THIRD GLOBAL DIALOGUE ON NUCLEAR SECURITY PRIORITIES

May 28-30, 2013
Fondation Mérieux's Les Pensières Conference Centre
Annecy, France

RAPPORTEUR'S REPORT

June 19, 2013

TABLE OF CONTENTS

ACKNOWLEDGEMENTS

The Nuclear Threat Initiative (NTI) thanks the 41 government officials, experts, nuclear security practitioners, and other stakeholders for participating in the third Global Dialogue on Nuclear Security Priorities meeting.

The meeting was held using the not-for-attribution rule. Individuals and governments are free to use the information obtained during the meeting, but that information should not be attributed to a specific individual or government. This rapporteur's report was drafted accordingly. Statements attributed to discussants in the plenary sessions represent the personal views of these individuals and do not represent the official positions of their respective governments or organizations. Although some statements have attribution for purposes of this report, specific individuals should not be cited for any other purpose or in any other context.

BACKGROUND AND RESOURCES

Impetus for the Global Dialogue on Nuclear Security Priorities

After the 2012 Nuclear Security Summit, two issues emerged: (1) the need for a strengthened global nuclear security system and (2) the need for an integrated discussion among government officials, experts, nuclear security practitioners, and other stakeholders about how best to strengthen the global nuclear security system as it pertains to weapons-usable nuclear materials. To address these issues, NTI initiated a Global Dialogue on Nuclear Security Priorities (Global Dialogue) of leading government officials, experts, nuclear security practitioners, and other stakeholders to build consensus on elements of a comprehensive global nuclear security system to track, account for, manage, and secure all weapons-usable nuclear materials (e.g., highly enriched uranium and separated plutonium).

Five Characteristics of a Strengthened Global Nuclear Security System

At the first meeting of the Global Dialogue in Warrenton, Virginia, on July 23-25, 2012, NTI proposed five characteristics of a strengthened global nuclear security system:

- The system should be **comprehensive**; it should cover all nuclear materials and facilities in which they might be present, at all times.
- The system should **employ international standards and best practices, consistently and globally**.
- At a national level, each state's system should have **internal assurance and accountability mechanisms**.
- Globally, the system should facilitate a state's ability to provide **international assurances** that all nuclear materials and facilities are secure.
- The system should work to reduce risk through **minimizing** or, where feasible, **eliminating**

weapons-usable material stocks and the number of locations where they are found.

The meeting concluded with strong agreement about the need to strengthen the global nuclear security system.

Further background information and resources developed for Global Dialogue meetings can be found on the Global Dialogue website: http://www.nti.org/globaldialogue.

Resources developed for previous meetings include:

- Former Senator Sam Nunn's July 23, 2012, "Remarks at the Global Dialogue on Nuclear Security Priorities"
- Nuclear Security Primer: The Existing System
- 1st Global Dialogue Rapporteur's Report (July 2012)
- 2nd Global Dialogue Rapporteur's Report (November 2012)
- Non-Paper 1: The Need for a Strengthened Global Nuclear Security System
- Non-Paper 2: Practical Proposals for Providing International Assurances
- Non-Paper 3: Comprehensiveness: Understanding Non-Civilian Nuclear Materials
- Non-Paper 4: The Strategic Value of Best Practices for Nuclear Security

Resources developed for the third Global Dialogue include:

- Discussion Paper: Next Steps on International Assurances (May 2013)
- Discussion Paper: The Nuclear Security Mission beyond 2014: Options for Addressing Governance Gaps (revised June 2013)
- Discussion Paper: The IAEA's Nuclear Security Role (revised June 2013)
- WINS Analysis: Facilitating Accountability for Nuclear Security: A National Level Model for Internal and International Assurances (May 2013)
- 3rd Global Dialogue Rapporteur's Report (June 2013)

EXECUTIVE SUMMARY

Meeting Objectives

The objectives of the third meeting of the Global Dialogue on Nuclear Security Priorities were to:

- Further develop the concept of international assurance;
- Determine objectives, timing, and options for potential successor arrangements to the Nuclear Security Summit process;
- Identify the implications for the International Atomic Energy Agency (IAEA) of eventual successor arrangements to the Nuclear Security Summit process; and
- Further strengthen creative and constructive dialogue among government officials, experts, nuclear industry, and other stakeholders.

Global Dialogue Progress to Date

From the first meeting of the Global Dialogue in July 2012, participants have explored, debated, and assessed policy solutions for strengthening the global nuclear security system.

Following the second Global Dialogue meeting in October 2012, the twin concepts of internal and international assurance were offered for further development and consideration within the official Nuclear Security Summit process at the November 2012 Sherpas meeting in Istanbul. The April 2013 sous-Sherpas meeting in The Hague focused on how to implement international assurances. In addition, the organizers of the Nuclear Industry Summit will be focusing part of its deliberations on industry contributions to international assurances. A number of the concepts collectively developed by participants in the Global Dialogue are gaining traction in official channels due to their efforts, however, ongoing work is still needed to refine these concepts and continue to build understanding and support for them.

Meeting Results

At the third meeting of the Global Dialogue in Annecy, France, on May 28-30, 2013, participants advanced thinking on: (1) further developing the concept of international assurance and its implementation; (2) industry's role in providing international assurances; (3) nuclear security governance beyond 2014; and (4) the IAEA and its nuclear security mission.

Further Developing the Concept of International Assurance

Participants reaffirmed their support for the concept of international assurance and agreed on its security benefits. They reached an understanding that assurance is about sharing selected information, as well as taking actions with respect to security. Participants made significant progress defining how to implement assurances and recognized that many activities that provide assurances are already taking place, such as peer review through the IAEA's advisory services, physical protection assessments required through nuclear cooperation agreements, or information sharing through previously obligated reporting mechanisms like United Nations Security Council Resolution 1540 (UNSCR 1540).

The group determined that implementing assurances, in some cases, may involve only expanding existing participation and regularizing, enhancing, and reporting on current activities—not creating a new overarching regime or mechanism.

There was less consensus and common understanding on how the concept of international assurance can be applied to the non-civilian sphere, which holds the greatest amount of weapons-usable nuclear materials. Separately, a key new issue—how to provide incentives to states to encourage honest information sharing when doing so might reveal security weaknesses—was raised and requires further exploration.

Participants agreed on the need to further specify how to implement the full range of international assurance mechanisms. To illustrate what implementation could look like at a more detailed level, the small group breakout session on assurances focused on implementing IAEA peer review (through its

International Physical Protection Advisory Service (IPPAS)) on an expanded basis. Participants agreed that it would be useful, as a follow-on exercise, to examine how other assurance activities could be implemented as well.

Industry's Role in Providing International Assurances

The discussion focused on how industry can define and implement international assurances regarding nuclear security, including how issues surrounding assurances for nuclear security already have been addressed in the context of nuclear safety. In particular, the discussion provided an opportunity to explore the tension between information sharing and confidentiality. Participants were able to think more deeply about what types of information could be shared and with what audiences. The discussion also highlighted how nuclear security lags behind nuclear safety with regard to the maturity of international industry engagements, including assurance.

The small group breakout session on this topic produced valuable and specific ideas on ways for government and industry to cooperate on improving security and providing assurance, such as: governments providing to facilities information needed to perform their security missions (e.g., information about the threat environment or to assist in reliability checks); governments enabling and encouraging industry communication on their security efforts through international assurances; facilities inviting government officials to observe performance testing to educate them on security practices; and government and operators together promoting cross-sector gift baskets at the 2014 Nuclear Security Summit.

The group concluded that there should be more coordination and synergies between the agendas of the industry summit and the official government summit in 2014.

Nuclear Security Governance Beyond 2014

There was consensus within the group that gaps in the global governance of nuclear materials continue to exist and that sustained attention to the nuclear security mission is needed beyond 2014. The majority of participants did not believe that the governance gaps could be closed by the 2014 Summit. Multiple models for continuing high-level discussion on materials security were discussed, but the group did not agree on a particular model for doing so or on whether there should be another meeting at the Summit-level in 2016. The discussion raised such issues as the need for high-level government participation in a follow-on arrangement, whether the process should be universalized or limited to a smaller set of countries, how to address non-civilian materials, and the opportunities to use existing mechanisms or models. The session put in place a strategic frame for how to think about addressing the future of the Summit process within the context of ongoing gaps in nuclear security governance. One conclusion was that more work is needed to ensure that "form follows function" in closing these gaps appropriately and using existing fora and mechanisms to their full extent.

The IAEA and its Nuclear Security Mission

Participants broadly agreed that the IAEA has a central role to play in nuclear security. There was also a

recognition that simply handing over the baton of the Summit to the IAEA was neither feasible nor desirable in the near-term and that the nuclear security community should take advantage of the strengths of all available mechanisms. While the group did not agree on what the IAEA's role should be, substantial progress was made in understanding the IAEA's key competencies and the challenges and constraints the IAEA faces. This enabled the group to think more strategically about the IAEA's ongoing role, particularly after the Nuclear Security Summit series ends.

The small group breakout session on this topic assessed how the IAEA could play a role in addressing gaps in a strengthened global nuclear security system. The small group identified what additional activities the IAEA could undertake to close existing gaps and that are aligned with the five characteristics of a strengthened global nuclear security system, such as: encouraging states to commit to applying IAEA guidance to all materials (comprehensiveness); accelerating development of IAEA guidance (international standards and best practices); strengthening support to regulators on nuclear security (internal assurance); increasing its capacity to conduct IPPAS missions (international assurance); and facilitating incentives to decommission HEU facilities (reducing risk through minimizing or eliminating materials).

Next Steps

All Global Dialogue participants, particularly those who are part of the official Nuclear Security Summit process, are encouraged to advocate that governments commit to strengthening the global nuclear security system and its five characteristics and attendant practical proposals.

NTI is open to convening the Global Dialogue again in the latter half of 2013 if requested by participants in the official Nuclear Security Summit process. As part of the ongoing support of the Global Dialogue, NTI will continue to assess additional analytic needs. We look forward to continuing to be in touch with you as we plan for the next stage of the process.

FRAMEWORK FOR DISCUSSION

Prior to the third meeting and to inform discussions, participants in the Global Dialogue were provided with three discussion papers and an analysis paper developed by the World Institute for Nuclear Security (WINS):

- **Discussion Paper: Next Steps on International Assurances** further develops the concept of international assurance and proposes a more detailed approach for how to implement international assurances, including specific assurance activities and principles to guide implementation
- **Discussion Paper: The Nuclear Security Mission beyond 2014: Options for Addressing Governance Gaps** provides a strategic frame around discussions of successor arrangements to the Summit process, in particular suggesting options to ensure sustainability of the nuclear security mission

- **Discussion Paper: The IAEA's Nuclear Security Role** focuses on key competencies of the IAEA and the challenges and constraints it faces in taking on a greater role in nuclear security
- **WINS Analysis: Facilitating Accountability for Nuclear Security: A National Level Model for Internal and International Assurances** provides a model for how a country might put in place internal accountability measures that would provide a basis for providing internal and international assurances.

These papers are available at http://www.nti.org/globaldialogue.

GLOBAL DIALOGUE ON NUCLEAR SECURITY PRIORITIES MEETING, MAY 2013

Below is a session-by-session report on the May 2013 Global Dialogue meeting.

Strengthening the Global Nuclear Security System: A Quick Review

The purpose of the first session, facilitated by Joan Rohlfing, NTI President, and Deepti Choubey, NTI Senior Director for Nuclear and Bio-Security, was to welcome participants and reorient the group to the key propositions of the Global Dialogue. Rohlfing reminded the group of the challenge: There is no comprehensive system to ensure that all nuclear weapons, weapons-usable nuclear materials, and nuclear facilities worldwide are effectively protected against terrorist and criminal threats. Instead, the system is currently made up of a patchwork of agreements, guidelines, and multilateral engagement mechanisms. Rohlfing restated that the purpose of the Global Dialogue is to respond to this system-wide challenge that the Nuclear Security Summit has not yet addressed and to provide a platform for an integrated discussion among government officials, experts, nuclear security practitioners, and other stakeholders about how best to strengthen the global nuclear security system.

Rohlfing reminded the group that at the second Global Dialogue, participants had reached consensus on the need for a strengthened global nuclear security system made up of five characteristics (see page 1).

Rohlfing also described the progress to advance the ideas that have emerged from the Global Dialogue, noting changes in the community's thinking about governments' responsibilities to secure nuclear materials. In particular, although a country still has sovereign responsibility to secure these materials, there is a greater understanding that this is also a shared responsibility. She further explained that no country can succeed in this alone and countries need to work together. Rohlfing emphasized that words and commitments must be backed up by deeds and that countries must demonstrate through their deeds that there is an effective security system in place.

Rohlfing also noted the impact of the Global Dialogue on the Nuclear Security Summit and related processes, such as the Nuclear Industry Summit. She credited the hard work of Global Dialogue participants for introducing a number of the key ideas into these other fora.

Choubey provided additional detail on the objectives of the meeting. On developing the concept of international assurances, Choubey explained that since the idea was introduced at the second Global Dialogue, the focus of discussion in the official Summit process has moved to how to implement international assurances. In addition, because nuclear industry will take up the concept of international assurance at the Nuclear Industry Summit, there is a need to think about how to coordinate the strategies of nuclear industry and governments on assurances. Regarding the Summit process, Choubey explained the need to put a more strategic frame around discussions about what happens after the Nuclear Security Summit process ends—in particular, shifting focus to sustaining the ongoing nuclear security mission and addressing ongoing gaps in the global governance of the security of nuclear materials. Choubey clarified that references to "governance" in this context do not mean a negotiated treaty but rather existing mechanisms or new mechanisms needed to support a sustainable nuclear security mission. Finally, Choubey explained that the conversation about how to close remaining gaps in the global nuclear security system would also have implications for the fourth plenary session about how to best support the IAEA and its nuclear security mission. She concluded with a description of the small group breakout sessions and the expectation of result-driven outcomes.

International Assurances: Issues for Further Development

In the session, "International Assurances: Issues for Further Development," Choubey led a facilitated discussion on international assurances with two discussants: Robert Floyd, Director General of the Australian Safeguards and Non-Proliferation Office, and Sherpa for Australia to the Nuclear Security Summit; and Laura Holgate, Senior Director, Weapons of Mass Destruction Terrorism and Threat Reduction, National Security Staff, and sous-Sherpa for the United States to the Nuclear Security Summit.

Choubey first put the international assurance concept within the context that a strengthened global nuclear security system should support a state's ability to provide international assurances that all nuclear materials and facilities are secure. Choubey then posed a series of questions to Floyd and Holgate.

> ***Question 1: In your discussions with governments, how would you characterize legitimate concerns about the concept of international assurance, and how would you respond?***

Floyd began by reporting that the general nature of the response based on the April 2013 sous-Sherpas meeting is that there is general agreement that the concept of international assurances is a good idea. However, many government officials wanted to know how to implement assurances and expressed important sensitivities.

The first sensitivity is the issue of sovereignty and national responsibility for nuclear security. Floyd noted that the concept must operate in the context of shared or collective responsibility; countries can both exercise their national responsibilities and provide assurances that security is being practiced well. In other words, sharing of information and providing assurances in no way undermines the sovereign

responsibility of states.

The second sensitivity that Floyd reported is the tension between confidentiality and transparency. He noted that security has long been characterized as something that is highly confidential. Yet there are measures that a country can take to be more open that do not reduce security or divulge information about specific security measures in place.

The third sensitivity that Floyd identified was efficiency. Several countries wanted to know how assurances, as a set of measures, activities undertaken, and information shared, could be implemented efficiently without creating more bureaucracy and duplicating efforts.

Finally, Floyd noted that language had posed some difficulties. For instance, assurances should not be linked to "negative security assurances." Floyd also clarified that international assurance is not about verification or inspection. Instead, it is about voluntary sharing of information and choosing to put certain practices in place. Floyd noted, however, that assurance is not simply communicating about security but also actually putting security measures in place. Finally, Floyd acknowledged the debate about what assurances should be called, with some countries arguing that "building confidence" would be a better phrase. Floyd argued that the outcome matters, not what the underlying concept is called.

Holgate followed up, noting that assurance reflects not only the sovereign nature of a country's security responsibilities, but also the "mutually dependent" nature of security: A country is only as secure as others are good at their security. In other words, "interdependencies" are a reality of the nuclear security environment.

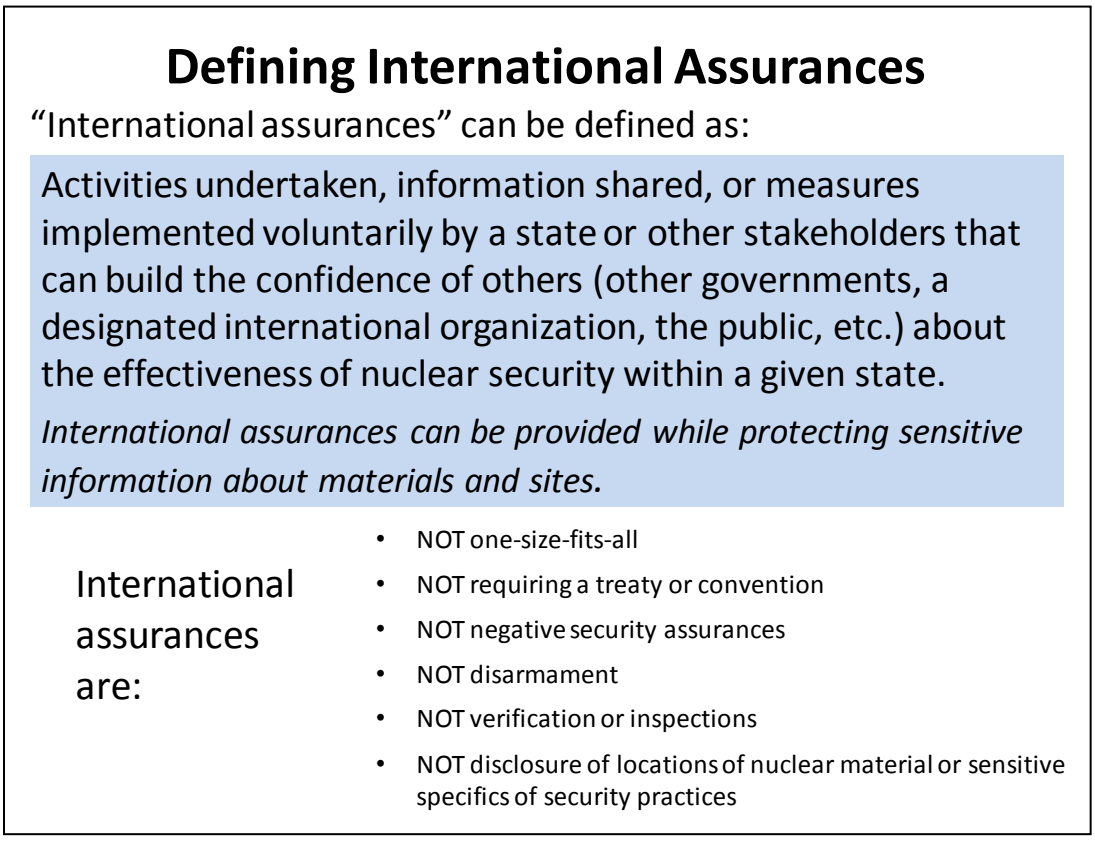
Holgate also emphasized the flexibility of the assurance concept in that it allows for tailored approaches by each country based on several factors: the nature of the material the country owns, regulatory oversight, political culture, the role of civil society, and internal government oversight. She emphasized that it is natural that the behavior that contributes to assurance will be unique and self-determined for each country.

Responding to the concern that assurances could lead to a duplication of efforts, Holgate explained that assurances can be an "organic part" of the underlying action. As an example, she pointed to Dutch actions with respect to their International Physical Protection Advisory Service (IPPAS) mission. Rather than keep the mission confidential, the Dutch government publicized that the mission took place and made some of the results public. In this way, the assurances were a natural, organic outcome of the mission.

On a related point, Holgate acknowledged that a challenge for countries was to ensure that detection and analytic systems of security recognize and incorporate assuring behavior. For example, she noted that the United States has a system of analysis of nuclear materials security that is site-based and has 36 measures of various aspects of security. However, none of the measures would have captured, for instance, press releases about an IPPAS mission. This demonstrates the need for analysts to recognize and credit behavior in a more structured way.

Holgate also noted that while assurances are what a country does and confidence is what it instills in another country, countries cannot guarantee that the behavior will, in fact, instill confidence in its audience, as that depends on whether the audience is tuned to or aware of the assuring behavior. Given this challenge, she urged the group to consider not just how to project assurances, but how the intended audience incorporates those assurances.

As a follow up to Floyd and Holgate's responses, Choubey restated the definition of international assurances and emphasized what international assurances are not.



Question 2: Why did the United States adopt international assurance as official government policy?

Holgate responded that assurance is a natural outgrowth of the Summit process and reflects the recognition of the security benefits that come with assurances. She reiterated that nuclear security is both "naturally interdependent and sovereign" and that assurances can build security without interfering with sovereignty and while protecting sensitive information. As an example, Holgate pointed to cooperation between the United States and Russia, in which very sensitive information was shared without either side feeling at risk. She noted that the lessons learned through this cooperation would be valuable to share with others to encourage similar activities by other countries.

Question 3: What does a country need to do to facilitate providing international assurances?

Floyd highlighted that international assurance is the outcome of successful *internal* assurances. Floyd noted that the essence of internal assurance is that countries need to know that their nuclear security is being practiced well, that necessary legal and regulatory structures are in place, and that compliance is happening. Flowing out of internal assurance is the opportunity to share some of this with other countries or other stakeholders in the form of international assurances.

Floyd suggested that countries begin by having appropriate treaties in place and fulfilling information sharing requirements arising from those treaties (e.g., reporting required by UNSCR 1540 and Article 14, 1 of the Convention for the Physical Protection of Nuclear Material (CPPNM)). Floyd noted that this not only reflects domestic legislation but also provides an opportunity to learn better practices internally. In addition, Floyd pointed to Australia's IPPAS mission, describing it as invaluable for receiving advice and reflecting on the adequacy of Australia's practices. He noted that if countries do not share and open up these kinds of avenues, opportunities to reach better practice are missed.

He acknowledged, however, that many countries are already doing things that provide international assurances. In other cases, assurance activities are taking place, but countries are not communicating about them. He pointed to current arrangements that could be enhanced or "tweaked" to provide more information. For example, he reported that Australia is establishing a website containing a consolidated set of information on Australia's actions on nuclear security.

Question 4: Can international assurances give weight to the words of the Washington and Seoul Communiqués that it is the fundamental responsibility of states to maintain effective security of "all nuclear materials, including nuclear materials used in nuclear weapons"?

Choubey reminded the group that 85 percent of the global stocks of weapons-usable nuclear material is in the non-civilian sector. Holgate responded to the question posed by noting that the United States has taken assurance steps regarding nuclear material associated with its weapons program. For instance, the United States publishes regulations and budgets that govern those materials, which become matters of public record in the course of dialogue with the legislature. In addition, the United States has made a concerted effort to take public accountability steps with regard to two recent errors: Six nuclear warheads were mistakenly flown from North Dakota to Louisiana in 2007 and the break-in at the Y-12 facility in Oak Ridge in 2012. These accountability steps included inspector general reports, commissions, and publication of steps to remedy problems. Holgate clarified that these actions were taken because they were the right thing to do, but that sharing the information contributes to the international dialogue on lessons learned and provides assurance that these errors will not likely reoccur. She emphasized that these actions were taken with respect to materials that are part of the weapons program.

Holgate illustrated this point by listing several questions that assurances can answer:

- Are we doing what we have pledged to do?
- Is our material secure and are our nuclear security practices effective?

- Do international experts think our practices are effective?
- Are we taking steps that improve security practices?
- Do we have a good legal basis for our security?
- Do we have a good process for designing and evaluating security procedures?
- Do we incorporate performance testing into security design?
- Does our training process incorporate security culture and personnel reliability?
- Do we have strong relationships with our peers inside and outside our country?

Floyd followed up by arguing that one of the good things about the concept of international assurance is that it applies to all material, including non-weapons-usable material such as radiological sources. As such, all countries—nuclear-weapons states, nuclear-armed states, or non-nuclear-weapons states—play a role. This is reflected in the Nuclear Security Summit, which provides an inclusive opportunity for countries to come together as equals and choose to apply good practice and appropriate arrangements to materials in each country's possession.

> ***Question 5: There is a range of different options for how states can provide confidence to others about the effectiveness of their nuclear security systems. Why does it matter to have this range of choices?***

To open the discussion, Choubey listed different assurance activities and indicated what is new about how the assurance concept could be applied to each activity. (The slide used at the meeting to illustrate this is available in "Discussion Paper: Next Steps on International Assurances" on the Global Dialogue website.) For each type of assurance activity, such as peer review through an IPPAS mission, Choubey outlined how an even greater assurance benefit could be realized:

- Broadening participation (e.g., more countries requesting an IPPAS mission or follow-up mission)
- Regularizing activities (doing them more frequently, such as hosting more frequent IPPAS missions)
- Enhancing activities (e.g., avoiding too narrowly scoping an IPPAS mission so that it is not meaningful)
- Sharing information about those activities (e.g., sharing a version of an IPPAS mission report).

Holgate noted that the Nuclear Security Summit was constructed to recognize that countries approach nuclear security from different perspectives. She reiterated that while some things are universal (e.g., UNSCR 1540) or apply to all States Parties (e.g., CPPNM), the assurance activity will depend on the type of material in a country's possession as well as a range of other issues, such as the unique history and political culture of each country.

Noting the lengthy list of activities in the chart, Floyd encouraged countries not to be overwhelmed because the list reflects a set of options and measures that apply differently in different situations. The list provides flexibility and the ability to choose what works in the national context. He reiterated that most activities listed are not new but could be used more effectively and to provide maximum assurance

value.

> ***Question 6: To further evaluate the international assurance concept, there needs to be a better understanding of how international assurances can be implemented. Are there principles that should guide implementation? How should we think about or approach this issue?***

This question referenced the principles that should guide implementation listed in Floyd's discussion paper, "Next Steps on International Assurances."

Proposed Principles for Guiding Implementation

PROPOSED PRINCIPLES	ILLUSTRATIVE EXAMPLES
Use existing implementation architecture (e.g., IAEA, UN, WINS, etc.) where possible, and strengthen this capacity as necessary. Work to harmonize and/or integrate similar pre-existing requirements to avoid duplication of effort and minimize costs.	• IPPAS • UNSCR 1540 • CPPNM Article 14,1
Build new architecture into existing institutions or platforms wherever possible.	• Expand WINS Academy offering to develop certification of nuclear security professionals.
Develop new platforms only when existing institutions cannot fill the gap.	TBD
For bilateral or ad hoc assurances, defer to participating states to design their own implementation mechanisms.	TBD
Others?	TBD

Floyd emphasized that using existing architecture is an important guiding principle to avoid duplication and ensure efficiency. New architecture should be built only when required. He noted, however, that bilateral mechanisms by nature must be worked out between parties as to how they are used to provide assurances, for instance, by further sharing information about the activity. Acknowledging that assurance is largely dependent on effective communication, he posed a question, "Is this a role for the IAEA, given this is already a place where information is shared? Or do states create their own mechanisms of sharing information, such as through websites or annual reports? Or is it both?"

In the discussion that followed with Global Dialogue participants some common themes emerged and are outlined below.

Defining International Assurance

Throughout the discussion participants emphasized that international assurance is about security not just public statements. Some participants also felt that the concept of international assurance needed to be clarified further.

One participant suggested refining the case for the added value of international assurance and how it is different from what the international community is already doing. For instance, will international assurance require a new mechanism? Is it about introspection at the national level or is there a link between internal and international assurances? Another participant answered that the difference is visibility, not necessarily the underlying steps that take place, and that the value of assurance is the sharing that takes place. She explained that international assurances provide greater understanding and visibility into a country's actions and that friends, neighbors, and rivals have a stake in what other countries are doing. If a country has concerns or questions, then this can provide the basis for a bilateral conversation about how to improve shared responsibility. For instance, the United States, the United Kingdom, and Russia have an ongoing dialogue on nuclear security. A press release was published that said the activity had taken place, that certain topics were discussed and best practices exchanged, and that the countries benefited. She noted that countries reading the press release could feel better that the three countries are taking the opportunity to improve and know each other better.

Another participant agreed, reemphasizing the importance of sharing information and conducting activities that demonstrate the effectiveness of the nuclear security system. He also reiterated that many assurance activities already exist, but that one can look at these activities and information shared from the perspective of assurances.

One participant urged that a set of criteria is needed for how well international assurances work beyond simply making statements that security is effective. For instance, describing an internal process for reviewing vulnerabilities, joint vulnerability assessments, and other bilateral visits could provide a substantial level of confidence.

Another participant urged the group to consider the limitations of international assurances, noting that international assurances would not have prevented recent incidents like those mentioned by Holgate earlier in the session. He instead said we should think of international assurances as a mechanism to help countries bring their houses in order and to ensure an exchange of best practices.

Additional Assurance Activities

During the discussion, participants reaffirmed several different activities as examples of providing assurances. One participant noted that the most effective way to share best practices is through international training and certification. He acknowledged, however, that most training and certification is targeted to security officials, but it is also important to develop training and certification for regulators, as they are accountable both internally and internationally.

Another valuable assurance activity recognized was bilateral inspections. At least two participants noted

that bilateral inspections could be made obligatory through Nuclear Supplier Group (NSG) or other export arrangements. One participant clarified that the NSG already requires physical protection measures to be in place.

One participant noted that sharing information on stocks of civilian HEU and plutonium, as some countries already do, is an example of an assurance on material accountability which more states could participate in.

Another participant urged the group to learn from other industries, for example, the aviation industry where a central international body thoroughly investigates accidents, which are then reported. This process provides assurances.

Finally, one participant noted that countries are reporting on activities in their national progress reports at the Nuclear Security Summit. Collating this information would be useful, she argued, but would require an entity to take this on.

Non-Civilian Materials

The group discussed the issue of non-civilian materials at length. One participant asked what type of assurances other countries would like to see from countries with non-civilian materials and whether this would be a responsibility for an individual country or a group. In response, another participant expressed concern that acting as a group would mean progress is made at the rate of the slowest member of the group. She suggested that progress could be made at the individual and bilateral levels, as well as by the broader group.

One participant cautioned the group about focusing on the 85 percent of material that is non-civilian material. He argued such efforts could potentially jeopardize the general confidence-building measures taking place between countries that have non-civilian materials. Both he and another participant warned about raising false expectations that assurances could be made with regard to this material. In contrast, another participant urged the group to think more creatively about how to provide assurances without talking about what the materials are used for, therefore encompassing the 85 percent.

It was proposed that participants from nuclear-armed states meet over lunch to learn about the analytic work NTI had done on how international assurances could be applied to non-civilian materials. A productive discussion advancing thinking on this issue occurred on the second day of the meeting among this smaller group.

Incentives

The theme of incentives emerged repeatedly throughout the meeting. One participant argued that an implicit assumption in the discussion was that a country demonstrating good behavior would lead to good behavior by other states. He questioned this implication and pointed to the need to look at incentives for behavior. Another participant agreed, asking what could be done about countries that are not motivated to provide assurances, either because they do not see nuclear security as a priority or for strategic reasons.

One participant argued that some states concerned about their prestige and national pride might not want to host an IPPAS mission that would expose shortcomings. He underscored the need to create a premium or political reward for countries to notice shortcomings, try to resolve them or seek assistance, and share these concerns publicly.

In response, another participant suggested that an incentive for countries to report on the effectiveness of their nuclear security infrastructure would be to provide international cooperation so that countries can improve security. He noted that the IAEA offers assistance through its IPPAS missions and its Integrated Nuclear Security Support Plans (INSSP), which help countries identify how to meet international obligations and establish nuclear security infrastructure. He noted that the IAEA is also organizing the first international workshop on sharing lessons learned from IPPAS missions. Another participant pointed out that the problem of incentives is not unique in nuclear security and suggested that a mechanism to report problems to an international body that provides amnesty, as INTERPOL does with cyber security for business, could be useful. Finally, another participant clarified that making international assurances mandatory is not politically feasible and not currently on the table.

Sovereignty

Returning to the discussion of sovereignty earlier in the session, one participant quoted Italian Prime Minister Mario Monti, one of the leaders at the Seoul Summit: "We must therefore continue to work together to ensure that national sovereignty does not represent an obstacle to the adoption of common rules and stricter international standards, the exchange of information and transparency, the adoption of mandatory review mechanisms, and the recognition of the IAEA central role." The participant noted that nuclear security can no longer be seen as the exclusive prerogative of individual states and that, while each state is responsible for its domestic nuclear security regime, it has a responsibility to others to fulfill its national responsibility effectively. The participant noted that there is a clear parallel with nuclear safety, where transparency and information sharing are now seen as essential.

Sustainability

One participant noted the importance of ensuring that Nuclear Security Summit deliverables are sustainable outside the process, which might be difficult given that the Nuclear Security Summit is limited to a small group of countries. Another participant agreed, reminding the group that while the concept of international assurances has progressed, it is still novel and must be introduced to countries outside the Summit process. He also noted that countries' differing capacities would need to be taken into account.

One participant argued that introducing too much specificity into the concept of international assurance could risk its sustainability because of the "bureaucratic response of instinctive denial" to something that is new. He urged the group not to give in to this instinct and to support this important concept.

Other Comments

- One participant noted the importance of knowing at any given time where nuclear weapons and

their components are, pointing to a U.S. software system called "Diamonds." The participant stressed the importance of the ability of leadership to know at any given time where all materials are and that they are accounted for, and to not find out retroactively that something is missing.

- One participant noted that there is already progress being made on international assurances, such as a general awareness that looking at the collection of activities from the perspective of assurances can be useful, and that countries are already participating more in activities, such as requesting IPPAS missions and publishing regulations. He argued that it would be useful to more systematically collect progress.

Building Confidence: Industry's Role in Providing international Assurances

Corey Hinderstein, Vice President, International Programs, NTI, led the discussion of industry's role in providing international assurances with Duncan Hawthorne, President and Chief Executive Officer of Bruce Power. The objective of the session was to address the following questions:

- How do contributions from key players in nuclear industry (enrichment facilities, research reactors, nuclear power plants, etc.) differ from the contributions of governments to the concept of international assurance?
- What is the value to nuclear industry of engaging in activities that provide international assurances? How can the international nuclear security policy discussion benefit from industry participation?
- What industry activities could be considered international assurances? What else could industry be doing?

Hinderstein opened the discussion by noting that for most of nuclear industry, what matters is how international commitments, such as those contained in INFCIRC/225 or the CPPNM, filter down from the state to the regulator to the facility. She also underscored the importance for the twin processes of the Nuclear Security Summit and Nuclear Industry Summit to facilitate a better understanding of mutual interests, equities, and opportunities for action between government officials and industry representatives to strengthen the global nuclear security system through international assurances.

Hinderstein clarified the meaning of "industry" as a term that covers both commercial and non-commercial licensees, including *inter alia* enrichment and reprocessing facilities, fuel fabrication facilities, nuclear power plants, material transportation companies, research reactors, security contractors and private protection forces, and laboratories and research and development. She noted that nuclear industry generally covers civilian materials rather than non-civilian materials.

Hinderstein then offered a quote from discussant Duncan Hawthorne which captured the concept of international assurances in the context of nuclear safety: "It is important to me, to [my employees] and to the local community that everyone is well informed of the various innovations and investments that [this company] has taken on to ensure we can successfully manage our plant if faced with an

unprecedented natural disaster. . . . We are in an excellent position to demonstrate that our plant can be relied on to operate safely under any condition."

She and Hawthorne then set up the plenary discussion by raising and answering the following questions.

Question 1: Why should industry care about providing international assurances?

Hawthorne began by noting that, in the nuclear safety context, the World Association of Nuclear Operators (WANO) had grappled with many of the issues raised with respect to international nuclear security assurances discussed in the previous session. With regard to safety, the industry has finally embraced the idea that there is a broader obligation to effective performance than just to the individual company or even country, and that this understanding is slowly developing for nuclear security. He noted that WANO does not use the word "assurances" but frames the discussion as the importance of people knowing how WANO exercises oversight of power plant safety and taking comfort in the safety of its members' facilities from that understanding. He explained, however, that the specifics of WANO's requirements, processes, and peer review results are kept confidential. He noted that WANO was created 24 years ago to bring together all operators under the concept that an event at any plant impacts all plants. He acknowledged that nuclear industry is very interested in the concept of assurance, especially in today's environment where in the absence of visibility there is a tendency to believe that nothing is being done. However, he acknowledged that increasing the level of visibility would require describing its activities and sharing the extent and scope of its findings. The view so far has been that, for WANO to do its job, reports must be confidential because this allows for self-criticality without worrying about external responses. Hawthorne also mentioned that the safety community has been wrestling with this issue for decades and still struggles on governance, implementation, and day-to-day decision making–the security community is far behind and yet the consequences of failure to effectively manage the mission would be profound.

Question 2: Is industry ready to grapple with assurances on security?

Hawthorne noted that when WANO was first formed, all operators agreed to share information about operational experience and lessons learned. Peer review did not start right away, but was eventually accepted because it was confidential. Describing the process of peer review, he noted that it is a very invasive process and the resulting reports are very technical. There is concern about putting the reports in the public domain and how they might be perceived.

Hawthorne also noted that, while WANO's objective is standardization of practices around the world, this is difficult because WANO is managed through dispersed regional centers with different requirements. As a result, for example, peer reviews occur every two years in North America but in other parts of the world the time frame is eight years. Ten member plants have never had a review.

Hawthorne reported that operators understand that security is important but do not necessarily think about operational excellence from the perspective of security. Following the terrorist attacks on 9/11, there were significant upgrades required by regulators, which left operators feeling that they had done all that was necessary on security. Yet, he has found that security at facilities can still differ greatly even

when they are being regulated by the same regulator, because implementation differs greatly.

Hinderstein followed up by noting that the definition of operational excellence does not yet include security. However, she provided an example of an assurance that Bruce Power engages in that demonstrates operational excellence in security: The guard force competes internationally against other SWAT teams and wins.

> ***Question 3: There has been a heavy focus in the Nuclear Security Summit process on weapons-usable nuclear material, while industry has focused more on radioactive materials and facilities that could be subject to sabotage. Why should we be inclusive of all materials?***

Hinderstein proposed two reasons to be inclusive. First, expectations need to be consistent to create a culture of accountability for security implementation. Second, different types of material could be co-located.

Hawthorne described the four tenets of WANO: sharing personal experience; training and accreditation; peer review; and technical support. Put into practice, operators share their experiences for the benefit of others, ensure that the people who fulfill these roles are qualified, open up the process for external review, and offer technical support to help others obtain their safety goals. When there is agreement around all four tenets, there is a benefit to everyone. However, he noted there is a very divisive discussion about how much should be in the public domain. Japan, for instance, wants to impact public confidence by openly demonstrating self-criticism and trying to improve through cooperation with the international community.

In the discussion that followed among Global Dialogue participants, they focused on how industry can define and implement international assurances regarding nuclear security, including how issues surrounding assurances for nuclear security already have been addressed in the context of nuclear safety. In particular, the discussion provided an opportunity to explore the tension between information sharing and confidentiality. Participants were able to think more deeply about what types of information could be shared and with what audiences. The discussion also highlighted how nuclear security lags behind nuclear safety with regard to the maturity of international industry engagements, including assurance.

As with the previous sessions, several common themes emerged and are outlined below.

Information Sharing

Information sharing was prominent in Hawthorne's remarks. One participant, recognizing the importance of peer review and self-assessment, acknowledged the disagreement on how much information should be shared. Hinderstein noted the need to think about what questions might be raised by sharing certain information.

One participant argued that there is a need to explain that not everything needs to be shared widely.

Information can be shared publicly, confidentially with a large organization, or with another country. Hinderstein clarified that assurances need not expose "every gory detail," but strategic communications about security activities can create greater confidence about the effectiveness of security. Hawthorne added that sharing information that a specific facility was visited on a specific date by peers, the following areas were evaluated, the following improvements and strengths were identified, and a follow-up visit has been scheduled would be sufficient to show that the operator is operating within international standards.

Enforcement

One participant noted that while she supported peer review, there is no way to ensure that operators remedy problems. Another participant echoed the need to address follow-up and enforcement.

Hinderstein noted that if we were to create an information-sharing norm, that would not be enforcement per se, but a follow-up report that stated that areas for improvement were not met would be part of accountability. Hawthorne followed up to explain that WANO had taken some measures to give it "teeth" and that member obligations have been increased. He also noted that threats to exclude members had been effective.

Standards

There was a discussion about the importance of standards of behavior. For instance, one participant noted the importance of having clear rules in the international market to ensure competitiveness. He argued that it is important to define expectations with regard to vendors and customers and enforce these through market activities, such as preferential procurement. Industry could follow guidance from the Nuclear Security Summit. He argued that it is important to send a message to governments that there is concern that some companies do not abide by expected behavior and that governments should only accept contracts from companies that follow international best practices. In response, Hawthorne noted that in the case of new entry countries that have no infrastructure or regulatory environment, it is important for the vendors, the IAEA, and the international community to set and self-enforce expected behavior. Hinderstein noted that if requests for proposals by countries building nuclear power plants included certain security standards, vendors would respond quickly. Thus, there can be market incentives for implementing security where security could provide a competitive advantage.

Another participant suggested that an International Organization for Standardization (ISO) standard could be developed by industry to define security standards, which could then be incorporated into contracts and business partnering. It would enable government officials without knowledge of security to compare to a standard. Having an ISO standard would also provide a way to distinguish, preference, and incentivize.

Security Culture and Corporate Governance

Hawthorne highlighted the difference in culture between safety and security and noted the need to work with and create a uniform culture. He noted that WANO recognizes that corporate structure has a

significant effect on the operator and that it is important to set the tone at the top of an organization. Another participant noted that corporate governance is another level of control and accountability that provides confidence.

One participant noted that, while policies come down from the government to ministries and then to industry, assurances also need to start at industry and go back up. He noted, however, the nuclear industry is competing with other industries like oil and gas due to concerns about safety, security, and waste management. In these other sectors, companies are taking corporate governance very seriously, partially because of financial scandals and because corporate executives and governing boards understand that corporate governance supports better decisions, greater success, and enhanced reputation. He suggested that a benchmarking report to highlight where companies are making an effort on good corporate governance could be useful.

Other Comments

- One participant stressed that an important part of WANO's assessment process is an internal assessment by the operator, which happens before the WANO team arrives. Hawthorne noted that the intention of self-assessment should be to pass the review. Self-assessment provides an operator a sense of itself and confidence that it will "pass" the review. In the context of security, he suggested that there is an opportunity for WINS to become a precursor to IPPAS that would help build capacity so that the operator would "pass" the IPPAS review.
- One participant asked to hear other participants' views on whether peer review teams should be international or national as long as communications were public.
- A number of participants expressed that there needs to be a greater focus on the regulator due to a lack of standards of implementation at the regulatory level and an absence of regulatory peer review.

Nuclear Security Governance Beyond 2014

Rohlfing led the discussion with John Carlson, NTI Counselor, as discussant.

Rohlfing began by stating that conventional wisdom that the 2014 Nuclear Security Summit would be the final Summit should lead us all to ask whether the community has met the objectives the Nuclear Security Summit was designed to address and what happens after the Summit process ends. How do we ensure the nuclear security mission continues to be supported by some mechanism and what kind of process do we need to put in place to close the remaining gaps in the global governance of security of all nuclear materials? Rohlfing clarified that "governance" does not refer to a new treaty or framework convention, but merely "institutional arrangements," in particular decisions of international bodies, cooperative arrangements, and other mechanisms and processes, for balancing national and international interests (i.e., the basic architecture of a global nuclear security system).

Carlson then provided a brief overview of his discussion paper for the meeting, "The Nuclear Security

Mission beyond 2014: Options for Addressing Governance Gaps." He began by summarizing guiding principles for how to address the governance gaps.

- **The first principle is to preserve political will**. He noted that what has been most valuable about the Summit process has been engagement by heads of government and effective use of their energy and commitment. He urged the importance of maintaining this high level political support for ongoing efforts to strengthen nuclear security. At the same time, however, he cautioned the need to avoid "Summit fatigue" from overuse of this level of engagement.
- **The second principle is maintaining commitment and effective decision-making**. In other words, as security strengthening efforts progress, how will commitments be made and issues be resolved and by whom? He explained that some commitments and decisions will be made at the technocrat level and others will be at a higher level. He asked the group to think back to the period before the Nuclear Security Summit process began and reminded them that many things did not get done because of lack of high-level interest. He argued that the community needs to build on what has already been achieved to ensure continuing momentum.
- **The third principle is broadening participation**. A major issue to be decided is whether nuclear security has such a degree of urgency about it that it should continue to be directed by key states (as with the Summit process) or whether we are at a stage or approaching a stage where we can only make effective progress by engaging most states. The answer could also be somewhere in between. He noted that at some point in the future the process will need to become universal, but the United Nations, for instance, provides the lesson that it is easy for particular states to obstruct progress and the Nuclear Security Summit has been carefully arranged to avoid that. The question then is, "When do we go beyond limited membership and avoid the risk of obstruction?"
- **The fourth principle is the need to avoid duplication of efforts**.
- **The fifth principle is the need to facilitate accountability**.

Carlson then argued that the Summit itself needs to answer the question about possible Summit successors, even if the decision is to involve larger membership. He acknowledged that this decision would not be binding if the decision was to broaden participation, but he also argued that it would be "strange" for the Nuclear Security Summit to "fade away" without giving guidance to what should follow and simply leave governments to pick up the pieces. He noted that the Nuclear Security Summit is in a unique position to decide what should follow and that this should be done at the final Summit, whether it is 2014 or another Summit in 2016.

Review of Options

OPTION 1		**CONTINUE CURRENT NSS INDEFINITELY**
OPTION 2		**HOLD ONE MORE NSS IN 2016**
OPTION 3		**NEW SUB-SUMMIT LEVEL PROCESS**
OPTION 4		**NEW SUB-SUMMIT LEVEL PROCESS UNDER IAEA AUSPICES**
	OPTION 4A	IAEA NUCLEAR SECURITY CONFERENCES
OPTION 5		**IAEA GENERAL CONFERENCE MARGINS**
OPTION 6		**CPPNM REVIEW CONFERENCES**
OPTION 7		**USE OTHER EXISTING MECHANISMS OR INSTITUTIONS**
	OPTION 7A	G8 GLOBAL PARTNERSHIP
	OPTION 7B	GICNT
	OPTION 7C	ICSANT*
OPTION 8		**COMBINATION APPROACH**
	OPTION 8A	REGULAR MINISTERIAL + INTERSESSIONAL MEETINGS OF EXPERTS
	OPTION 8B	AD HOC SUMMITS

Carlson then walked through options for successor arrangements described in his discussion paper, noting that they are not mutually exclusive:

- The first option, which he noted is unlikely to gain support, is to continue the Nuclear Security Summit indefinitely.
- The second option is to hold another Nuclear Security Summit in 2016. He argued that it is clear that the 2014 Summit will not have solved all problems but that Summit participants might decide to seriously assess the future and set in motion a process for continuing the program of work. 2016 could be the Summit that sets in place the architecture of the future.
- The third option is a new sub-summit level process. This could be a series of high-level meetings, perhaps at the ministerial level, mirroring the current Summit process (a similar two-year cycle; Sherpas meetings; etc.). The advantage of this arrangement, Carlson argued, is that it follows an established model. The disadvantage, however, is that a host state would be needed every two years and there is no standing secretariat.
- The fourth option is a new sub-summit level process under the auspices of the IAEA. However, if the IAEA becomes the successor to the Summit, participation would need to be universal. It would also require expanding the IAEA's mandate to include all material, not just civilian material. A variant of this option would be to build on the upcoming IAEA Nuclear Security Conference and have it run on a regular basis. However, it is unclear whether this could be used to advance a broader nuclear security agenda as this kind of conference is not a decision-making conference and does not result in agreed commitments on which participants follow through.

Currently, there is no precedent at the IAEA for such a conference, as most meetings involve the exchange of technical information.

- A fifth option is to convene meetings on the margins of the General Conference meeting in Vienna, taking advantage of the presence of key individuals. However, this could encounter timing problems with the Board of Governors meeting.
- A sixth option is to use CPPNM review conferences to convene a conference of all parties to the CPPNM. This has not been used, but a majority of states parties could request such a meeting. One shortcoming is that meetings cannot be held more frequently than five years, but there is a substantial agenda with shorter time horizons. This challenge could be addressed by holding PrepCom meetings between the review meetings. However, these meetings would not have decision-making authority. There is also a scoping issue as the 2005 Amendment to the CPPNM is not yet in force. Until the Amendment comes into force, which is far from certain to happen in the short-term, the scope could be narrow. Thus, CPPNM review conferences, while a good option in the longer term, currently do not meet the short-term needs.
- A seventh option is to use other existing mechanisms or institutions such as the G8 Global Partnership Against the Spread of Weapons and Materials of Mass Destruction (G8 Global Partnership), the Global Initiative to Combat Nuclear Terrorism (GICNT), or the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT). Carlson noted several weaknesses of each of these mechanisms, including the limited objectives and memberships of the G8 Global Partnership and GICNT and the limited scope of ICSANT. He did note, however, that GICNT might work as an accountability framework on specific commitments.
- Finally, Carlson noted the possibility of a combination approach that draws on the features of existing mechanisms. One variation would be regular ministerial meetings and intercessional meetings of experts. These meetings could be held every two years and have a similar Sherpas system. This could be integrated with the IAEA Nuclear Security Conference.

In the discussion that followed among Global Dialogue participants, there was consensus within the group that gaps in the global governance of nuclear materials continue to exist and that sustained attention to the nuclear security mission is needed beyond 2014. The majority of participants did not believe that the governance gaps could be closed by the 2014 Summit. Multiple models for continuing high-level discussion on materials security were discussed, but the group did not agree on a particular model for doing so or on whether there should be another meeting at the Summit-level in 2016. The discussion raised such issues as the need for high-level government participation in a follow-on arrangement, whether the process should be universalized or limited to a smaller set of countries, how to address non-civilian materials, and the opportunities to use existing mechanisms or models. The session put in place a strategic frame for how to think about addressing the future of the Summit process within the context of ongoing gaps in nuclear security governance.

As with the previous sessions, several common themes emerged and are outlined below.

Function of the Summit and Successor Arrangements

Several participants felt that the discussion had not touched on what the purpose of a successor arrangement should be and instead had focused on what form it should take. One participant asked: For what do we need the process? He noted that the Nuclear Security Summit had a particular purpose, which was to support the goal of securing all nuclear material. He argued that developing a future architecture for nuclear security is very different from the current Summit process, which is useful to support countries taking unilateral action, but not good at making collective decisions, especially for large policy matters.

Another participant agreed that the Summits have been a catalyst for individual decisions, not collective action. She summarized the Summit functions as capturing the personal attention of national leaders; focusing on tangible, meaningful outcomes; hosting regular events that elicit announcements and deliverables; and providing a forum that helps to advance international efforts.

Ideas for Successor Arrangements

Several additional ideas for successor arrangements, or variations of the options in Carlson's paper, were discussed.

One participant was surprised that UNSCR 1540 had not been included in the list of existing mechanisms, noting that is universal and binding, addresses non-civilian material, and has a committee of experts to manage the process. This is particularly important, she argued, because while the Summit process addresses non-civilian material, there is no other forum in which to do so, including the IAEA. Another participant argued that there is a need to make the UNSCR 1540 reports more relevant to nuclear security and that discussing the reports could be an interesting mechanism.

A different participant said that the function of the Summit is to do what heads of government want to commit their time to and that if there is something they wish to accomplish, they will attend. As such, there should be an institution that can host summits when needed but not on a pre-determined schedule.

Another participant liked the idea of a ministerial-level model to avoid losing momentum and getting bogged down in bureaucracy. However, he did not see the need to have Sherpas meetings because ministries could service this need.

2016 Summit

There was some debate within the group about the value of another Summit in 2016. One participant said that even if there were another Summit in 2016, it would not change certain realities, such as the challenge of discussing non-civilian materials and therefore would not close the comprehensiveness gap.

Another participant was more optimistic about the ability to close the architecture gaps in two years but noted that in addition to a comprehensiveness gap, there is an assurance gap. She noted that, while heads of government could not make commitments at a technical level, they could agree on a set of

principles that inform how to build a strengthened system. This would provide a successor process with a set of instructions.

One participant argued that, although he does not think another Summit is necessary, if one is held in 2016, the United States should host it so it can conclude what it started.

At a later point in the meeting, one participant said that the desire to have another Summit would be based on Dutch performance at the 2014 Summit. Another participant warned, however, that it would be too late to wait until the end of the 2014 Summit to decide whether to have another Summit and that the decision needs to be communicated earlier. She argued that instead the value is in the substance and energy that is injected early in the 2014 process.

Need for High-Level Participation

Several participants were concerned with the ability of the community to maintain high-level political will to sustain the nuclear security mission. One participant argued for continuing political involvement. She noted that if the Summits end, it could send the message that nuclear security is no longer a priority for leaders or that the job is done—neither of which is the case. She suggested that heads of government must continue to come together in addition to intercessional meetings of experts. Another participant agreed that the story line for the end of the Summit process would be that enough progress has been made in nuclear security for leaders to stand down and turn the process over to somebody else. He argued that, in stepping away from the process, countries need to say that a sustainable mechanism should be put in place for continuing to devise meaningful assurances on what countries are doing. Another participant noted that the Summit's purpose had been to generate political will and that this objective has been accomplished. However, he argued that the network established by the Nuclear Security Summit must be preserved and inherited by something else.

Broad Participation

Whether the process should be universal or only include a select group of states also was discussed.

One participant argued for a universal process. However, one participant suggested that there would need to be multiple fora that have different purposes. Answering the question whether it is an urgent problem that requires a few states or requires everyone, he said that it is both. He noted that countries have common but differentiated responsibilities. For instance, countries with nuclear weapons have different responsibilities than countries with weapons-usable nuclear material or with nuclear power plants. He argued that there needs to be a combination of forums that allow countries that have much of the responsibilities to move forward while keeping all countries involved.

Another participant made a similar comment, arguing that there should be two institutions, one for non-civilian material and another for civilian material. The former would include as many nuclear-armed states that wish to be involved.

The Role of the IAEA

Previewing the discussion for the next session on the IAEA's nuclear security role, one participant noted that there are several requirements for the IAEA to become the new summit convener. First, current Summit participants would need to formally hand over the process to the IAEA. Second, key Summit participants would need to put the equivalent political energy into the IAEA summit process as they did for the Nuclear Security Summit process. He argued that there is no reason why the IAEA cannot run a Sherpa-like process before the IAEA summits or collect commitments from countries, but there would need to be an underpinning of strong political support for rethinking how the IAEA hosts summits. In addition, the IAEA would need to be more proactive and provide more leadership at the Director-General level to arrive at similar results to the Nuclear Security Summit. He also noted some advantages of the IAEA: near-universal membership; a standing body; and the ability to follow through on commitments. A key disadvantage, however, would be how to deal with nuclear weapons issues, given the IAEA's currently limited mandate.

Another participant worried about the IAEA's universal membership, asking whether other member states that are not part of the Summit process would be willing to undertake the same commitments as Summit countries. At a minimum, however, she argued, the IAEA could play a supplementary role.

Other Comments

- One participant suggested that the decision about successor arrangements could be delayed and the immediate priority needs to be whether to hold a Summit in 2016.
- Later in the meeting, one participant criticized industry for failing to take advantage of the Summit process to take meaningful action and urged industry to seek an ongoing ability to meet, discuss, and measure ongoing improvements in nuclear security.

Update on the 2013 IAEA Nuclear Security Conference and Ministerial

Khammar Mrabit, Director of the Office of Nuclear Security, Department of Nuclear Safety and Security, IAEA, provided a short briefing on plans for the 2013 IAEA Nuclear Security Conference and Ministerial.

The IAEA and its Nuclear Security Mission

Charles Curtis, NTI President Emeritus, led the discussion of the IAEA and its nuclear security mission with two discussants: Khammar Mrabit; and Trevor Findlay, Professor of International Affairs, Carleton University and Research Fellow, Belfer Center for Science and International Affairs, Harvard University.

Curtis opened the session by characterizing the issue as the need to incentivize progress on a more robust response to the security challenges in nuclear material security. He reminded the group that the safeguards system is an intrusion on sovereignty which was incentivized by access to nuclear technology and non-proliferation objectives. In the area of nuclear safety, the concession of the sovereign

prerogative was the recognition of a common plight—that a safety incident anywhere is a problem for all nuclear activity. What is not well-recognized is that this is also the case with respect to nuclear security. Member states do not currently feel that the benefit for nuclear security outweighs the additional burdens, reporting responsibilities, and intrusion on sovereignty commensurate with the benefit received in the context of safety and safeguards.

With regard to the IAEA's role of a "platform," Curtis noted that a platform is something to build upon and there needs to be an explicit understanding of the structure to be built. However, he urged the group to not let the perfect be the enemy of the good, reiterating that the IAEA's work on security has done much good, and that countries have a collective responsibility to strengthen it.

Mrabit gave a presentation on the IAEA's nuclear security activities. He began by restating the vision of the IAEA's Office of Nuclear Security to achieve worldwide, effective security wherever nuclear or other radioactive material is in use, storage, and/or transport, and of associated facilities and activities. Yet, he noted, the responsibility rests with member states and the role of the IAEA is to support requests, assist states to establish and maintain effective nuclear security through assistance in capacity building, guidance or standards, human resource development, and risk reduction. It also facilitates adherence to implementation of international legal instruments related to nuclear security. Core services offered by the IAEA include development of nuclear security guidance in consultation with member states, peer reviews and advisory services that help states implement and apply the guidance, education and training, information management and coordination, assistance at major public events like the Olympics, coordinated research projects, risk reduction, Integrated Nuclear Security Support Plans (INSSPs) which are meant to establish nuclear infrastructure in a systematic and comprehensive manner, and, finally, international coordination and cooperation, for instance working with the UNSCR 1540 Committee and the United Nations Counterterrorism Implementation Task Force.

Mrabit went on to summarize some of the challenges and opportunities that face the IAEA. First, 80 percent of expenditures on nuclear security come from extra-budgetary sources and conditions attached by some donors limit expenditures. In addition, he pointed to the challenge of gaining entry into force of the 2005 Amendment to the CPPNM by 2014. However, he noted several opportunities. First, there is increased worldwide awareness on nuclear security issues and recognition of the IAEA's leading role in nuclear security. He noted the IAEA's continuing role as a global platform to play a proactive, collaborative, and sustainable role in nuclear security and highlighted the 2014-2017 Nuclear Security Plan's seven activity areas.

Findlay began his presentation by noting the advantages and core competencies of the IAEA. First, the IAEA has autonomous and permanent status. As such, small developing countries attach more credibility to the IAEA than the Nuclear Security Summit and are more willing to take the IAEA's advice and assistance than others these countries would consider to have a hidden agenda. Second, the IAEA covers all aspects of nuclear governance—safety, security, and peaceful use—and therefore has a useful capacity to increase awareness in all areas. Finally, the agency has credibility due to its reputation of being technically competent and scientifically oriented. Findlay noted the following four competencies of the IAEA: its ability to convene multilateral meetings to discuss nuclear security; its ability to embed

itself in international conventions for which it is a depositary; its ability to provide assistance and advice to member states; and its ability to establish increasingly respected guidelines.

However, Findlay went on to note several constraints and challenges. First, Findlay critiqued how the IAEA defines itself, saying that the word "platform" is very passive, while "central role" is too proactive considering the IAEA's limited capacity. For example, he noted that following the Fukushima accident, the IAEA said it had a central role in nuclear safety and states expected it to be the "go-to agency" for safety, which it is not. As such, Findlay urged the IAEA to not be too ambitious but also not too passive.

Second, Findlay noted the lack of prominence that nuclear security has in IAEA programs. He said this is not only a bureaucratic problem, but also a political problem, because the IAEA needs to build capacity. He argued that the IAEA needs to have awareness of all its roles and embed nuclear security into them as part of the public goods it can provide. He acknowledged that the Office of Nuclear Security cannot do this by itself.

Third, Findlay noted the lack of transparency about the IAEA's personnel, resources, and how it assesses its future financial needs or spends its budget. Without more transparency, Findlay argued, it is impossible to assess the IAEA's performance, effectiveness, and efficiency, which impedes others' ability to be proactive in arguing for more resources for the IAEA. He urged that it is in the IAEA's interest to be more transparent about its activities, its costs, its personnel, and its needs.

Finally, Findlay pointed to the lack of mandatory elements in the IAEA's nuclear security work. The IAEA provides guidance, not mandatory, enforceable standards. He argued that rather than engage in a political battle to change this, there is instead a need to embed practice in a normative way. For instance, as more states host IPPAS missions on a regular basis and share the results, this could spur healthy competition.

Findlay then cautioned the group to be aware of certain dynamics. First, there is an agency-wide tendency at the IAEA to stovepipe programs that deal with safety, security, and safeguards. He argued for pursuing an agency-wide viewpoint as a way to resolve difficulties that affect the nuclear security portfolio.

The second dynamic is the chicken and egg problem. It is difficult for the IAEA to promote itself as having a central role in nuclear security if it does not have the resources and mandate to do more now. Yet, states are unwilling to give the IAEA an increased role unless it can demonstrate its competency. The lesson is that, while countries should be careful about throwing money at the IAEA, they should also recognize the IAEA's constraints. Either way, the IAEA must prove itself.

Third, Findlay noted that agency culture is to avoid risk. For example, though the IAEA is the depositary for the CPPNM and would be within its rights to instigate a conversation about reporting requirements, it has shied away from this task.

Finally, Findlay suggested the need to think about the IAEA holistically and perhaps come to a budgetary grand compromise that would allocate funds throughout the IAEA by taking into account different

priorities.

In the discussion that followed among Global Dialogue participants, they broadly agreed that the IAEA has a central role to play in nuclear security. There was also a recognition that simply handing over the baton of the Summit to the IAEA was neither feasible nor desirable in the near-term and that the nuclear security community should take advantage of the strengths of all available mechanisms. While the group did not agree on what the IAEA's role should be, substantial progress was made in understanding the IAEA's key competencies and the challenges and constraints the IAEA faces. This enabled the group to think more strategically about the IAEA's ongoing role, particularly after the Nuclear Security Summit series ends.

As with the previous sessions, several common themes emerged and are outlined below.

Role of the IAEA

The reflections about the IAEA's role largely reiterated points made in the presentation. For instance, one participant commented on the high degree of universalization brought by the IAEA, while other participants reiterated the challenge of the IAEA's limited mandate and that broadening this mandate would be difficult. One participant suggested that the issue of non-civilian materials should be treated separately. Another participant urged the group to be mindful of what the IAEA can deliver given its limited resources.

One participant was skeptical about the IAEA's ability to hold meaningful gatherings, arguing that if the conferences at the IAEA continue to be organized as they are, then the IAEA will not work as a successor because we cannot afford for countries to "simply go and make statements." Instead there is a need for interactivity, which she pointed out was also missing at the Seoul Summit.

Ideas for Successor Arrangements

In the discussion, participants further discussed the need for a post-Summit successor and identified several more ideas for successor arrangements. One participant argued that whether to hold a Summit in 2016 or not is irrelevant because a 2016 Summit would not create sufficient time to close the gaps in the system. Instead, the Summit process could devolve to a new vehicle to continue efforts to close the gaps.

One participant noted that the United States hosted a regulators conference and thought this could be continued as part of an ongoing process to address these issues.

One participant took issue with posing a choice between the Nuclear Security Summit and the IAEA. He noted that leaders will decide what to do at the Summit, while the July Nuclear Security Conference is devised by a group of collaborative organizations in an effort to identify what is needed. He said that anything that contributes to nuclear security is good and no system is perfect.

Need for High-Level Participation

The value of high-level participation came up again in this discussion, with one participant stressing the importance of heads of government having opportunities to meet on nuclear security. He argued that the best way to expose leaders to issues is through tabletop exercises that demonstrate a security incident. He explained that this could introduce more energy into the Summit while also addressing the problem of complacency. Another participant noted that a tabletop exercise is being proposed for the World Economic Forum in Davos.

Another participant added that head-of-government attention is needed because "things tend to get stovepiped" in ministries, and another cautioned that a ministerial-level process is unlikely to get the same results as the Nuclear Security Summit.

Other Comments

- One participant noted that if the 2014 Summit is the last Summit, the Dutch need to allocate time to discuss what happens beyond 2014, but if there will another Summit in 2016, Sherpas need to be tasked to come up with a plan for after 2016.
- One participant disagreed with the need for budgetary discipline, noting the urgency of nuclear security. He noted that where an agency puts its money shows its priorities.
- One participant referred back to an earlier suggestion about producing ISO standards, arguing that something based on the IAEA structure would be better than ISO-type standards, as there is not an agreed-upon starting place to create such standards.
- One participant said that one of the functions of the Summit has been to facilitate an interagency dialogue because nuclear security cannot be associated with a single entity. Another participant said the Summit's function has been to strengthen nuclear security.
- One participant noted that one of the advantages of the Nuclear Security Summit is the level of ambition that is achievable because of limited participation.

Breakout Session Report Out and Reactions

Following the plenary sessions, participants were assigned to small groups that met separately. The purpose of these breakout sessions was to allow participants to formulate specific, tangible steps for strengthening the global nuclear security system. The three sessions were:

- Topic 1: Implementing International Assurances
- Topic 2: Identifying and Supporting Industry Contributions to International Assurances
- Topic 3: Establishing the IAEA as a Nuclear Security "Platform."

On the afternoon of Thursday, May 30, volunteers from the three breakout sessions presented their findings.

Topic 1: Implementing International Assurances

The objective of this session was to reach a common understanding of how best to implement international assurances efficiently and cohesively with minimal duplication and for maximal assurance benefit.

To begin, the group was asked "What is the single most important action another country with nuclear material could do to assure you that it is effectively and appropriately securing those materials?" This question generated a list of ideas:

- Communicating and acknowledging difficulties;
- Peer review and publishing the results of peer review;
- Dialogue leading to agreement;
- Strong internal assurances;
- Demonstrations of openness;
- Physical protection measures; and
- Strong and independent oversight mechanism.

Two of these actions generated more support from group members. The first was communicating difficulties. The second was peer review and continuous improvement. With regard to the first action, the group recognized the need for incentives and a vehicle to allow states to communicate difficulties without penalties. The group brainstormed some existing vehicles: Requests for support that can be made of the UNSCR 1540 Committee; best practice exchanges; tabletop exercises; peer review; and bilateral nuclear security assistance.

There also was discussion within the group about clarifying assurances, with one group participant identifying three characteristics of a good assurance measure:

- Comprehensive: Full scope of relevant activities;
- Detailed: Sufficient to measure effective security; and
- Ongoing: Culture of continuous improvement.

As part of the discussion about clarifying assurances, the presenter noted that one group member had asked whether assurances is about something new or the synergy and coordination between existing mechanisms. The presenter clarified that we are not talking about a new or overarching implementation mechanism but recognizing that many different assurance mechanisms are already taking place and the next step in the process is to frame them in a more coherent picture. She explained there is a change in emphasis from taking actions to also communicating activities, practices, and regulations, etc. In addition, the presenter noted that some actions would be voluntary and some would be mandatory, even if they were created for a different purpose (such as UNSCR 1540 reports and CPPNM Article 14, 1 reports). The presenter highlighted a question posed during the breakout session that remained unanswered: Should the approach be à la carte or should there be a core set of actions that all countries participate in?

The presenter explained that the breakout session used IPPAS missions as a case study of how to develop an international assurance mechanism. The group agreed on the need to encourage all states with nuclear materials to undertake regular IPPAS missions that are broad in scope (i.e., broad enough to give confidence and identify practices and improvement), to have follow-up missions after remedial action is taken in order to give confidence that those issues have been addressed, and to publish as much information as possible. However, the group also discussed the need for member states to ensure that the IAEA has the resources to carry out these activities (e.g., financial contributions, in-kind contributions, and experts). The group also considered possible fora for agreeing to principles around IPPAS missions: A Nuclear Security Resolution at the IAEA General Conference; a commitment at the 2014 Nuclear Security Summit; or the G8 Global Partnership, which could provide financial support. However, the group agreed that there is a need for ongoing outreach to encourage the uptake of IPPAS missions or follow-on missions by articulating the benefits and value of IPPAS missions.

One member of the group also drafted some principles for implementing IPPAS missions:

- Broadly adopted;
- Adequately resourced;
- Share outcomes as appropriate;
- Sufficient and timely follow-up;
- Accurately measure effectiveness of security; and
- Standards by which security is measured must be appropriate.

In the discussion with Global Dialogue participants that followed, the theme of information sharing was prominent once again:

- One participant noted that publishing information about peer review missions could present a problem if they reveal vulnerabilities. However, he acknowledged that publishing information about the *process* of how security is being managed, controlled, and how individuals are held accountable (e.g., laws and regulations) is not problematic. Another participant reminded the group that when an IPPAS mission takes place, it is based on an agreement reached by the host country and the IAEA according to conditions set by the host country, including confidentiality.
- One participant reiterated concern about stigmatization of weaknesses. Another participant underlined the importance of authentic and genuine assurance and reminded the group that there are different levels of communication, such as to the public or at the bilateral, small group, or regional level. These options can alleviate some of the stigmatization concerns.
- Similarly, another participant suggested that information does not necessarily need to be made publicly available but available only within the community. For instance, in the context of WANO, information is made available within the community. However, this information is not disseminated to the public. He noted that more general performance indicators are available to the public on the U.S. Nuclear Regulatory Commission's website. The same participant provided an anecdote in which a judge had required a plant to share its security plan with an expert

witness. While this had caused much concern, the plant cooperated, and the concerns did not come to fruition, because the witness was required to go through the same security procedures as someone at the site.

- One participant questioned whether a country can publish enough about its internal vulnerability assessment processes, effectiveness, assessments, testing, etc., that could convince others that it is doing a good job securing its materials without revealing anything sensitive.

One participant again raised the issue of non-civilian materials, pointing out that there has been a lot of focus on IPPAS missions, but that IPPAS missions do not deal with the 85 percent of material that is non-civilian. He urged the group to think more about how to get assurances around this material. He noted that U.S.-Russia cooperation had allowed U.S. experts to have a much better understanding of the Russian security system through sharing of information. The United States also brought Russians to nuclear weapons facilities. However, he argued there needs to be new ideas about how to keep one another assured. He stressed the value in having countries with nuclear weapons participate in visits to help improve confidence that security is being done properly, though he acknowledged that there are some sites that will always be closed to outside visitors.

Finally, one participant stressed that not all IPPAS missions are created equal because they are based on agreement by the host country. A site visit arranged because of a bilateral nuclear cooperation agreement could come to very different conclusions than an IPPAS mission. Another participant noted that the United States is the only country that actually visits sites to ensure that physical protection obligations are being met.

Topic 2: Identifying and Supporting Industry Contributions to International Assurances

The objectives of this session were to develop a list of options for voluntary actions by industry supportive of the international policy discussion on strengthening nuclear materials security, and to craft a strategy for aligning industry contributions with international and national policy development.

The presenter began by asking the question, “Why would industry want to provide assurances?” He listed several possible answers:

- An incident anywhere is an incident everywhere and there would be consequences for all.
- It is important to have confidence from stakeholders, including the public, investors, regulators, and others.
- Assurances drive internal accountability and performance in that general leadership needs to be able to carry responsibility for securing a site. This will inform where money or resources need to be allocated to maintain security. This also reduces the risk of interruptions of operations.
- Assurances ensure a level playing field. It is important to have honest competition and a level playing field.
- Assurance is about communicating, sharing, and profiting from ideas and best practices.
- Nuclear industry should not want only to meet regulator standards but to excel in what it is doing, including security.

The presenter then listed ideas for possible industry assurance mechanisms:

- Industry could commit to security standards or principles to provide goals for industry.
- Security should be incorporated into the corporate governance process.
- Training and certification that ensure competent security personnel—both for operators and regulators.
- Sharing and communicating lessons learned from testing and incidents.
- Peer-to-peer engagement is important, even if it occurs within a country rather than internationally, due to sensitivities.
- Reports on security practices are valuable and do not have to report on security details. Rather, they can report that certain exercises were performed or standards met.
- Regulators could be encouraged to share more information.

The group also responded to the question "What can government do to help?" He listed the following actions that governments could take:

- Give a "green light" to assurances: Enable and encourage industry communication on security efforts through international assurance.
- Support robust security overall, offering or suggesting training.
- Determine what communication the government would like to see.
- Preserve an independent, competent regulator.
- Work together with the same goal: The atmosphere should be constructive and the aim should not be to make the other's life difficult.
- Promote cross-sector gift baskets at the Nuclear Security Summit.

Finally, the presenter provided some examples of principles for industry assurances which the group developed:

- The government sets goals, and industry determines how to provide assurances.
- Recognize the diversity in nuclear industry and that there are different types of companies with different security aspects.
- Assurances should not compromise security.
- Assurances should address legal or economic concerns and ensure a level playing field.

Before opening the topic up for discussion, Hinderstein, as group facilitator, noted that the group's task had been to develop a list of voluntary actions and to create a strategy for aligning government and industry action. She noted that the group did not have a chance to address the role of the regulator, which is the "switching point" between policy makers and licensees. She also noted that many specific ideas were condensed for purposes of the presentation, but included:

- Making public statements: In an annual report, do not just report on what has been done but on what the company intends to do to discharge its nuclear security responsibilities. This provides accountability.

- Inviting observers to performance testing or force-on-force exercises; for instance, government officials can be assured by the execution of a security plan or be educated about what it takes to secure nuclear materials and facilities.
- Governments need to provide support: In order to perform their security missions, facilities need information about the threat environment or background information for personnel reliability checks.

In the discussion with Global Dialogue participants, the following comments were made:

- One participant noted that the relationship between government and industry is top-down, but that industry is the one faced with daily realities. He suggested that industry could propose beneficial legislation to help discharge its security responsibility.
- One participant noted the importance of incorporating security into governance at all levels of an organization and that one of the benefits of assurance by its nature is that it would require the attention of leadership and governing boards in the security mission.
- One participant took issue with the statement that a security incident anywhere is an incident everywhere, noting that while this is true for safety, where blame is cast at industry, this is not necessarily the case with security, which is viewed as more of a government responsibility. Another participant disagreed, saying that if materials were lost because of a security breach, this is a concern everywhere. Another participant clarified that in some countries security is a private company responsibility and in others a government responsibility, and that assurances should be commensurate with responsibility. Another participant also disagreed with the initial statement, making the point that psychologically there is a consequence to industry when a security incident happens because of diminished public confidence. Specifically, the regulator may also react to what happens elsewhere and impose additional requirements.
- One participant asked whether there had been any discussion about the possibility of shared space for governments, industry, and civil society, which could be a format for discussing assurances. He noted that this is only done on the sidelines of the Summit. The presenter for the topic answered that cross-sector gift baskets were mentioned in the context of aligning the interests of industry and government, with specific ideas being: sharing information; peer review; certification.
- One participant noted that a discussion of the security responsibility of industry should take into account the development of national infrastructure in a country requesting new technology. He argued that industry should say that before providing new technology there must first be a national infrastructure. He noted that this is already the case for safety, but should also be done for security.

Topic 3: Establishing the IAEA as a Nuclear Security "Platform"

The objectives of this session were to analyze capacity gaps of the IAEA in a strengthened global nuclear security system and generate a series of ideas for what process or processes can build support for an

expanded role of the IAEA.

The presenter began by stressing that the group did not spend time defining "platform." The group did discuss the IAEA's role, however. First, the IAEA is one of several entities supporting global nuclear security. Second, even though the IAEA has a central role in the process, we should not expect that the IAEA should be everything in nuclear security or to cover all aspects of security. This is not realistic, desirable, or necessary. Instead, the IAEA is one of many "ecosystems" that are active on the issue. However, the group agreed that the role of the IAEA must be strengthened to help fill gaps. For example, the IAEA is a body that could provide coordination with other entities that contribute to nuclear security, such as WINS and the G8 Global Partnership. In that context, it is more appropriate to think about these entities as equals even though the IAEA has an important set of responsibilities. The group also acknowledged that as an institution, the IAEA cannot compel actions and that any action requires leadership from its member states.

The presenter then described the exercise performed by the group, which was to assess how the IAEA could play a role in filling gaps in the system for each of the five characteristics of a strengthened global nuclear security system. The outcome of the discussion was as follows:

Principles	IAEA Role and Gaps
Comprehensive	States should commit to inform their practices on all materials using IAEA guidance
International Standards and Best Practices	• IAEA has authoritative role for standards • Incorporate best practices through cooperation with WINS and other organizations or states • Accelerate guidance development
Internal Assurances	• IPPAS • Strengthen support to regulators on security
International Assurances	• Expand IPPAS - Increase IAEA and Member State capacity • Publish statistics on IPPAS missions • IAEA encourage reporting and provide format and process guidance
Minimization and Elimination of Materials	• Member States commit to minimizing/eliminating materials • IAEA facilitate incentives to decommission HEU facilities

Comprehensiveness: A significant gap in the IAEA mission as it relates to comprehensiveness is that it deals only with material in peaceful use. However, the presenter noted that the IAEA has at least some experience dealing with non-civilian materials and therefore, it is not unprecedented for the IAEA to be involved with those materials. However, he noted that the IAEA's role in this regard would depend on the will of member states, likely in the form of voluntary arrangements to expand the IAEA's mandate.

In addition, these countries could be encouraged to commit to the principle that they will inform their practices on all materials based on IAEA guidance.

International Standards and Best Practices: The presenter noted that the IAEA already has an authoritative role in this area because of its set of guidelines. Even though the guidelines are voluntary, it is important to recognize that they can become binding when incorporated into nuclear cooperation agreements or NSG arrangements. To ensure that the guidelines incorporate best practices, the guidelines should be developed in cooperation with other organizations, like WINS, but should also incorporate best practices from states with non-civilian materials. Finally, the presenter noted the importance of developing guidelines quickly.

Internal Assurances: The group agreed that the IAEA's role in internal assurances comes largely through its IPPAS missions but that the IAEA could also strengthen its support for regulators on security.

International Assurances: The presenter described ways the group had brainstormed for the IAEA to help fill the assurance gap. First, the IAEA could expand IPPAS, but this would require increased capacity both at the IAEA and within member states that provide experts to IPPAS mission teams. Second, the IAEA could publish the statistics of missions, for instance, at a minimum, that a mission is taking place. Finally, the IAEA could also encourage visibility of the results and encourage reporting by providing a format and process for such reporting to take place, as well as providing assistance.

Minimization and Elimination of Materials: The presenter acknowledged that the IAEA already does work in this area by supporting minimization and elimination efforts, but that it could expand its role by developing incentives to expand these activities.

Finally, the presenter noted cross-cutting themes. First, countries involved in the Nuclear Security Summit could act as a community within the IAEA to strengthen the IAEA's role. Second, there is a need for greater leadership from all member states on strengthening nuclear security in the context of the IAEA. Third, there is a need to make sure that implementation of standards and guidance is effective, which is difficult because of their voluntary nature. Fourth, comprehensiveness does not just mean covering all material, but also universalizing IAEA membership and participation in all relevant agreements.

In the discussion that followed, several participants commented on the role of the IAEA:

- One participant noted that the exercise undertaken by the group demonstrated how the IAEA can expand into roles that go beyond its original scope, such as assistance on reactor conversion and minimization which takes place outside the Office of Nuclear Security. Another example is the Plutonium Management and Disposition Agreement between the United States and Russia, which involves the IAEA in a non-traditional way. This demonstrates that the IAEA's technical competencies and political authorities can be used in service of other goals.
- One participant suggested that safeguards inspectors could be trained in security issues so that

if they see a glaring security issue, they could report it. He also suggested that the IAEA could ask member states for permission to provide information to the Office of Nuclear Security. Because of the frequency of safeguards inspections, this could provide significant additional information flow on security issues. Another participant expressed concern that not all safeguards inspectors undergo background checks. Another participant pointed to previous missions in which people from the safeguards and safety offices had participated together, though not in the context of a safeguards inspection. This demonstrated the possibility of using technical competencies to solve problems together.

- One participant noted that the session had also addressed the role of the IAEA following the end of the Summit series. He reemphasized the issue of universalization of membership. He noted that the Nuclear Security Summit had been a valuable forum to convene nuclear-weapons states, other nuclear-armed states, and non-nuclear-weapons states on equal footing to discuss issues of common interest. Universalization (which would occur if the Summit process was folded into the IAEA) could dilute some of that. He also warned that having a non-civilian subgroup removes the broader community from the conversation and that a broad community process matters.
- One participant highlighted the need for analysis on what IAEA security functions are essential and strategic, desirable or discretionary.

Some participants also revisited the theme of international assurances:

- One participant reflected upon the emphasis on measures like IPPAS missions and said that the framework should encompass all international obligations regarding security, including UNSCR 1540, the CPPNM, and ICSANT.
- One participant asked what an IPPAS program would look like to provide meaningful assurances in terms of how often a mission should take place and what that would mean in terms of resources, budgets, and experts.

Some participants also discussed the issue of standards. One suggested that there needs to be a platform for regulators to come together and share best practices so that best practices “seep through the layers.” He noted the role of Centers of Excellence in training. Another participant from the breakout session group noted that the group reached a common understanding that the guidance used for IPPAS missions should be considered standards themselves. He reiterated an earlier point that some IAEA standards are now mandatory because of certain agreements and suggested that IAEA guidance should become standards in the future.

Finally, one participant suggested that minimizing materials should go hand-in-hand with greater technical assistance.

Recommendations and Next Steps

In the final session of the Global Dialogue, Rohlfing reflected on the discussions and outcomes of the

meeting. She highlighted substantive observations about the successor arrangements issue, findings for the ongoing Nuclear Security Summit process, and areas for further study, particularly regarding international assurances, non-civilian materials, and the role of industry.

With regard to successor arrangements, Rohlfing acknowledged there was no consensus on a successor arrangement to the Nuclear Security Summit. While there was agreement on the centrality of the IAEA's role, there was recognition that it is not the only entity and the community should take advantage of the strengths of all available mechanisms. By and large, participants did not think that simply handing the baton of the Summit to the IAEA in the near term was feasible or desirable.

Some findings for the Nuclear Security Summit process were as follows:

- There is not yet a system that is built to be sustainable beyond the Nuclear Security Summit process. Doing so will require empowering institutions, developing partnerships with industry, and holding states accountable for their commitments.
- It is important to articulate the principles behind the strengthened global nuclear security system (i.e., the five characteristics) and the Nuclear Security Summit process should lend weight to those principles and further develop them.
- Countries part of the Nuclear Security Summit process could be more effective if they act as a community and continue to lead.

Rohlfing also noted some areas for further study, including:

- Further defining how we implement international assurances, including the full range of assurance mechanisms
- Identifying how to provide assurances around non-civilian materials
- Developing incentive structures to shape behavior
- Coordinating industry activities with policy objectives emerging out of the official process.

In the discussion with Global Dialogue participants that followed, several participants made some final comments not made previously:

- One participant noted that the IAEA cannot act without direction from a "higher level" and that the IAEA is the perfect body to then translate these directions into standards, handbooks, training manuals, etc. The higher level does not always need to be heads of government, but the attention of heads of government is necessary to ensure against complacency.
- Another participant urged that compelling documents and briefings about the threat need to be developed. He suggested we "take a page from the safety world" in writing up incidents and lessons learned that can be transmitted to the appropriate people (with different versions redacted for different audiences). This would underscore the very real threat.
- One participant urged the group to turn the focus back to the core Washington Summit objectives so they are not lost in the institutional building discussion:
    - Fostering nuclear security culture
    - Securing vulnerable materials

    - Taking measures against nuclear terrorists.
- One participant suggested three additional areas for further study:
    - The issue of transparency versus confidentiality
    - The idea of instigating or triggering national reporting through treaties and the IAEA
    - Reporting should be rationalized and relieve the burden on countries.

Next Steps

In ongoing support of the Global Dialogue process, NTI will continue to assess additional analytic needs. Participants are also invited to provide NTI with their suggestions and priorities. All participants, particularly those who are part of the official Nuclear Security Summit process, are encouraged to share the proposition of a strengthened global nuclear security system and relevant practical proposals with colleagues.

To this end, the Global Dialogue page on the NTI website describes the project, the not-for-attribution nature of the discussions, and makes available several resources that have been developed as a result of these meetings. Please visit the Global Dialogue website: http://www.nti.org/globaldialogue. The resources are listed on page 2 of this report.

We look forward to continuing to be in touch with you as we observe developments in the official Nuclear Security Summit process and determine how the Global Dialogue can continue to have the greatest usefulness and impact.

PARTICIPANTS LIST

The following people participated in all or part of the third Global Dialogue on Nuclear Security Priorities:

Mr. Dauren Aben
Senior Research Fellow
Kazakhstan Institute for Strategic Studies

Ambassador Undraa Agvaanluvsan
Advisor
Ministry of Mineral Resources and Energy, Mongolia

HRH Prince Zeid Ra'ad Al-Hussein
Permanent Representative of Jordan to the United Nations
Permanent Mission of the Hashemite Kingdom of Jordan to the United Nations

Professor Matthew Bunn
Associate Professor, John F. Kennedy School of Government
Harvard University

Mr. John Carlson
Counselor
NTI

Ms. Siew Fei Chin
Deputy Resident Representative and Minister-Counsellor
Permanent Mission of the Republic of Singapore to the IAEA

Ms. Deepti Choubey
Senior Director for Nuclear and Bio-Security
NTI

Mr. Charles Curtis
Former Deputy Secretary of the U.S. Department of Energy
President Emeritus
NTI

Mr. Bart Dal
Advisor for Nuclear Security and Safeguards, Sherpa Team for the Nuclear Security Summit Process
Ministry of Foreign Affairs, The Netherlands

Dr. Joanna Dally
Head, CBRN Security Team
Foreign and Commonwealth Office, United Kingdom

Ms. Nilvana Darama
Deputy Political Director
Ministry of Foreign Affairs, Turkey

Ambassador Piet de Klerk
Ambassador of the Kingdom of the Netherlands
The Netherlands Embassy in Amman, Jordan

Mr. Philippe Delaune
Deputy Director for International Affairs
French Atomic Energy Commission

Mr. Philippe Denier
Nuclear Affairs Advisor, Delegation for Strategic Affairs
Ministry of Defence, France

Mr. Greg Dupuy
Consultant
World Institute for Nuclear Security (WINS)

Ambassador Filippo Formica
Permanent Representative to the International Organizations in Vienna
Permanent Mission of Italy to the United Nations in Vienna

Dr. Trevor Findlay
Chair, William and Jeanie Barton Chair in International Affairs, Director, Canadian Centre for Treaty Compliance (CCTC), Professor of International Affairs, Carleton University
and
Research Fellow, Belfer Center for Science and International Affairs, Harvard University

Dr. Robert Floyd
Director General, Australian Safeguards & Non-Proliferation Office
Department of Foreign Affairs and Trade

Mr. Gideon Frank
Director
Israel Electric Corporation Limited

Mr. Amandeep Gill
Minister (Disarmament)
Permanent Mission of India to the United Nations in Geneva

Colonel Keith Harrington
Military Assistant to the Assistant Secretary of Defense for Nuclear, Chemical and Biological Defense Programs
U.S. Department of Defense

Mr. Duncan Hawthorne
President and Chief Operating Officer
Bruce Power, Canada

Ms. Corey Hinderstein
Vice President, International Program
NTI

Ms. Laura Holgate
Senior Director, Weapons of Mass Destruction Terrorism and Threat Reduction
National Security Staff, United States

Dr. Roger Howsley
Executive Director
World Institute for Nuclear Security (WINS)

Mr. Anno Keizer
Security Manager
URENCO Nederland, B.V.

Ms. Olga Kuznetsova
Counsellor
Permanent Mission of the Russian Federation to the United Nations in Geneva

Ambassador Masood Khan
Permanent Representative to the United Nations
Permanent Mission of Pakistan to the United Nations

Dr. Martin Larose
Deputy Director (Policy), Global Partnership Program
Foreign Affairs and International Trade, Canada

Dr. Patricia Lewis
Research Director, International Security
Chatham House

Mr. Jan Lodal
Counselor
NTI

Dr. Khammar Mrabit
Director, Office of Nuclear Security, Department of Nuclear Safety and Security
International Atomic Energy Agency

Mr. Taisuke Mibae
Director, Non-Proliferation, Science and Nuclear Energy Division
Ministry of Foreign Affairs of Japan

Mr. Kees Nederlof
Security Policy Department, Non-Proliferation, Disarmament,
Arms Control and Export Control Policy Division
Ministry of Foreign Affairs, The Netherlands

Dr. Anita Nilsson
President
AN & Associates, LLC, Sweden

Mr. Steve Nesbit
Director, Nuclear Policy and Support
Duke Energy Corporation, United States

Ms. Samantha Pitts-Kiefer
Senior Program Officer, Nuclear Materials Security
NTI

Dr. Pavel Podvig
Director
Russian Nuclear Forces Project

Ms. Joan Rohlfing
President and Chief Operating Officer
NTI

Ms. Deborah Rosenblum
Executive Vice President
NTI

Ambassador Sameh Shoukry
Egyptian Sherpa For Nuclear Security Summit Process
Ministry of Foreign Affairs

Dr. Leonardo Juan Sobehart
Business Development Manager & Head of Nuclear Security at Nuclear Division
INVAP, Argentina

Dr. Page Stoutland
Vice President, Nuclear Materials Security
NTI

Mr. William H. Tobey
Senior Fellow
Belfer Center for Science and International Affairs, Harvard University

Mr. Victor Vasiliev
Deputy Permanent Representative to the United Nations
Permanent Mission of the Russian Federation to the United Nations in Geneva

Mr. Andrew Weber
Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs
U.S. Department of Defense

Ms. Caecilia Wijgers
Coordinator, Sherpa Support Team, 2014 Nuclear Security Summit
Ministry of Foreign Affairs, The Netherlands