built up around it? Or should it be scrapped? Should we start over from 21st-century first principles, not those of the 1970s?

On June 1, 2006, just over two weeks ago, the independent international Weapons of Mass Destruction Commission, chaired by Hans Blix, released its report entitled *Weapons of Terror*. It underscores the need for attention to the questions we will be discussing here and includes a list of 60 recommendations for reducing threats by weapons of mass destruction, including nuclear.

While we wrestle with these issues over the next few days together, it is worthwhile, if not daunting, to remember that none of these questions are entirely new. Allow me to read from the 1946 *Report on the International Control of Atomic Energy*, commonly known as the Acheson-Lilienthal Report, perhaps the first official attempt to seek solutions to these questions. This report was incredibly prescient in framing our discussions ever since and right up into the present:

We were given as our starting point a political commitment already made by the United States to seek by all reasonable means to bring about international arrangements to prevent the use of atomic energy for destructive purposes and to promote the use of it for the benefit of society...formulated in the Agreed Declaration of November 15, 1945.... An understanding of the declarations in that document will itself throw considerable light on the criteria by which any specific proposals for international control may be judged.

---

Where do we  
go from here?  
Is nuclear  
disarmament  
still a goal?

---

The Agreed Declaration cites three reasons for seeking international control. This Declaration recognizes that the development of atomic energy, and the application of it in weapons of war, have placed at the disposal of mankind “means of destruction hitherto unknown.” The American people have been quick to recognize the really revolutionary character of these weapons, particularly as weapons of strategic bombardment aimed at the destruction of enemy cities and the eradication of their populations. Enough has been said to make unnecessary a repetition of the probable horrors of a war in which atomic weapons were used by both combatants against the cities of their enemy. But it is hardly possible to overestimate the deep impression of horror and concern which insight into these future possibilities has made so widespread.

The second point recognized in the Agreed Declaration is that there can be no adequate military defense against atomic weapons. A great mass of expert testimony is involved in an appreciation of the firmness of this point, but it appears to be accepted without essential reservation, and subject only to an appropriate open-mindedness, about what the remote future of technical developments in the arts of war may bring.

The third point, and again we quote from the Agreed Declaration, is that these are weapons “in the employment of which no single nation can in fact have a monopoly.” Of the three, this is perhaps the most controversial. Strong arguments have been brought forward that the mass of technical and scientific knowledge and experience needed for the successful development of atomic weapons is so great that the results attained in the United States cannot be paralleled by independent work in other nations. Strong arguments have also been put forward that the degree of technical and industrial advancement required for the actual realization of atomic weapons could hardly be found in other parts of the world. These arguments have been met with great and widespread skepticism. It is recognized that the basic science on which the release of atomic energy rests is essentially a worldwide science, and that in fact the principal findings required for the success of this project are well known to competent scientists throughout the world. It is recognized

---

...there can be no adequate military defense against atomic weapons.

---

that the industry required and the technology developed for the realization of atomic weapons are the same industry and the same technology which play so essential a part in man's almost universal striving to improve his standard of living and his control of nature. It is further recognized that atomic energy plays so vital a part in contributing to the military power, to the possible economic welfare, and no doubt to the security of a nation, that the incentive to other nations to press their own developments is overwhelming.

---

...nuclear weapons are still perceived as the ultimate tool for security....

Many predictions of the Acheson-Lilienthal Report have come true—nuclear weapons are still perceived as the ultimate tool for security, nuclear know-how and technology have spread to every corner of the globe, and the issues are too great for one nation to be able to dictate policies for the rest of the globe. These decisions must be made among nations, with sufficient buy-in and adherence to guard against the dangers while enjoying the benefits. And so we will work over the next few days to search for consensus and policy recommendations that will inform and elevate the debate above the current instances of dissension and toward agreement into the next decade and beyond.

To begin, let's start with the fundamentals. Our discussion agenda asks us to take stock of our present situation. What are the shortcomings of our present nuclear regime? Today nuclear weapons, materials, infrastructure, and knowledge are spread across the globe, both in ways we can define—nuclear weapon states stockpiles and nuclear energy reactors—but also in ways that are murky and shifting—such as the A. Q. Khan network. It is impossible to think of addressing these problems and potential threats purely by the actions of one, or even a few countries. The United States can't "solve" this situation. Neither can NATO, or the G-8. Keeping all of us safe from nuclear terrorism and the threat of nuclear annihilation, while assuring the benefits of nuclear energy and advanced technology, will take a truly global effort.

Of course, this was the goal of the NPT. And the "Atoms for Peace" program before it. And the Acheson-Lilienthal Report before that. As we sit here in the summer of 2006, 60 years after J. Robert Oppenheimer, Hans Bethe, and the other leading US scientific luminaries pondered these same questions, how do we choose to seek and frame solutions? What does our intended outcome look like? And that is the second item

---

on our discussion agenda. What are the goals and characteristics of an effective nuclear regime?

We must acknowledge that the nature of an effective nuclear regime, while rooted in the past, is not static. During the Cold War, the superpower rivalry between the United States and the USSR kept many forces in check—nuclear issues being on the forefront. Fifteen years after the dissolution of that conflict, latent pressures have begun to create dangerous fissures, while reassessments among many states have simultaneously created new challenges. Can these international challenges be met with approaches that enforce and buttress global norms? Can we rely on ad hoc, stove-piped initiatives? Can we sustain a system that ideologically separates the “good guys” from the “villains” and applies different standards to each?

More directly, what should be the future of the NPT? Most would likely agree that it is not a perfect document, but what do we do with that conclusion? Does it need tinkering? Would we be better advised to scrap it entirely and start with a blank sheet? How do we balance those who argue that the nuclear weapon states have not fulfilled their Article VI obligations with those who say that Article IV is being wildly distorted beyond rational intentions? Is the crux of the issue one of noncompliance or a generality in the NPT itself that invites temptation to push at the boundaries?

Every generation of the Atomic Age seems to need to revisit the core questions surrounding nuclear weapons and nuclear energy. At the beginning of the 21st century, with the Cold War behind us, with increased globalization ahead, and with nuclear challenges on all sides, addressing this need is critically urgent. I look forward to our discussions.

---

Can we sustain  
a system that  
ideologically  
separates the  
“good guys” from  
the “villains”...?



---

## Conference Report

### “Taking Stock”

Participants began their discussions on issues of nuclear weapons, energy, and nonproliferation by assessing the current situation and addressing issues such as the shortcomings of the existing nuclear regime, the Nuclear Non-Proliferation Treaty’s (NPT) “grand bargain” and its continued viability, and the impact of the 2005 NPT Review Conference and the World Summit.

---

...the United States and Russia can no longer control the system....

Conference participants from 16 states and all regions of the world expressed the view that the regime created by the NPT is under considerable strain. There was broad consensus that a multilateral, strengthened regime is needed, although participants expressed a range of proposals for actions that could strengthen the NPT and methods for implementation. Particularly in the current, highly politicized international atmosphere, participants also agreed that one of the key issues is operationalizing any proposals for change or reform.

Participants noted that the arms control regime created by the NPT is a product of the Cold War and that its stability was been determined largely by the United States and the Soviet Union. Several participants remarked that during the Cold War, the arms control regime was maintained because nuclear weapons were the outward manifestation of the superpower rivalry; clear shows of force, capability, and numbers not only shocked but regulated the nuclear players club. With the end of the Cold War and its power-balancing dictates, nuclear weapons policies have begun shifting from deterrence to a more forward leaning tool of coercion. This changing attitude was widely perceived as more dangerous and unstable than the traditional role of deterrence.

Similarly, most participants argued that the United States and Russia can no longer control the system and any viable system must also include efforts to engage all nuclear powers, including those within and those outside the NPT regime. At the same time, some noted that part of the failure of the NPT stems from foot-dragging by the nuclear states and the resultant frustration generated among the nonnuclear weapon states, particularly those states within the nonaligned movement. However, many also emphasized that the United States is in a unique leadership position. It should take the necessary steps toward disarmament and

---

strengthened nonproliferation, providing security assurances and guaranteed access to technology for peaceful uses as a means of demonstrating that leadership.

Many participants concluded that the failure to fully implement the NPT has created a crisis of legitimacy. In addition to the lack of leadership, there is an inability of the regime to function effectively. Some attribute this to a system that maintains a basic dichotomy between those states that have and those that do not have nuclear weapons. Others noted that different standards have been applied to new states acquiring nuclear weapons than to those within the NPT: India and Pakistan have been treated differently than Iran and North Korea.

Several participants pointed to the increased threat of nonstate actors armed with weapons of mass destruction (WMD). While no terrorist groups have yet used nuclear weapons, there was concern that insufficient action by states increases the terrorist risk unnecessarily. Expressing skepticism that the past is an indicator of the future, one participant noted that the world has come very close to nuclear catastrophe several times—through accidents and near uses—even when only “responsible” state actors were involved. The extension to nonstate actors should give even more pause.

Participants agreed that any solution to the problem requires a multilateral approach, but offered a variety of suggestions and recommendations. These included:

- Establish a goal within the NPT regime to achieve better balance, better compliance, better nonproliferation controls, and better guarantees of access to the fuel supply for peaceful uses.
- Create a new regime involving six separate, sequential steps:
  - New agreements between the United States and Russia to make progress toward arms control, nonproliferation, and the elimination of the concept of mutually assured destruction.
  - Extension to the other nuclear weapon states within the NPT—the United Kingdom, France, and China.
  - Further extension to states outside the NPT regime—India, Pakistan, and Israel.

---

...insufficient action  
by states increases  
the terrorist risk  
unnecessarily.

- 
- Agreements with Iran and North Korea.
  - Agreements with states with nuclear technology that have chosen not to pursue weapons.
  - A common approach to the nexus of WMD and terrorists.

This participant remarked that such a regime would be effective in dealing with both state and nonstate actors.

---

...move the world toward the goal of eliminating nuclear weapons....

- Take practical steps to strengthen the existing NPT regime including: (1) focus on the development of practical proposals for the 2007 NPT Preparatory Committee and 2010 NPT Review Conference, (2) urge states to accept the US proposal for a Fissile Material Cut-off Treaty (FMCT) and specifically address the issue of verification, (3) urge the United States and Russia to decrease the number of weapons held on high alert status, (4) convince those states that have not yet ratified the Comprehensive Test Ban Treaty (CTBT) that it is in their best interest to ratify and move the world toward the goal of eliminating nuclear weapons, and (5) establish a legal framework to reinforce the NPT by providing negative security assurances.
- Adopt a moral basis for the agreements contained within the NPT. The responsibility for demonstrating that moral basis lies in leadership from the United States, which should redefine the way it looks at WMD and change the rules of engagement for the use of such weapons.
- Understand that collective security is an absolute necessity for small powers that are not able to guarantee their own security. Such a system must work through recognized principles of international law. The NPT grand bargain has been legitimated by the advisory opinion of the International Court of Justice (ICJ), and it provides a ready framework for such collective security.
- Participants discussed the changing role of nuclear weapons and suggested that a new paradigm for dealing with international nonproliferation issues should be developed. This would involve recognizing that nuclear weapons are more properly treated as a security liability than a security asset.
- Many participants agreed that negotiating an alternative to the NPT is not feasible and therefore there is a need to implement what already

---

exists. One participant noted that in implementing the system: (1) there is a need for more disarmament, but that absolute disarmament is a politically unrealistic solution; (2) there must be a better system for guaranteeing access to nuclear technology for peaceful uses; (3) the United Nations is already heavily involved in nuclear issues through the International Atomic Energy Agency (IAEA), but should play an increased role; (4) states should be encouraged to come toward a political consensus by rethinking the arrangement whereby some states are allowed to have nuclear weapons and others are not; (5) UN Security Council Resolution (UNSCR) 1540 is an important step toward addressing nonstate actors, but more action is needed; and (6) there is a need for political and diplomatic solutions for reducing the likelihood that nuclear weapons will be used.

### Goals and Characteristics of an Effective Nuclear Regime

The current regime, based on the complementary components of the NPT, has been tremendously successful in the past in dealing with nuclear nonproliferation challenges. As the system has undergone increased stress, there is widespread agreement that improvements must build upon already agreed-upon rights and obligations, continuing a regime of multilateral rules and norms.

Achieving the benefits of a reinvigorated and improved regime will take active and sustained leadership and promotion, beginning with the United States and Russia. As the world's sole remaining superpower, the United States holds a unique place in the global regime, both in terms of rights and responsibilities. As such, it must lead the regime to promote and encourage credibility and reliance on it. Similarly, as the globe's only other actor on relative nuclear par with the United States, Russia must also shoulder its own responsibilities to sustain the regime.

This leadership from the major powers, beginning with the United States and Russia, must begin with a clear, consistent, and evenhanded approach to the main difficulties confronting the regime: verification and noncompliance. The immediate cases of Iran and North Korea illustrate these gaps in the regime and demand solutions that strengthen the ability of the global community to monitor and police future cases. Yet ad hoc and voluntary measures alone are not enough to deal satisfactorily with the issues raised by these two test cases, and more universal, multilateral understandings and efforts are needed. More intrusive measures for inspections and more

---

As the world's sole remaining superpower, the United States holds a unique place in the global regime....

---

robust multilateral organizational efforts will increase confidence in the system and help to move beyond mistrust and suspicion engendered by past failures. An effective regime will make the decision of states relatively transparent, provide a means of early detection of violations, and create a framework for legitimizing action against cheaters.

The United States and Russia should also undertake a number of specific bilateral efforts to improve the regime and lower nuclear dangers. First, the United States and Russia should agree on a set of nontargeting declarations. Second, they should agree to notify the other state of missile launches. Third, they should declare that there is no intention to deploy nuclear warheads on unmanned aerial vehicles (UAV) and invite others, including the United Kingdom, France, and China, to join the agreement. Fourth, they should agree to continue the verification measures provided in the START I Treaty before it expires. Finally, there should be weapons reductions down to levels approaching that of the other nuclear weapon states. Such a force level might lead initially to a posture of 500 weapons on high alert, 500 weapons on low alert, and 500 weapons not on alert in reserve and in such a condition that it would take months to activate them.

While dealing with compliance on the nuclear weapons side, an effective regime will also adroitly handle the growing issue of increased global nuclear energy usage, as the world moves to supply ever-increasing energy sources to larger populations of perpetually developing societies. Key to this nuclear energy future will be a safe, reliable, and secure civilian fuel supply system for all who wish it. Several proposals have been put forth to offer steps forward in this area, notably those by IAEA Director General Mohamed ElBaradei and US President George W. Bush, and yet there has been little real discussion of these types of arrangements to date. Thorough arrangements on enrichment, reprocessing, trade, inspections, transportation, and a host of other related issues will be essential to providing a beneficial nuclear future without suffering from accompanying dangers surrounding weapons-usable material proliferation.

Nuclear disarmament remains an essential component to fulfilling the goals and intentions of the nuclear regime and, as such, should not be relegated to secondary status. While opinions varied on the speed and accounting of disarmament efforts so far, there was broad agreement on the importance of determined and progressive action toward disarmament

---

Thorough arrangements on enrichment, reprocessing...and other related issues will be essential to providing a beneficial nuclear future....

---

from the nuclear weapon states. A wide variety of measures have been offered to measure progress in this area, and pursuit of these, particularly ratifications of the CTBT and the FMCT would bolster confidence in the overall regime. Security assurances, both positive and negative, could act as interim steps toward reaching these objectives, though equally dependent on the political will toward viable, multinational regimes.

An effective regime must also deal with the question of outliers to the system in a manner considered fair and equitable. As one participant put it, “We can’t continue to allow states outside the regime to benefit without obligation or consequence; we can’t reward outliers and punish responsible nonnuclear states.” As long as Israel, India, and Pakistan remain outside the system and are seen as benefiting from their nonparticipation, resentment will continue to linger and fuel argumentation based on double standards and a perceived intrinsic inequity in the system. Whether formally within the NPT or in some independent fashion, agreements that bring outliers more in line with the existing regime and detail similar rights and responsibilities will build confidence.

**Controlling Our Nuclear Weapons Legacy—“Cleaning up the Cold War”**

Participants engaged in a robust discussion of threat reduction efforts, agreeing that such efforts have been only moderately successful. Even though a large amount of money has been spent, efforts to reduce the

---

“...we can’t reward outliers and punish responsible nonnuclear states.”



---

nuclear threat have lacked focus. There has been only 30 to 50 percent progress on cleaning up nuclear materials, which is not very successful considering the amount of time. Participants also expressed frustration with the lack of emphasis on expertise noting that there are assets within the scientific community that could have been leveraged to assist with reduction efforts.

---

Threat reduction efforts have been hindered by a lack of funding....

Participants generally agreed that while a great deal of time, money, and resources have been spent on threat reduction, there is still a lack of resources, poor coordination, and fuzzy prioritization on the part of the United States, Russia, and the Group of 8 “Global Partnership” in threat reduction programs and proposals. However, while participants agreed on the need for increased resources and coordination, they did not agree on how this should be accomplished. Some argued that increased coordination should come from the Global Partnership. One participant noted that the Global Partnership is to continue until 2012, but there is no plan of operation or organization for actions to be carried out between now and 2012. Another called for the creation of an information clearing-house as a mechanism for coordination of actions and information. Others proposed using the UN Security Council to identify pressing issues and to place pressure on groups to move in and take responsibility for dismantling nuclear weapons.

Participants identified the odd relationship between the United States and Russia and cited this relationship as one of the biggest obstacles to threat reduction efforts. One participant described the relationship as “a crazy split personality,” pointing to the actions of both states in simultaneously preparing for mutually assured destruction and helping each other dismantle their nuclear weapons. Several participants also noted that Russia and the United States are increasingly suspicious of the intentions of the other state, which has led to an undermining of the activities of the Global Partnership and has prevented access to sensitive sites. Many participants noted the need to fix the basic relationship between the United States and Russia and called upon these two states to improve relations, engage in progressive discussions, and demonstrate threat reduction leadership to the rest of the international community.

Participants also noted that threat reduction efforts have been hindered by a lack of funding, particularly for initiatives such as the Global Partnership. While \$20 billion was pledged for the Global Partnership by

---

states initially, the funding has not been realized. The Global Partnership is experiencing donor fatigue. However, one participant remarked, “If there was greater political will, we could find a way to solve the problem of lack of resources.” One participant recommended the World Bank as a potential source of increased funding for threat reduction, noting that the World Bank is already playing a role in the elimination of chemical and biological weapons and landmines. Others disagreed, because nuclear issues are not related to the primary goal of the World Bank—the elimination of world hunger.

Participants were generally supportive of the idea of applying the principles of Comprehensive Threat Reduction (CTR) to other regions of the world, in addition to the United States and Russia. Many agreed that CTR has provided a political conduit and a set of useful tools that can and should be exported to other situations and regions. However, some participants felt that CTR should not be applied elsewhere because it has not yet been completed between the United States and Russia. One participant suggested an assessment of CTR in the context of Russia and the United States, internalization of the lessons learned, and then a study of how the lessons could be applied to other regions.

Participants also discussed the political viability of threat reduction programs and agreed that efforts need to be repackaged. One participant noted that a starting point that everyone can agree on is the statement from the 2005 NPT Review Conference that “the only absolute guarantee against a terrorist use of nuclear weapons is the elimination of nuclear weapons.” Another participant proposed labeling threat reduction programs as a nuclear reduction agenda and called for the creation of a political platform that could be supported by politicians that simultaneously demonstrates a strong stance on defense issues but that could also be implemented easily. “We must start down the road to a safer future by tightening the grip on nuclear weapons and this is something the US people would buy into.”

### **Nonproliferation and Counterproliferation**

Participants were cautious in their support of counterproliferation efforts to date. Several noted that there have been some successes including the interception of the *BBC China* and the elimination of the A. Q. Khan terrorist network in Pakistan. However, participants also agreed that more needs to be done in the area of counterproliferation

---

“We must start down the road to a safer future by tightening the grip on nuclear weapons....”

---

and that confidence-building measures are needed to gain political support for counterproliferation activities.

Participants expressed mixed reactions to UNSCR 1540. Most agreed that UNSCR 1540 has achieved ownership by a great number of states. However, there are still a number of states that are not engaging in good practices and there is not a comprehensive plan or timetable in place to assist those states or secure their compliance. Many participants noted that UNSCR 1540 is the first statement in a legal document that proliferation by nonstate actors is a threat to international security and creates a unique nexus between proliferation and international terrorism. UNSCR 1540 creates a comprehensive set of measures that states need to take and has improved state capacities to respond to efforts of proliferation. However, one participant noted that while states that have embraced globalization and see the need for a system of collective security have embraced UNSCR 1540, other states perceive it as a threat to their sovereignty. Several participants also recognized that many states view an increased role of the Security Council as threatening and continue to view the Security Council as representing only Northern interests.

Participants disagreed about the level of success regarding the implementation of UNSCR 1540. Many participants noted that it does not have a timeline for implementation, does not contain consequences for failure to implement, and relies on good faith action by states in implementation.

---

UNSCR 1540...  
has improved state  
capacities to  
respond to efforts  
of proliferation.



---

Other participants pointed out that reporting has been quite successful with 130 states sending their initial reports voluntarily. In some cases, the UN Security Council has requested additional information, and 70 states have provided this. Only 60 states have not met the reporting requirements of UNSCR 1540. One participant remarked that it is important to keep in mind that many states are having difficulty convincing their state to take the measures recommended by UNSCR 1540 and that outreach could be a way to increase compliance and encourage reporting. Another participant recommended the use of regional organizations to increase compliance, and others noted that when states send their reports to the Security Council they could note the areas where they need assistance so that outreach efforts could be targeted effectively. Such information would also be useful in separating those states that cannot comply due to lack of resources from those states that refuse to comply for domestic or international reasons.

Participants engaged in a robust discussion of the Proliferation Security Initiative (PSI), with many hesitant to characterize its efforts thus far as successful. One participant noted that the PSI started as an ad hoc group that recognized a need and formed a multilateral cooperative. This participant felt that such progress could not have been obtained by starting within a multilateral institutional framework. However, another participant noted that all the PSI members share the same interests and opinions and that if the initiative was universalized it could be hard for many states to secure the necessary national political support. Many participants recognized that it is difficult to discern under international law what the legal rights of states are. All of the signatories to the PSI believed that it would give powerful states the right to board ships at any time and in any place, however implementation has been very controversial and has been viewed by some as legitimizing piracy at sea. Some participants called for increased transparency of PSI activities and noted the need for all states to know what has happened and why when an incident occurs.

There was some dissatisfaction expressed with the term *counterproliferation* and the implication that there is a difference between counterproliferation and nonproliferation. Some participants stated that the term implies that active involvement on the part of states is necessary, which has made counterproliferation initiatives a hard sell politically within many states. Participants suggested replacing the term *counterproliferation* with other terms, such as *antiproliferation* or *positive security assurances*.

---

Information  
would be useful in  
separating those  
states that cannot  
comply...from those  
that refuse to  
comply...

---

The effects of global warming will require an increased reliance on nuclear energy in the future.

---

Participants generally agreed that counterproliferation efforts need to be strengthened and expanded and offered a variety of suggestions for improvement. It was suggested that a body of data be created outlining the downstream political and economic consequences of proliferation. Such data could be presented to states contemplating the development of nuclear weapons and serve as a method of deterrence from such action. There was also a suggestion that the Convention on Nuclear Terrorism be used as a mechanism for forward momentum. One participant also suggested strengthening counterproliferation efforts by obtaining better intelligence, promoting shared intelligence, and developing a viable solution to the problem of counterproliferation financing.

### **The Future of Nuclear Energy**

“Today not to plan for the use of nuclear power would be globally irresponsible.” Participants agreed the effects of global warming will require an increased reliance on nuclear energy in the future. One participant noted that there has to be a threefold increase in energy production by 2050 to maintain the current standard of living and meet population increases and that nuclear energy is likely to play a large part in meeting those demands. However, while participants were supportive of increased reliance on nuclear energy and identified it as a more environmentally safe means of energy production, participants also identified several areas of concern that arise with increased reliance on nuclear energy.

Under Article IV of the NPT, states have an unalienable right to pursue nuclear technology for peaceful uses and are guaranteed the fullest possible access to information necessary to do so. However, participants also recognized that there is a connection between nuclear energy and nuclear weapons and a need to ensure that the right under the NPT of access to nuclear energy technology is not being used for access to nuclear weapons technology. One participant argued that security relationships need to be changed so that states with the ability to develop nuclear weapons choose not to develop nuclear weapons. Another participant noted that the NPT is an instrument of international security and was not intended to be a mechanism for technology exchange. Others also argued that the Article IV right to pursue nuclear technology for peaceful uses does not include the right to enrich. To address these issues, participants recommended an increase in multinational operations, the development of a reserve fuel bank under IAEA control, a moratorium on new national facilities, and the development of a multinational arrangement for spent fuel reprocessing.

---

The largest problem identified by participants with increased reliance on nuclear energy is the lack of an effective means of waste disposal. Participants agreed that there are two major problems with waste disposal: the environmental concerns surrounding disposal and the potential for weaponization. Reprocessing is one option for lessening the environmental impact, but this solution leads to increased potential for proliferation. Participants discussed several potential solutions, including burying the waste in the sea bed, burying the waste in geologically stable areas of the earth, and sending waste to the moon. They cited the need for a coordinated and planned effort on the part of the entire international community to deal with these problems and noted that if the market is allowed to determine the solution to the waste disposal problems, the outcome will not be optimal. Several participants felt very strongly that there should not be increased reliance on nuclear energy until a solution to the problem of waste disposal can be reached.

The second largest problem with increased reliance on nuclear energy is providing credible assurances to states of access to the fuel supply. Participants recognized the need for a reliable international interdependent system to guarantee states access to the fuel supply. The system would also need to be designed so that states could not use political or other motivations to circumvent or manipulate the system. One participant described a current initiative by the Global Nuclear Energy Partnership to develop a small nuclear reactor with a secure reactor core that could be shipped to a location and returned after the life of the reactor. In order to obtain the reactor, a state would need to agree to forgo certain fuel cycle activities, such as reprocessing, but in return would be guaranteed a fuel supply for the life of the reactor and would not have to deal with the issue of waste disposal. However, this proposal only deals with the removal of the waste from the reactor and does not contain an ultimate solution for waste disposal.

Several participants also noted that increasing reliance on nuclear energy also increases the potential for nuclear terrorism. If there were a lack of political or military control in a nuclear state, it could be easy for a terrorist organization to obtain a nuclear weapon. However, a more likely scenario would result from terrorists targeting and attacking a nuclear reactor or by terrorists obtaining spent fuel and conducting a radiological attack, possibly through the use of a dirty bomb. Many participants expressed frustration with the lack of organization and leadership on the

---

The largest problem...is the lack of an effective means of waste disposal.

---

problem of nuclear terrorism. One participant noted that Latin America has made attempts to deal with the issue of nuclear terrorism on a regional basis and urged that other regions can and should do the same.

### Managing the Fuel Cycle

Participants agreed that effectively managing the fuel cycle requires a rules-based multilateral system that will balance rights and responsibilities, while allowing room for the operation of market forces and robust inspection practices.

---

These proposals have been seen as creating another dichotomy within the NPT....

Participants began their discussion on management of the fuel cycle by discussing the two proposals that have been presented to the international community thus far. The first proposal was presented by President Bush to the Nuclear Suppliers Group (NSG) in February 2004. It would require an agreement among the members of the NSG not to transfer the enrichment or reprocessing technologies to other states. The second proposal was presented by IAEA Director General Mohamed ElBaradei in a series of articles in *The Economist* in 2003. This proposal calls for a moratorium on the development of new capacity and the creation of an international framework for managing the existing capacity.

The Bush proposal was not well received by the NSG, the 2005 NPT Review Conference, or the G-8. The proposal calls for the denial of technology to states that are in good standing with the NPT and in the international community. One participant noted the European Union (EU) has offered a similar proposal that would deny enrichment and reprocessing technology to states that are not in good standing with the NPT. However, these proposals have been seen as creating another dichotomy within the NPT between those states that have the technology and those states that are not allowed to have the technology.

Several participants expressed the idea that the only way to stop proliferation is to freeze the current situation, and that there is a need for one international governing body that ensures fairness and impartiality. Expressing frustration with the differential treatment of states, one participant remarked, "Can we not in our wisdom of humanity agree that we all stand on common ground?" There was also consensus around the idea that any governing body should be a rules-based and a multilateral system capable of developing practical solutions to the problems of managing the fuel cycle. Several participants noted that such a system is not only a

---

good idea but is essential because international security is indivisible and threats to security are really threats to all states.

With agreement on the need for an institutional framework to manage the fuel cycle, participants offered varying proposals as to how to create such an institution. One participant recommended the IAEA as a potential forum for discussion, but others expressed concern that starting with the IAEA could prejudice the outcome. Another participant called for the creation of an entirely new international body to manage the fuel cycle, but again others noted that such a process would be very lengthy, would involve disputes about membership in the body, and would not produce results in the immediate future. Other participants recognized that there is a lack of leadership on this issue and recommended the formation of a coalition of the willing. It was suggested that such a coalition could initially discuss the situation in Iran, but could also potentially develop a set of rules that could be applied more broadly in other situations in the future. “Iran is a crisis, but it could also be an opportunity—we might be able in the resolution of the Iran crisis to create a prototype of the international solution.” One participant noted that while there is a lack of consensus about what to do and who should do it, there is a lot of discussion on the issue and the proposals presented thus far are a credit to that discussion. This participant also emphasized that there is room for several groups and several different initiatives to address fuel cycle management issues.

Many participants agreed that both the costs and the security risks associated with enrichment and reprocessing are very high and thought that states would relinquish their right to enrich and reprocess if they could be guaranteed access of adequate fuel supplies. To this end, participants discussed and recommended the creation of an international fuel bank. Participants noted that while an international fuel bank is a great idea, it could be difficult to establish because it creates further issues of ownership, production, control, support, conditions, location, and access to enrichment technology—all of which would need to be resolved before the fuel bank could operate effectively.

The role of the IAEA relative to the establishment of an international fuel bank was also discussed. Article IX of the statute establishing the IAEA provides the framework for the establishment of a fuel bank, but that provision has rarely been used. Participants generally expressed a

---

“Iran is a crisis,  
but it could also be  
an opportunity...”

---

desire to have the IAEA involved in the activities of an international fuel bank, but some were hesitant to give full control to the IAEA due to current problems of overextension and lack of funding.

Participants also discussed the FMCT as it relates to management of the fuel cycle. There was general agreement that FMCT should be separated from other issues and presented for discussion. In the absence of progress on FMCT, several states have moved forward by imposing their own moratoria on the production of fissile material. Most participants agreed that a multilateral agreement, such as the FMCT, is still necessary and that such an agreement could be an additional step toward strengthening the NPT regime. Disagreement about the FMCT centered on the issue of verification. Some participants urged ratification of the FMCT as is and dealing with the issue of verification as an amendment. Other participants asked that realistic verification factors be included in the FMCT from the outset. Such factors would include: (1) all declared reactors and all enrichment plants placed under IAEA safeguards, (2) agreement that a fissile material cutoff does not include existing stockpiles of materials, (3) expansion of IAEA safeguarding efforts and expansion of the capability to verify composition, and (4) increased resources for the IAEA to support increased roles and responsibilities.

---

There have been such drastic reductions only because of the vast number of weapons that existed.

### **Obligations for the Nuclear Weapon States**

Participants agreed that there is still a commitment to disarmament on the part of the nuclear weapon states and that drastic reductions in numbers of weapons have been made since the end of the Cold War. However, many participants urged that the pace should be accelerated. They argued that there have been such drastic reductions only because of the vast number of weapons that existed. Most participants agreed that both the United States and Russia need to take a more aggressive leadership role in disarmament. Article VI of the NPT talks about disarmament generally, not just nuclear disarmament, and participants agreed that all states could and should do more to fulfill this obligation.

While most participants felt that there is still a general support of disarmament, many also noted that the nuclear weapon states could stimulate progress by continuing to decrease the number of weapons in their arsenals and improving their nuclear weapons posture. Several participants noted that the United States and Russia still possess enough weapons to destroy the world several times over. The insistence of both

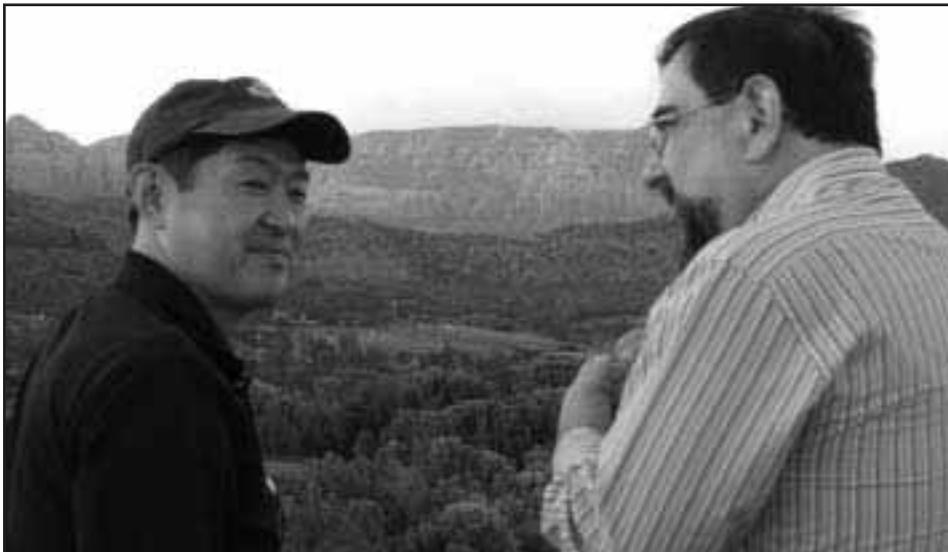
---

of these states in clinging to their nuclear weapons is replicated all over the world and contributes to a hostile international climate. Many participants recognized a lack of leadership and called upon the United States and Russia to continue to make the necessary steps to stimulate further progress on disarmament and improve the international climate. One participant felt that since 1998 the United States has created a “new arms race” through its vastly increased defense expenditures, which is also contributing to the defensive posture of the United States and many other states. The participant noted that throughout the 1990s, the United States steadily decreased its defense expenditures, but toward the end of the decade made significant increases that spurred expenditures back to Cold War levels. These increases in spending were followed by similar increases in Russia, China, and India.

Participants discussed how to evaluate commitments to nuclear disarmament. Several noted the attempt at evaluation standards in 2000 with the “13 Steps.” Some suggested that workable standards have not been developed thus far because nuclear weapon states tend to look at disarmament as a process involving quantifiable measures as the key criteria while nonnuclear weapon states tend to look at disarmament in terms of commitments to a future world where there are no nuclear weapons. Many participants expressed the view that progress on disarmament in quantitative terms is less impressive if it has not significantly affected the nuclear posture. It was suggested that nuclear weapon states take further qualitative steps, such as de-alerting weapons, to improve the overall nuclear posture and make progress on disarmament.

---

...since 1998 the United States has created a “new arms race”....



---

Most participants agreed that unless disarmament is seen as a collaborative exercise and the issue discussed in a cooperative rather than confrontational environment there will be “no incentives for the nuclear weapon states to make further disarmaments.” Many participants agreed that the problems associated with nuclear weapons cannot be solved using conventional tools of analysis. Participants called for increased cooperation, collaboration, and an environment where interdependence is emphasized over national interests to deal with these issues. One participant noted that national interests in situations involving nuclear weapons are shared national interests and the responses to them will have to be shared as well.

---

Participants called for increased cooperation and collaboration....

Participants generally agreed that calls for the development of new generations of nuclear weapons, both in terms of yields and the processes involved, are not consistent with a commitment to disarmament. One participant pointed specifically to calls for new nuclear weapons in the 2001 Nuclear Posture Review, an official document of the United States. Another participant disagreed, stating that there is a legal prohibition in the United States on the development of new nuclear weapons. However, others noted that there was some research and development of a bunker buster weapon and while that has now been abandoned there is discussion about a reliable replacement warhead, and Sandia and Los Alamos are involved in the creation of new nuclear weapons designs.

Several obstacles preventing further progress on the process of disarmament were identified. Many participants expressed frustration with the nuclear policies pursued by the current administration in the United States. Participants described the current administration policies as unreasonable, threatening, “unacceptable to the rest of the world,” and “the biggest obstacle to disarmament.” Several participants agreed that the problems are broader and that political leaders generally lack the expertise necessary to fully understand nuclear issues.

Participants offered a variety of proposals and suggestions for improving the overall nuclear posture and instigating progress toward disarmament. One participant recommended that the United States ratify the CTBT as a demonstration of leadership and then urge other states to ratify the treaty in an attempt to move the international community toward consensus. Another called upon all states to remember humanity and noted that the current situation is very serious and very dangerous. This participant also called upon the international community to reaffirm the com-

---

mitment to disarmament and reevaluate how disarmament will be accomplished. One participant recommended a number of practical steps including: (1) endorsement of the US proposal for FMCT, including a verification panel that could serve as a reference to the International Panel on Fissile Materials; (2) de-alert and remove the unnecessary and unacceptable risk imposed by the high number of weapons held on high alert status; and (3) call for the strengthening of the IAEA and expand IAEA capacity so that it could provide assurance of access to the nuclear fuel supply.

## Confidence-Building Measures

### Reassuring the Nonnuclear Weapon States

Participants agreed that the nuclear weapon states should act to reassure the nonnuclear weapon states, and recommended that providing security assurances was the best way to build confidence. Most participants agreed that security assurances should contain two parts: (1) there will be no nuclear threat to the nonnuclear states by the nuclear states (negative) and (2) if there is a threat, the nuclear states will provide security (positive). However, participants looked to different states and organizations to provide such assurances. Some participants suggested that the UN Security Council address the topic of security assurances or that security assurances be provided through nuclear-weapon-free zones (NWFZs). Other participants noted that any credible security assurances would have to come from the United States or from the five official nuclear weapon states, and that at this time the United States is not inclined to give security assurances and it is hard to reach consensus on anything among the five declared nuclear weapon states.

While security assurances were identified as among the best confidence-building measures, participants also recognized that they carry several problems with them as well. It was noted that a number of states would need higher levels of security assurances and that for these states nuclear weapons are only part of the problem. Several participants recognized that it is difficult to make security assurances credible beyond the point of issuance and that there is never going to be 100 percent confidence in any security assurance. It was suggested that the nuclear powers agree on a set of self restraints about what they would not do, and that nonnuclear states take certain actions to make it more likely that the nuclear weapon states would come to their aid if necessary.

---

...remove the unnecessary and unacceptable risk imposed by the high number of weapons held on high alert status....

---

In addition to security assurances, participants offered other suggestions for building confidence. One participant recommended the establishment of a regional framework for assessing and providing security assurances and noted that in order for assurances to be credible they have to be comprehensive and provided by a multilateral institution. Participants agreed with a recommendation that all states be required to declare their nuclear material holdings by isotopic composition and pointed out that such declarations would provide a more realistic identification of capacity because holding nuclear material determines weapons capability.

---

...all states be required to declare their nuclear material holdings....

### NATO Weapons in Europe

Most participants agreed that the NATO nuclear weapons currently positioned in six European states, five of which are nonnuclear states, should be removed. The group questioned the need for such weapons noting that extended deterrence could be achieved through other means and is provided to many other states, such as Japan and South Korea, without the deployment of weapons on their soil. Participants recognized that NATO has a problem because several of its member states committed and recommitted to the elimination of nuclear weapons at the 1995 and 2000 NPT Review Conferences, but have also signed a NATO document stating the nuclear weapons are essential. Some participants accepted the reasoning that it is possible to commit to the elimination of nuclear weapons and, pending the elimination, still feel a need for self defense.

Participants also discussed Russian security in relation to NATO nuclear weapons in Europe. This should also be discussed in the



---

NATO-Russia Council. Some participants recommended that NATO unilaterally remove the weapons positioned in European states. Others recommended that the NATO weapons in Europe only be removed if Russia agreed to reduce the number of strategic nuclear weapons. However, still others noted that Russia faces a threat not just from the nuclear weapons in Europe but also from the nuclear weapons in Asia and such a proposal is likely to be rejected unless the Asian nuclear weapon states also eliminate their nuclear weapons of the same range.

### Comprehensive Test Ban Treaty

Nearly all participants agreed that the CTBT is important and should be ratified by all states. Participants also identified technical and political dimensions to any prohibition on the testing of nuclear weapons. In the technical dimension, there is a desire to stop the testing of weapons in an attempt to deter the further development of more advanced nuclear weapons. In the political dimension there is a desire to stop the testing of weapons as a further commitment to a nuclear free world. Many participants agreed that the CTBT has been harmed by the US refusal to ratify. Several participants called on the United States to take a leadership role and move forward with the process of ratification as a gesture to the rest of the international community and a reaffirmation that the United States is committed to eliminating nuclear weapons and does not intend to develop new weapons. Some participants described ratification of the CTBT as a necessary component to maintaining the NPT regime.

### Nuclear-Weapon-Free Zones

Participants agreed that NWFZs are constructive and suggested a coordinated effort to promote and establish such zones in Africa, Latin America, Asia, and the Middle East. Canada has considered a declaration as a nuclear-weapon-free state, but such declaration would currently be inconsistent with NATO membership.

### Other CBMs

“The most important strategic confidence-building measure is the political resolution of conflict.” Participants agreed that successful conflict resolution could potentially be very important as a confidence-building measure. Other participants also recognized the role that market forces can play in both resolving conflicts and building confidence.

---

Nearly all participants agreed that the CTBT is important...

---

Participants urged timely action on the nuclear regime. In 2008, START I will expire and the verification and monitoring provisions will cease; in 2010 there will be another NPT Review Conference; and in 2012 the Strategic Offensive Reductions Treaty (the “Moscow Treaty”) will expire. It was suggested that in the next two years the United States and Russia should reach new agreements on verification and monitoring and should prepare a new long-term strategy to be implemented by political leaders that reaffirms the commitment to reducing the number of nuclear weapons and demonstrates leadership prior to the next NPT Review Conference.

---

“The NPT may be in distress, but the obligation on us is to reinforce it.”

Participants expressed serious concern that a lack of consensus at the 2010 NPT Review Conference could undermine the NPT to such an extent that the regime would break apart. One participant observed that the NPT itself is a set of norms and rules, and failure of the review process does not necessarily mean that the norms and rules are being abandoned. However, most participants agreed that failure to reach consensus in 2010 would have very serious political consequences for the NPT.

### Recommendations

Many participants expressed concern about the future of the nuclear regime. “The NPT may be in distress, but the obligation on us is to reinforce it.” Participants agreed that the future of the NPT is uncertain and that collaborative actions are needed now to strengthen it and avoid failure at the 2010 NPT Review Conference. Most participants agreed that the nuclear weapon states carry a disproportionate responsibility for moving the issues forward. Several participants were dissatisfied with the leadership of the United States and Russia and recommended that these states work together to spur progress. Other participants, while noting that leadership is important, added that all states have some level of responsibility and recommended that the nonnuclear states work to encourage responsible behavior on the part of the nuclear weapon states. Many participants expressed the need for increased cooperation between the nuclear weapon states and the non-nuclear weapon states, between North and South, and within the NPT to deal with the current challenges and to change the international climate. Participants also agreed that there needs to be a paradigm shift on nuclear issues and honest discussion about why current multilateral arrangements are failing.

---

The current situations in Iran and North Korea were viewed by participants as very disturbing and potentially serious. Many participants urged engagement with Iran and normalization of relations between Iran and the United States as early steps. “We seriously have to think about what set of conditions would make Iran change its position, reverse its position, or cooperate to some extent.” Participants agreed that the international community should consider and agree on a set of consequences for Iran if there is continued refusal to cooperate. Some participants felt that the Iran situation illustrates a weakness in the NPT and could encourage other states to follow Iran’s example and manipulate the NPT for access to technology. There were several calls for increased resources and capacity for the IAEA so that nuclear energy programs could be effectively monitored to prevent states from following the Iranian example.

Participants agreed that international response to the situations in Iran and North Korea will set a precedent for action in the future. Most agreed that any solution to these problems will require action on the part of the United States, but urged that such action be in compliance with international law and also involve the United Nations. There was also a suggestion that regional organizations be heavily involved in any attempts at diplomacy.

Participants also expected increased use of nuclear energy in the future, but noted that nuclear energy still carries problems and risks. Several called for increased attention to the global warming, resolving nuclear energy problems and reducing the risks, and creating better safeguards to protect against the risk of use of nuclear materials by nonstate actors.

---

...international  
response to the  
situations in Iran  
and North Korea  
will set a precedent  
for action in  
the future.

---

## Chairman's Observations

The world's nuclear regime is in difficulty. Built around the Non-Proliferation Treaty, it was created in a different era. Times and circumstances have changed. The Cold War, which motivated development of many of its elements, is long ended. The emergence of nonstate actors, rising national powers, forces of globalization, and technological developments are adding new challenges to the regime. Growing awareness of global warming, coupled with expanding populations and modernizing societies, are encouraging greater use of nuclear energy to meet global energy needs. Yet, in spite of these new and emerging challenges, the nuclear regime is suffering neglect.

---

...strong and creative leadership is urgently needed to strengthen the nuclear regime....

The most significant message to come from our lively discussions at Sedona is this: strong and creative leadership is urgently needed to strengthen the nuclear regime to meet these new and emerging challenges. We dare not continue to allow it to fall into disarray.

The goal must be a robust and comprehensive rules-based multilateral system that balances rights and responsibilities, includes vigorous inspection practices, allows for the operation of market forces, and ensures fairness and impartiality. It will need to cover all elements of the fuel cycle including enrichment, reprocessing, storage, transportation, and waste disposal. It will involve new international agreements, norms, and understandings. Such a system is best achieved by strengthening and improving the present regime, rather than starting over.

Factors that will need to be woven into this development include:

- The immediate circumstances of North Korea and Iran must be resolved in a manner that strengthens the overall regime, or else the “crisis of confidence” in the regime will continue to worsen.
- The issues of compliance, verification, and monitoring are paramount. Ensuring confidence in the regime will require more intrusive and more thorough international compliance mechanisms. This, in turn, will require enlarging and strengthening international bodies like IAEA that are responsible for such activities.
- Nuclear disarmament must be much more actively pursued by the nuclear weapon states, though the other goals of the nuclear regime

---

(peaceful uses and nonproliferation) should not be held hostage to this. The three pillars of the nuclear regime should be pursued concurrently.

- Developing and implementing an international multinational fuel bank is an attractive part of the solution to several issues—proliferation concerns, economics, reliable energy supplies, and a strengthened regime.
- More aggressive attention to cooperative threat reduction programs will reduce threats from past nuclear activities and help to build confidence.
- Several specific measures would offer reassurance and build momentum toward a strengthened regime. These include: security assurances, removal of the remaining nuclear weapons from Europe, entry into force of the Comprehensive Test Ban Treaty, and passage of a Fissile Material Cut-off Treaty.

Our Sedona discussions were rich and lively. Conference participants offered many excellent proposals to help strengthen the world's nuclear regime. But political leadership and will are fundamental. At this point, they are the primary missing ingredients. Let us hope and urge that these discussions and others like them will underscore the urgency of this task and motivate constructive action.

---

## The Stanley Foundation

The Stanley Foundation brings fresh voices and original ideas to debates on global and regional problems. It is a nonpartisan, private operating foundation that focuses primarily on peace and security issues and advocates principled multilateralism. The foundation's concept of principled multilateralism means working respectfully across differences to create fair, just, and lasting solutions.

The Stanley Foundation's work recognizes the essential roles of the policy community, media professionals, and the involved public in building sustainable peace. Its work aims to connect people from different backgrounds, often producing clarifying insights and innovative solutions.

The foundation frequently works collaboratively with other organizations. It does not make grants.

Stanley Foundation reports, publications, programs, and a wealth of other information are available on the Web at [www.stanleyfoundation.org](http://www.stanleyfoundation.org).

The Stanley Foundation  
209 Iowa Avenue  
Muscatine, IA 52761 USA  
563-264-1500  
563-264-0864 fax  
[info@stanleyfoundation.org](mailto:info@stanleyfoundation.org)