



Strengthening US-China Nonproliferation and Nuclear Security Cooperation in the Asia Pacific

**A Conference Report of the
The First US-China Nonproliferation
and Nuclear Security Dialogue**

**by
David Santoro and Ralph A. Cossa**

**Issues & Insights
Vol. 14-No. 11**

Washington, DC
June 2014

Pacific Forum CSIS

Based in Honolulu, the Pacific Forum CSIS (www.pacforum.org) operates as the autonomous Asia-Pacific arm of the Center for Strategic and International Studies in Washington, DC. The Forum's programs encompass current and emerging political, security, economic, business, and oceans policy issues through analysis and dialogue undertaken with the region's leaders in the academic, government, and corporate areas. Founded in 1975, it collaborates with a broad network of research institutes from around the Pacific Rim, drawing on Asian perspectives and disseminating project findings and recommendations to opinion leaders, governments, and members of the public throughout the region.

Table of Contents

	Page
Acknowledgements	iv
Conference Key Findings	v
Conference Report	1
 <u>Appendices</u>	
Appendix A: Conference Agenda	A-1
Appendix B: Conference Participant List	B-1

Acknowledgements

This dialogue is funded by the US Department of Energy's National Nuclear Security Administration.

Key Findings

The First US-China Nonproliferation and Nuclear Security Dialogue

Washington, DC – June 26-27, 2014

The Pacific Forum CSIS, with the support of the Department of Energy's National Nuclear Security Administration, held the first round of the US-China Nonproliferation and Nuclear Security Dialogue in Washington, DC, on June 26-27, 2014. The two-day track-1.5 meeting brought together approximately 25 US and Chinese nuclear experts, scholars, and policymakers, all attending in their private capacity. The meeting compared US and Chinese perspectives on current nuclear dangers, the review process of the Nuclear Nonproliferation Treaty (NPT), nonproliferation noncompliance, crisis management and nuclear-use prevention, nuclear security, and opportunities and challenges to US-China cooperation in these domains. Key findings include:

The best prospects for successful US-China cooperation, both at the bilateral and regional/global levels, are in nuclear security.

Americans and Chinese also view nonproliferation, and crisis management as important areas for US-China cooperation. Cooperation in these areas could form the basis for the nuclear dimension of the “new type” of relations between the United States and China.

To Americans and Chinese, the most serious nuclear dangers come from Pakistan, North Korea, and Iran. Americans regard the possibility of nuclear escalation between India and Pakistan with deep concern; Chinese are less worried. Unlike Americans, Chinese fear Japan's alleged new military activism and worry that it could go nuclear, without much difficulty, given its large stockpiles of nuclear materials.

While most Americans and Chinese focus on “situational” nuclear dangers, some on both sides stress the need to also emphasize “technological” dangers, such as the spread of enrichment and reprocessing technologies.

While Americans generally appear to be more worried than Chinese about nuclear terrorism, the gap in threat perceptions has narrowed in recent years. Since the 2008 Beijing Olympic Games, in particular, China has paid much greater attention to nuclear security.

China's new Center of Excellence on Nuclear Security is an important platform to promote cooperation. Conducting table-top exercises with China on nuclear security could also offer opportunities to enhance mutual understanding of threats and responses and develop an agenda for cooperation. The Cox Report continues to be seen by many Chinese as a significant hurdle to stronger cooperation, however.

Americans and Chinese agree on the goal of nonproliferation, but do not give it the same priority. While Americans afford it high priority, Chinese describe it as “important, but not urgent.” That is why Chinese favor diplomacy to deal with noncompliance, while Americans are more readily prepared to use other tools, including sanctions or force.

Nonproliferation and geopolitics are intimately connected. Like US concerns about Iran's nuclear program, Chinese concerns about Japan's nuclearization potential are rooted in geopolitical dimensions.

The United States and China have a mutual interest in a successful 2015 Review Conference. Both sides view P-5 unity as critical for this, and stress the importance of enhancing relations between the P-5 and the NPT non-nuclear-weapon states (NNWS).

Different types of nuclear crises can emerge in the Asia-Pacific, including nuclear accidents, nuclear terrorist attacks, nuclear proliferation cascades, and nuclear escalation between two nuclear-armed states.

US-China cooperation to prevent and manage a nuclear crisis cannot be discussed out of context. Specific scenarios need to be played out and lessons identified as a first step to help strengthen cooperation. Given the difficulties of doing so at the official level, track-1.5 engagement is seen as particularly well-suited for this exercise.

Approaches matter. While Chinese tend to focus on the probability or likelihood of nuclear crises emerging, Americans focus equal importance on risks and implications, believing that even low probability events must be seriously addressed if the associated consequences are unacceptably high.

Nuclear escalation between the United States and China is unlikely because bilateral relations are stable and the two countries' leaderships mature and cautious. It is not impossible, however, particularly if core interests become involved. This calls for official and sustained dialogue in this area, and the development of confidence-building measures, new communication channels, and greater transparency.

Next steps. Categorization of sub-issue areas is important: developing a typology of nuclear dangers would be useful, as would a typology of nuclear crises in the Asia Pacific. As a first step to encourage both sides to promote a nondiscriminatory nonproliferation regime, it is essential to compare and contrast US and Chinese proliferation threat assessments. Work is also needed to enhance mutual understanding of and approach to nonproliferation noncompliance.

Feeding dialogue results into existing track-1.5 US-China strategic nuclear discussions is critical to facilitate mutual understanding and broader cooperation. It is also important to feed dialogue results into relevant multilateral processes such as the ASEAN Regional Forum (ARF) and the Council for Security Cooperation in the Asia Pacific (CSCAP), which supports multilateral cooperation on countering the spread of weapons of mass destruction, export controls, and nuclear energy safety and security.

Conference Report

Nonproliferation and nuclear security are vital areas for US-China cooperation. This is a key takeaway of the 2012 DOE-sponsored landmark study “Building Toward a Stable and Cooperative Long-term US-China Strategic Relationship” (accessible at http://csis.org/files/publication/issuesinsights_vol13no2.pdf). Specifically, the study calls for more focused dialogue to flesh out each side’s understanding of and approach to these issues in an attempt to identify opportunities and challenges to stronger cooperation, both bilaterally and in Northeast and Southeast Asia.

In response to this recommendation and building upon its longstanding track-1.5 US-China dialogues on nuclear strategic dynamics, the Pacific Forum CSIS, with the support of the Department of Energy’s National Nuclear Security Administration (DOE/NNSA), in 2014 launched the “US-China Nonproliferation and Nuclear Security Dialogue.” This dialogue is composed of three workshops: the first to assess how each side perceives, assesses, and approaches nonproliferation and nuclear security challenges, and the next two focused on what both sides can do jointly to address these issues in Northeast Asia and Southeast Asia, respectively. This project aims to chart a way forward for how the United States and China can better work together (as well as with others) to respond to nonproliferation and nuclear security challenges.

The Pacific Forum CSIS held the first workshop in Washington, DC, on June 26-27, 2014. The meeting gathered approximately 25 US and Chinese nuclear experts, scholars, and policymakers, all attending in their private capacity. The meeting compared perspectives on nuclear dangers, the Nuclear Nonproliferation Treaty (NPT) review process, nonproliferation noncompliance, crisis management and nuclear-use prevention, nuclear security, as well as opportunities and challenges to enhance US-China cooperation in these domains.

Defining Today’s Nonproliferation and Nuclear Security Priorities: What to Worry about Most – and Why

Toby Dalton (Carnegie Endowment for International Peace) kicked off this session by explaining that the US foreign-policy community identifies three actor-specific nuclear threats to the US homeland and broader US interests: Pakistan, Iran, and North Korea. Concerns about Pakistan stem from the co-location of sizable quantities of fissile material and extremist groups with intent and demonstrated capability against the Pakistani state, as well as stated ambition against international targets. The prospect of Iran with nuclear weapons is seen by Washington as destabilizing to the Middle East and a threat to the nonproliferation regime, especially if other regional states follow suit and develop their own nuclear weapons. Finally, the United States is concerned that North Korea may soon become capable of targeting the US homeland with nuclear-tipped missiles and may proliferate nuclear and missile technologies to client states and non-state actors; an additional concern is that the North Korean leadership might be tempted to engage in aggressive conventional warfare activities, in the belief that its increasingly sophisticated

nuclear deterrent enables it to control escalation. Of these three nuclear dangers, the North Korean problem has the greatest potential impact on US-China relations and Asia-Pacific security more generally.

From a US perspective, another nuclear danger bears observation: evolving nuclear dynamics in South Asia. The strategic situation in the Indian sub-continent is of deep concern to the United States because there are increasing asymmetries in nuclear and conventional capabilities between India and Pakistan, no shared vision about nuclear weapons or the development of strategies for escalation dominance. Moreover, policymakers in both states place significant trust in nuclear deterrence and do not question its core principles, despite changing technology and posture. Another concern is escalation to nuclear use following a crisis initiated by a terrorist attack in India attributed to Pakistan.

Zhu Feng (Peking University) stressed that the Chinese foreign-policy community identifies four nuclear dangers: North Korea, Iran, Pakistan, and Japan. Topping China's concerns is North Korea. With the Six-Party Talks stalled since 2009 and North Korea's steady nuclear and missile developments, there is no good prospect for denuclearization. Moreover, there is a risk that Kim Jong Un might engage in nuclear adventurism and provoke a nuclear crisis in the region. Another potential problem is North Korea's collapse, which could significantly increase nuclear dangers because the safety and security of its nuclear weapons and fissile materials are not guaranteed.

Second on the list of China's top nuclear dangers is Iran. Despite the conclusion of the Geneva Action Plan, it remains to be seen if Washington and Tehran can conclude a comprehensive agreement on the nuclear issue, and instability throughout the Middle East does not provide fertile ground for this. China's third concern is Pakistan and the risk that the nuclear-armed country collapses or that terrorists seize control its nuclear weapons or fissile materials to carry out attacks. Finally, China identifies Japan's huge stockpile of nuclear materials, which allegedly gives the country a quick breakout capability, as a clear nuclear danger. Beijing is concerned that Tokyo may decide to go nuclear, particularly in the context of Shinzo Abe's alleged new military activism (and the political and constitutional changes he is promoting in Japan).

While both the United States and China identify Pakistan, North Korea, and Iran as primary nuclear dangers, there were differences regarding each country's top concern. Americans see Pakistan is the United States' top nuclear danger because it is a fragile nuclear-armed state where terrorism activity is rampant. Even though Americans stressed that they have confidence that Pakistani authorities strive to maintain the highest standards of nuclear security over its nuclear arsenal and fissile materials, concerns run high in Washington. Chinese, for their part, expressed concerns about Pakistan, but stressed that they worry more about North Korea. Americans suggested that there may be potential for US-China cooperation to enhance nuclear-weapon security in Pakistan. Chinese disagreed, explaining that Pakistani authorities are more concerned about having their nuclear weapons stolen by the United States than by India, or even the Taliban. Given US and Chinese shared concerns about Pakistan and China's special relationship

with Islamabad, it was suggested, as an alternative and as an example of Beijing's nuclear-security leadership, that China conduct quiet dialogue with Pakistan about nuclear-weapon security and that it explain the benefits of maintaining a "lean and effective" arsenal, especially as Pakistani authorities are contemplating the development of a much larger (and potentially ineffective) arsenal.

Next, Chinese voiced deep concerns about the trajectory of Japan's security policy under Shinzo Abe and its nuclearization potential. They pointed to the country's large stockpiles of fissile materials and its commitment to put the Rokkasho facility online as evidence of Japan's determination to maintain at least a "breakout capability." Some Chinese recommended that the problem could be solved if all fissile materials were removed from Japan. When pressed, Chinese qualified their claims, stressing that Beijing's worries should not be overstated: China is confident that Japan will not go nuclear any time soon, but believes that it is no longer a remote possibility because discussions about these issues are no longer considered taboo in Japan.

Following a discussion about the lead-time needed for Japan to go nuclear (which led to a recommendation for a study to conduct a net assessment on the matter), Americans noted that, from their perspective, the prospects for Japan's nuclearization are low, if not nonexistent. They stressed that Tokyo maintains the highest standards of nuclear safeguards, good cooperation and transparency with the International Atomic Energy Agency (IAEA), and that most of Japan's plutonium stocks are not on its territory (or have been given up). Americans also added that the US extended deterrent eliminates Japan's need for independent nuclear weapons and, in any case, they pointed out that "nuclear allergy" is still a powerful force in Japan. Chinese were not convinced. Still, a US participant noted that this discussion about Japan's nuclearization potential is useful because Chinese concerns about Japan, which are deeply rooted in geopolitical dimensions, are not dissimilar to US concerns about Iran. Comparing and contrasting each threat assessment, therefore, would be a useful exercise because it could encourage both countries to build a nondiscriminatory nonproliferation regime.

Americans then asked their Chinese counterparts if they are concerned about India because the latter, unlike Japan, is a nuclear-armed state targeting China. Americans also asked if China worries about India-Pakistan strategic nuclear dynamics more generally (particularly in the wake of a possible nuclear policy change under India's new Modi administration). Chinese responded that they are concerned about India, but much less so than about Japan. While acknowledging the many uncertainties about India-Pakistan dynamics, Chinese explained that they believe it to be relatively stable at the moment.

Finally, a few Americans and Chinese contended that while "situational" or "actor-specific" concerns are a useful metric to assess nuclear dangers, it is also helpful to focus on "technological" problems, such as the spread of enrichment and reprocessing technologies. Focusing on technological problems is a less political approach that may facilitate US-China cooperation. These remarks led to a recommendation that Americans and Chinese draft a typology of nuclear dangers.

Advancing the NPT Review Process and other Nonproliferation Instruments

Liu Xiaoming (China Arms Control and Disarmament Association) explained that China considers the NPT to be essential to maintain international peace and security. While China and the United States, as P-5 members, are both beneficiaries of the NPT and have many common interests in a successful review process, it is also critical for them to address the legitimate concerns and rights of all non-nuclear-weapon states (NNWS).

In the lead-up to the 2015 NPT Review Conference (RevCon), our Chinese speaker made several recommendations, including enhancing P-5 unity, finding a proper balance between P-5 and NNWS interests, reaching a comprehensive nuclear deal with Iran before the July 2014 deadline, thinking outside the box about the North Korean nuclear problem (with Washington starting a bilateral dialogue with Pyongyang to eventually restart the Six-Party Talks), encouraging all P-5 members to participate in the movement on the humanitarian impact of nuclear use, and promoting the establishment of a zone free of weapons of mass destruction in the Middle East. Particularly important is to invest in the P-5 diplomatic process, which contributes to advancing the goals and objectives of the NPT (and where China is leading the work of the P-5 Working Group on the Glossary of Definitions for Key Nuclear Terms). Other efforts outside official channels are worthwhile. Our speaker, for instance, suggested that a center of excellence on nonproliferation, modeled on the center of excellence on nuclear security, be created to make progress on the NPT review process and other nonproliferation agreements, especially strategic trade controls.

Lewis Dunn (Science Applications International Corporation) began his presentation by reminding participants of the legacy of the 2010 RevCon, including that it concluded a strong, substantive action plan across the three NPT pillars and demonstrated the ability of its parties to work together to achieve a constructive outcome. Another important aspect is the growth of the movement on the humanitarian consequences of nuclear use, which is unlikely to fade away. While the NPT review process seems to be proceeding well, there remain important underlying issues between the P-5 and NNSA, particularly over nuclear disarmament.

A successful RevCon should include full and frank discussion about the “health” of the NPT and that its parties should agree on a five-year vision for the future with practical and effective ways to implement the Action Plan. The United States and China have an interest in ensuring that the RevCon is a success because the NPT is a key element of the broader US-China political-military relationship and because it helps reduce uncertainties and strengthen mutual reassurance and predictability between the two countries. Our speaker recommended that the United States and China should promote the start of negotiations for the conclusion of a fissile material cut-off treaty, reach general agreement on how to prevent or respond to North Korean proliferation provocations, strengthen safeguards for advanced nuclear-fuel-cycle activities, or engage in verification activities. As members of the P-5, the United States and China should also strengthen the P-5 diplomatic process and propose the creation of an institutionalized dialogue between

the P-5 and NNSA on nuclear disarmament and a P-5-only sub-group on minimizing the risk of nuclear use.

Americans and Chinese concurred that they have a mutual interest in a successful 2015 RevCon. Both sides were also in sync in viewing P-5 unity as critical for this, and they agreed on the importance of enhancing relations between the P-5 and NNWS to ensure that the NPT review process stays the course.

However, Americans and Chinese have few illusions about the prospects of a successful RevCon in 2015. Both anticipate an uphill battle between the P-5 and NNWS, particularly over the alleged lack of progress toward nuclear disarmament. Moreover, while acknowledging that the P-5 diplomatic process has been relatively successful so far, participants on both sides raised concerns that tensions with Russia over the Crimea issue may foreshadow a rough ride ahead for P-5 unity.

The proposals put forward by our US speaker for the creation of an institutionalized dialogue between the P-5 and NNWS and a P-5 sub-group on minimizing the risk of nuclear use generated much interest. Both proposals received relatively strong support from Americans. Chinese were more skeptical. With regard to the proposed P-5/NNWS dialogue, Chinese asked who the NNWS would be, and if the dialogue would include proliferators. Americans responded that such dialogue should include core NNWS from the major NPT “blocs” and that the effort would be an attempt to bridge the gap between “nuclear haves” and “nuclear have-nots.” It would be particularly important to bring together the P-5, which endorse an incremental approach to nuclear disarmament, and the NNWS, many of which back ideas promoted by the movement on the humanitarian consequences of nuclear use, including the need to eliminate nuclear weapons rapidly.

The P-5 sub-group on minimizing the risk of nuclear use received more consensual support from both sides. A question was raised about the benefit of working on this problem within the P-5 context or bilaterally, to which most people responded that the two approaches are not necessarily mutually exclusive.

Nonproliferation Noncompliance – Priorities and Cooperation

Leonard Spector (James Martin Center for Nonproliferation Studies) explained that US and Chinese thinking on noncompliance overlap substantially in terms of goals, but differ in terms of the priority and effort devoted to achieving them. The United States is active in its efforts to counter noncompliance. In contrast, China is more circumspect in its approach to the problem which can be described as “responsible but cautious.” Moreover, its relations with North Korea and Iran differ considerably from the United States: Washington sees them as adversaries and Beijing does not, mainly for geopolitical reasons.

This explains, on the one hand, why China is committed to restricting illicit transfers to noncompliant states, why it has complied with crucial US economic sanctions against Iran, and why it has reacted strongly to North Korea’s third nuclear test. This also

explains, on the other hand, why China has blocked the targeted sanctioning of several individuals and entities, why its implementation of UN Security Council sanctions resolutions has been weak overall, why it refrains from significantly upping the pressure against North Korea, why it has failed to implement and enforce effective export controls on dual-use nuclear and missile commodity transfers to Iran and North Korea, and why it remains excluded from the Australia Group and the Missile Technology Control Regime (MTCR).

Fan Jishe (Chinese Academy of Social Sciences) explained that Chinese thinking about noncompliance is not solely focused on nonproliferation. It also encompasses the disarmament and peaceful use NPT pillars. China's basic position is that (1) nuclear disarmament is a key component and should be pursued actively; (2) a balance should be struck between nonproliferation and the peaceful use of nuclear technology; and (3) proliferation crises should be addressed with political and diplomatic means because "it is always controversial to judge noncompliance," and full authority should be given to the United Nations and other relevant organizations.

More specifically, China is uncomfortable with double standards when it comes to matters of noncompliance. To Beijing, states with enrichment and reprocessing capabilities should be treated in a nondiscriminatory manner, regardless of the type of cooperation they have with the IAEA. States should also refrain from engaging in assisting others to develop enrichment and reprocessing capabilities, and all future civilian nuclear cooperation should bar recipient countries from acquiring such capabilities. Finally, there should not be any nuclear cooperation with non-NPT nuclear-armed states.

During the discussion, Chinese explained that China has limited leverage over North Korea and that it is a mistake to believe that Beijing, if it so chose, could push Pyongyang toward denuclearization. They explained that China has been active in trying to restrain North Korea in recent months, so much so that Pyongyang "is getting angry with us." Americans expressed skepticism and asked what China would do if North Korea were to conduct a fourth nuclear test, which the Chinese leadership has often described as a "dangerous, pivotal event." Chinese participants did not provide a specific answer. Moreover, when pressed on how China could cooperate with the United States to deal with North Korea, Chinese explained that Beijing is reluctant to "be seen as working with Washington."

Some Chinese reminded their US counterparts that "overall nonproliferation is not a real priority for China." Others stated that Beijing thinks of nonproliferation as important, particularly in the context of the nuclear renaissance, but that, to China, "political thinking means more." One Chinese insisted that nonproliferation ranks higher on China's foreign-policy priorities than in the past and he stressed that in view of concerning developments in Xinjiang and Central Asia, Beijing is likely to pay more attention to nonproliferation (and nuclear security) in the years to come.

A discussion followed on the consistency of US and Chinese approaches to nonproliferation, and noncompliance in particular. Pointing to US nuclear policy toward India and Israel, Chinese argued that Beijing's nuclear policy has been more consistent than the United States'. While some Americans argued that US nonproliferation policy has sometimes left much to be desired, all maintained that the United States has been very consistent. Americans added that Chinese policy, in contrast, has had some serious misgivings, which explains why China, to this day, remains barred from membership in many multilateral export controls regimes, such as the MTCR. Chinese countered that Beijing has significantly improved its export controls policy since the early 2000s, and added that the Ministry of Commerce, in recent weeks, has established several brand new bureaus to manage trade of sensitive goods. Americans recognized that Chinese efforts have been substantial, but maintained that China is still not "MTCR-worthy." They also stressed that most problems are the result of actions by entities within China, as opposed to actions by the Chinese government.

Preventing a Nuclear Crisis and Nuclear Use

Guo Xiaobing (Chinese Institutes of Contemporary International Relations) opened by saying that nuclear crises are most likely to break out in the Asia Pacific because the region includes six out of the nine states possessing nuclear weapons and there are several tense situations, rapid development of nuclear power, accumulation of fissile materials, a number of terrorist groups, and few regional mechanisms to talk about nuclear issues. On the Korean Peninsula, options are limited to deal with North Korea's nuclear and missile developments: the Six-Party Talks, which have not met in six years, remains the only feasible framework to deal with the problem. Similarly, should there be a light-water-reactor accident in North Korea, it is difficult to envision how the problem could be addressed, especially because Pyongyang's nuclear program has both military and civilian dimensions.

Meanwhile, efforts to prevent a nuclear proliferation cascade in East Asia should include investments in an international fuel bank, the enhancement of IAEA safeguards, the promotion of proliferation-resistant technologies, and tighter export controls. The United States and China have an interest in investing and cooperating in all these areas. US-China cooperation is also critical to encourage India and Pakistan to engage in confidence-building measures and reach stable strategic stability. Cooperation among the nuclear security centers of excellence in China, Pakistan, India, South Korea, Japan, and Kazakhstan is also important to prevent terrorism in the region.

Michael Swaine (Carnegie Endowment for International Peace) explained that there are two types of possible nuclear crises in the Asia Pacific: political-military crisis with the potential of escalation to nuclear use and an incident leading to a nuclear proliferation cascade. Nuclear crises are most likely to take place on the Korean Peninsula or in South Asia, although some could also break out over Taiwan or over territorial and maritime issues in the East China Sea.

On the Korean Peninsula, conceivable pathways to a nuclear crisis include the testing of a miniaturized nuclear warhead on a missile delivery system by North Korea, a North Korean decision to employ nuclear threats to get concessions from Washington and Seoul, a North Korean nuclear threat emerging as a result of domestic political calculations, a North Korean decision to use or threaten to use nuclear weapons following its defeat at the conventional level, and a “loose nuke” scenario. Meanwhile, in South Asia, nuclear crises would be more dangerous because both India and Pakistan are nuclear-armed states with strategies of escalation dominance. Possible pathways include the unauthorized use of nuclear weapons by military leaders, the employment of tactical nuclear weapons by Pakistan early in a conflict, a Mumbai-like terrorist incident that triggers an attack on Pakistan, or, as in the case of the Korean Peninsula, a “loose nuke” scenario.

Our US speaker explained that the United States and China have limited room to maneuver to prevent/manage nuclear crises. The best use of their time would be to clarify how each would react to a crisis. Such information-sharing could be conducted through a joint risk reduction center. Other efforts include the adoption of confidence-building measures, particularly on signaling, and hotlines that link the right people on both side and have a clear and mutually-agreed communication protocol in place.

The discussion began with a focus on the possibility of a nuclear crisis on the Korean Peninsula. Participants on both side argued that Pyongyang may decide to use nuclear weapons in a contingency if it believes that the United States is determined to go after the North Korean regime. One participant argued that the challenge, therefore, is to communicate to Pyongyang that Washington does not seek to threaten the regime (if that’s the case) and that Beijing may have a role to play in delivering that message. Several Americans, however, questioned if there are any scenarios where the United States would wage a limited war with North Korea. They added that signaling to Pyongyang that, for instance, a North Korean attack on Seoul would not necessarily trigger a massive US response would undermine deterrence and be counterproductive.

This discussion revealed that US-China cooperation to prevent or manage a nuclear crisis cannot easily be discussed divorced from the particulars of context. Instead, specific scenarios need to be played out and lessons identified as a first step to help strengthen cooperation. Given the difficulties of doing so at the official level, participants suggested that track-1.5 engagement is particularly well-suited for this exercise. They concurred that it would make sense to work on a scenario involving a nuclear crisis between India and Pakistan because this is where such a crisis is most likely to break out. Participants also recommended that track-1.5 efforts take on the task of drafting a US-China typology of nuclear crises, which can take various forms (e.g., nuclear accidents, nuclear terrorist attacks, nuclear proliferation cascades, or nuclear escalation between two nuclear-armed states) and would likely lead to different US and Chinese responses. Precisely, it was emphasized that while Chinese tend to focus on the probability or likelihood of nuclear crises, Americans put equal importance on risks and implications, believing that even low probability events must be seriously addressed if the associated consequences are unacceptably high.

Finally, the risk of nuclear escalation between the United States and China was mentioned. Participants on both sides suggested that this is unlikely because bilateral relations are stable and the two countries' leaderships mature and cautious. It is not impossible, however, particularly if core interests become involved. This calls for official and sustained dialogue in this area, and the development of confidence-building measures, new communication channels, and greater transparency.

Nuclear Security: Ongoing Threats, Building Global Cooperation

William Tobey (Harvard University) explained that there are three types of nuclear terrorism: via nuclear explosives, nuclear sabotage, and "dirty bombs." He stressed that terrorists have tried - and continue to try - to get their hands on nuclear materials and even nuclear weapons. Even though the core of Al Qaida is now profoundly disrupted and nuclear security standards have improved considerably, the nuclear terrorism threat has not disappeared because many nuclear materials remain insecure. Because "nuclear terrorism anywhere would be a catastrophe everywhere," there cannot be any room for complacency.

There are important opportunities for US-China cooperation on nuclear security. Both countries should make a joint commitment to excellence at the 2016 Nuclear Security Summit, support the World Institute for Nuclear Security, coordinate their follow-up activities after each summit, commit to implement the amended Convention on the Physical Protection of Nuclear material (CPPNM) and the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT) prior to their entry into force, implement of second-line-of-defense programs, and agree on essential elements of effective physical protection of nuclear materials.

Hui Zhang (Harvard University) explained that since the September 11, 2001 terrorist attacks against the United States, China has made significant progress in improving its nuclear security. The effort has benefited considerably from cooperation between the China Atomic Energy Authority (CAEA) and the US DOE. This cooperation has been characterized by an extensive series of exchanges, including visits to several US facilities to learn nuclear security and accounting techniques; workshops on insider threats, physical protection systems, and nuclear security culture; work on advanced technology for materials protection, control, and accounting of nuclear materials; work to strengthen security and accounting regulations and inspections in China; and cooperation to build a Center of Excellence (CoE) on Nuclear Security.

Current cooperation focuses mainly on the Chinese civilian sector, but personnel from defense facilities also participate because CAEA is responsible for controlling fissile materials nationwide in both military and civilian stockpiles. Still, to better prevent nuclear terrorism, our Chinese speaker argued that US-China cooperation needs to expand from civilian efforts to the military sector because the Chinese military has custody of large stocks of weapon-usable fissile materials and all Chinese nuclear weapons. Without this effort, the benefits of cooperation will remain limited. Specifically, the United States and China should restart the lab-to-lab program, which

was active in 1995-1998 and was designed to help create an interest in China in strengthening security systems by demonstrating the advantages of a modern system for material protection, control, and accounting. As first steps, the program could begin with non-sensitive activities that are mutually beneficial, such as discussions and good-practice exchanges on applications of modern techniques and continuous remote monitoring approaches for the storage of nuclear warheads and sensitive nuclear materials; tracking and monitoring techniques for shipments of fissile materials; and safety and security measures protecting nuclear weapons and nuclear materials. As the lab-to-lab program moves forward, the United States and China may then consider mutual visits and joint work at some selected key sites, among other initiatives.

During the discussion, it quickly became clear that Americans are more worried than Chinese about nuclear terrorism. Nevertheless, Chinese participants echoed their speaker's presentation, explaining that Beijing has paid more attention to the problem since the early 2000s, and particularly since the 2008 Olympic Games. Yet some distinguished the US and Chinese positions: while Beijing is in sync with Washington on the reality of the nuclear terrorist threat at the global level, it remains relatively skeptical that this threat may come from within China. Still, Chinese participants stressed that the gap in threat perceptions between the United States and China is narrowing fast and that, as a consequence, the best prospects for successful US-China cooperation, both at the bilateral, regional, and global levels, are in nuclear security more so than in nonproliferation or crisis management/prevention. One Chinese participant even stated that nuclear security "is an area where both countries should invest to improve their broader relationship." To many Americans, this implied that nuclear security could form a basis for a long overdue definition of the nuclear dimension of the "new type" of relations between the United States and China.

The Cox Report continues to be seen by many Chinese as a significant hurdle to stronger cooperation, however. Americans responded to Chinese concerns by pointing out that the Report does not prevent the development of important cooperative nuclear security activities, including information sharing on methodologies to assess nuclear terrorist threats, for instance.

Building Nuclear Security Cooperation in Asia

Liu Chong (Chinese Institutes of Contemporary International Relations) focused on China's new Nuclear Security Center of Excellence, which is a joint US-China project. When up-and-running (tentatively in late 2015), it will be the largest, most advanced nuclear security center in the region, capable of training up to 2,000 people a year. Its core functions will include nuclear site personnel training, technology research and development, international exchange, and nuclear safety, safeguards, and material control and protection.

The proliferation of centers of excellence in the region and lack of coordination among them could lead to duplication of work and other challenges. Our Chinese speaker

recommended that these centers be more transparent and enhance coordination of their activities as a first step to build nuclear security cooperation in the Asia Pacific.

Page Stoutland (Nuclear Threat Initiative) made a case for a table-top exercise between the United States and China involving a nuclear security incident. He shared his experience conducting a similar exercise between former US and Russian officials.

During this exercise, participants worked through a fictitious scenario as a way to highlight key issues in a real-world event, to provide a streamlined way for participants to better understand what a real situation might involve, and to better understand others' perspectives and priorities. Valuable lessons were identified: it highlighted the ways in which the joint response might fail and pointed out flaws in current postures, prompting participants to make several recommendations for action. A similar effort involving the United States and China could significantly contribute to nuclear security cooperation.

Larry Brandt (Stanford University) talked about a new, soon-to-be-launched collaborative project sponsored by the US Naval Postgraduate School's Project on Advanced Systems and Concepts for Countering WMD (PASCC), and executed by Stanford's Center for International Security and Cooperation (CISAC). The Stanford project will engage a number of organizations in China's civilian nuclear and nuclear-weapon communities. This project is meant to address nuclear security issue areas not currently being tackled by the Nuclear Security Center of Excellence or other, ongoing US collaborative efforts with China. It will exploit CISAC's extensive experience on technical collaborations in radiological and nuclear terrorism.

One aspect of the project will seek to identify, evaluate, and provide detailed implementation paths for substantive engagements in topical technical areas, such as forensics, radiation detection, and radiological threats. A second will focus on the performance of joint systems and risk analyses of selected topics in the radiological and nuclear domains. These joint studies will provide a framework for structuring and communicating US and Chinese perspectives on the threat, system metrics, and overall architecture directions.

Participants on both side recognized that China's new center of excellence on nuclear security is an important platform to promote cooperation. Since work is needed to improve coordination among the nuclear security centers that are emerging in Asia (in an attempt to avoid duplication of efforts and take advantage of economies of scale and comparative advantages of each), participants pointed out that it is important for China's center to find its niche, and to cooperate with the United States to do that. Participants also suggested that such efforts could establish the basis for broader cooperation among these centers, and added that nuclear safety may be a valuable area to focus on for this.

Finally, participants agreed that the United States and China would have much to gain by conducting table-top exercises on nuclear security. This could offer opportunities to enhance mutual understanding of threats and responses, as well as develop an agenda for cooperation.

Conclusions and Next Steps

In addition to summarizing the meeting's key findings, this session focused on specific areas where the United States and China can build cooperation in the nonproliferation and nuclear security domains, as well as in crisis management/prevention. David Santoro (Pacific Forum CSIS) and Miles Pomper (James Martin Center for Nonproliferation Studies) took note of the fact that the United States and China seem to see eye to eye on nuclear dangers, despite some differences. They concurred that developing a typology of nuclear dangers would be a first step to help enhance cooperation. Both speakers highlighted several other "positives" for US-China cooperation that came out during the meeting, including mutual agreement on the importance of a successful 2015 RevCon (and of maintaining P-5 unity), broad concurrence of views on the danger posed by nonproliferation noncompliance, mutual interest in building a nondiscriminatory nonproliferation regime, and recognition by both side that work is urgently needed on crisis management/prevention. They noted several "negatives" as well, however. While the United States and China agree on the goal of nonproliferation, they disagree on its priority and the means to address it, and for all the talk about the need to cooperate on crisis management/prevention, it remains mostly unclear how to effectively build habits of cooperation other than by conducting scenario exercises at the track-1.5 level.

Still, both speakers agreed that a promising area of cooperation for the United States and China is in nuclear security. China's Nuclear Security CoE holds much hope and should become a basis for bilateral cooperation. Table-top exercises on nuclear security should also be conducted, with priority given to cyber issues and radiological sources. The United States and China should also cooperate to deal with nuclear-security issues involving third countries; while it is politically difficult to do so in some countries (e.g., North Korea or Pakistan), it may be possible to do so elsewhere. At the global level, the United States and China should make a commitment to minimize (and eventually eliminate) highly-enriched uranium by the fourth Nuclear Security Summit in 2016.

Hua Han (Peking University) focused her presentation on nuclear security and concurred with US speakers that this constitutes a promising area for US-China cooperation. She stressed that current developments, in particular the dangers associated with the nuclear renaissance, are likely to make nuclear security even more central to US-China cooperation than it already is. At the track-1 level, she recommended cooperation via China's CoE as well as via the Radiation Detection Training Center at Qin Huangdao. She also praised the value of track-1.5 efforts, including this dialogue and programs led by CISAC and Harvard University.

More specifically, our Chinese speaker proposed the following items for a US-China cooperation agenda: (1) promoting a nondiscriminatory nonproliferation regime, including restrictions on the spread of enrichment and reprocessing technologies, controls over nuclear-grade plutonium, and action to encourage the entry into force of the Southeast Asian Nuclear-Weapon-Free Zone; (2) encouraging cooperation among the Northeast Asian Nuclear Security CoE; and (3) developing a nuclear security culture in the Asia Pacific.

During the discussion, participants concurred that while efforts at promoting US-China cooperation on the nonproliferation and crisis management/prevention fronts are laudable and should continue, nuclear security (and nuclear safety) cooperation between the United States and China has the best chance of success. Americans stressed that it could help define the nuclear dimension of Xi Jinping's "new type" concept. All participants agreed that cooperation among the Northeast Asian Nuclear Security CoE is needed and many also emphasized the need to capitalize on the recently-established ASEAN Network of Regulatory Bodies on Atomic Energy, or ASEANTOM to encourage nuclear security (and safety) cooperation in Southeast Asia. Participants recognized the importance of strong US-China cooperation to make progress toward these goals in both regional settings, and stressed that this dialogue could play a pivotal role in this process.

It was also recognized that feeding dialogue results into track-1.5 US-China strategic nuclear discussions is critical to facilitate mutual understanding and broader cooperation between the two countries. Moreover, it is important to feed dialogue results into relevant multilateral processes such as the ASEAN Regional Forum (ARF) and the Council for Security Cooperation in the Asia Pacific (CSCAP), which supports multilateral cooperation on countering the spread of weapons of mass destruction, export controls, and nuclear safety and security.

APPENDIX A

The First US-China Nonproliferation and Nuclear Security Dialogue

Washington, DC – June 26-27 2014

Agenda

Thursday, June 26, 2014

9:00 **Welcome Remarks**

9:15 **Session 1: Defining Today's Nonproliferation and Nuclear Security
Priorities: What to Worry about Most – and Why**

This session will compare and contrast US and Chinese perspectives of nuclear dangers. What is each country's assessment of proliferation and nuclear terrorism threats in and outside the Asia Pacific? What are the most worrying threats and the most pressing issues to address, both in the nonproliferation and nuclear security domains? Why?

Toby Dalton
Zhu Feng

10:45 **Coffee Break**

11:00 **Session 2: Advancing the NPT Review Process and other Nonproliferation
Instruments**

This session will focus on the nonproliferation regime. What are US and Chinese perceptions of and approaches to the NPT review process? How can US-China cooperation be strengthened in the lead-up to the 2015 Review Conference? How can China's role as a mediator between NWS and NNWS contribute to success? What is success? What contributions can the United States and China make in the P-5 diplomatic process? Can we find a way to ratify the SEANWFZ Protocol? What contributions can the United States and China make to improve strategic trade management in the region?

Liu Xiaoming
Lewis Dunn

12:30 **Lunch**

13:45 **Session 3: Nonproliferation Noncompliance – Priorities and Cooperation**

This session will look at nonproliferation noncompliance. What are US and Chinese perceptions of and approaches to noncompliance? What constitutes noncompliance for the United States and China? Is noncompliance a threat to the NPT? What are the similarities and differences in US and Chinese assessments?

How can the United States and China work together to ensure the successful implementation should there be a P-5+1 deal with Iran?

Leonard Spector
Fan Jishe

15:15 Coffee Break

15:30 Session 4: Preventing a Nuclear Crisis and Nuclear Use

This session will focus on preventing nuclear crises and nuclear use. How might a nuclear crisis or nuclear use come about in the Asia Pacific region? What can the United States and China do together to prevent and manage a nuclear crisis? What can each side do together to help prevent nuclear use? [Scenarios should focus on the possibility of a nuclear crisis/use on the Korean Peninsula or in South Asia, or involving a non-state actor.]

Guo Xiaobing
Michael Swaine

17:00 Session Adjourns

Friday, June 27, 2014

9:15 Session 5: Nuclear Security: Ongoing Threats, Building Global Cooperation

This session will examine the components of the nuclear security regime and the Nuclear Security Summit process. What are US and Chinese perceptions of the most important nuclear security threats today in the Asia Pacific? Globally? How can US-China cooperation be built to meet those threats, including by strengthening the regime and by advancing the goals of the Summit process? What can the United States and China do to implement the results of the 2014 Summit? [Discussions about the US-China nuclear security center of excellence should be withheld to the following session.]

William Tobey
Hui Zhang

10:45 Coffee Break

11:00 Session 6: Building Nuclear Security Cooperation in Asia

This session will focus on building nuclear security cooperation in the Asia Pacific, with a focus on the role of China's new nuclear security center of excellence. What is the current status of the center? What are/should be its goals? How can the center be best utilized to enhance nuclear security not only in China, but also in the Asia Pacific? What other cooperative actions should the United States and China consider to strengthen cooperation and preparedness to respond

to nuclear security threats in or transiting via the Asia Pacific? Can the Center of Excellence strengthen implementation of UNSCR 1540?

Liu Chong
Page Stoutland
Larry Brandt

12:30 **Lunch**

13:45 **Session 7: US-China Cooperation on Nonproliferation and Nuclear Security in the Asia Pacific: A Working Agenda**

This session will reflect on next steps for future cooperation between the two countries on nonproliferation and nuclear security in Northeast Asia? In Southeast Asia? What is the baseline for cooperation? What are the opportunities and challenges to enhance such cooperation? What specific issues should the United States and China prioritize in the near- to medium-terms?

Miles Pomper
Hua Han

15:15 **Meeting Adjourns**

18:00 **Closing Dinner**

APPENDIX B

The First US-China Nonproliferation and Nuclear Security Dialogue

Washington, DC – June 26-27 2014

Participant List

China

1. FAN Jishe
Senior Fellow
Chinese Academy of Social
Sciences
2. GUO Xiaobing
Associate Researcher
Chinese Institutes of Contemporary
International Relations
3. HAN Hua
Director
Center for Arms Control and
Disarmament
Peking University
4. HU Yumin
Research Fellow
China Institute for International and
Strategic Studies
5. HUI Zhang
Senior Research Associate
Project on Managing the Atom, Belfer
Center, Harvard University
6. LIU Chong
Executive Chief for Arms Control and
Military Strategy
Institute of Arms Control and Security
Studies, China Institutes of
Contemporary International Relations
7. LIU Xiaoming
Director of the
Nonproliferation Program
China Arms Control and
Disarmament Association
8. Meicen SUN
PhD Candidate
Department of Political Science
University of Pennsylvania
9. ZHU Feng
Professor
Peking University, and
Visiting Fellow
Brookings Institution

US

10. James ACTON
Senior Associate
Carnegie Endowment for International
Peace

Larry BRANDT
Visiting Scholar CISAC
Stanford University
11. Toby DALTON
Deputy Director, Nuclear Policy
Program
Carnegie Endowment for International
Peace

12. Lewis DUNN
Senior Vice President
Science Applications International
Corporation
13. Miles POMPER
Senior Research Associate
James Martin Center for
Nonproliferation Studies
14. Leonard SPECTOR
Deputy Director
James Martin Center for
Nonproliferation Studies, Washington
Office
15. Page STOUTLAND
Vice President
Nuclear Materials Security
Nuclear Threat Initiative
16. Michael SWAINE
Senior Associate, Asia Program
Carnegie Endowment for International
Peace
17. William TOBEY
Senior Fellow
Belfer Center for Science and
International Affairs

USG Observers

18. Robert H. GROMOLL
Director Office of Regional Affairs
US Department of State
19. Charles MAHAFFEY
Senior Foreign Affairs Officer
US Department of State
20. Robert SWARTZ
Senior Advisor
National Nuclear Security
Administration
US Department of Energy

Pacific Forum CSIS Staff

21. Ralph COSSA
President
Pacific Forum CSIS
22. Raj KOLLURU
Research Intern
Pacific Forum CSIS
23. David SANTORO
Senior Fellow
Pacific Forum CSIS