

Nuclear Security and Safety

Nuclear Security Summits: Drivers, Progress and Prospect

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The challenge of nuclear security is the one shared by the international community as a whole. According to the IAEA, the term “nuclear security” refers to the prevention and detection of, and response to, theft, sabotage, unauthorized access, illegal transfer or other malicious acts involving nuclear material, other radioactive substances or their associated facilities. Since taking office in 2009, the Obama Administration has invested tremendously to enhance nuclear security around the globe, and made constant efforts to promote nuclear security summits attended by top leaders of various countries worldwide. Since 2010, three nuclear security summits have been held respectively at Washington D.C. in the United States, Seoul in South Korea and Hague in Netherlands, making the nuclear security a center under the spotlight.

At the concluding stage of the 2014 Hague Summit, President Obama announced to host another and also the last nuclear security summit, which would serve as the conclusion of the entire nuclear security series. Having greatly fueled the international community to build the momentum of nuclear security global cooperation, the nuclear security summit is portrayed as the sprint in the marathon, which provides that most of the sprints has been finished, and the sprint of the sprint would be about to come -- an ideal timing to evaluate what the achievements the nuclear summits have already reached and to provide an assessment on the prospect that the 2016 nuclear security summit is likely to face.

The Drivers behind Nuclear Security Summits

In general, there are several factors that

contribute to President Obama’s decision to initiate nuclear security summits series. Firstly, the posture of international nuclear security has made it necessary for the Obama Administration to highlight both the importance and the urgency of nuclear security issues and call for international joint efforts to take necessary measures to address nuclear security challenges. According to the International Panel on Fissile Materials which offers authoritative estimate on global stockpiles of nuclear materials, the stockpiles of highly enriched uranium and separated plutonium have accounted for 1600 tons and 500 tons respectively, which could be used to produce more than 100,000 nuclear weapons. This large amount of existing fissile material has become a risk for the international community that once being employed out of vicious intentions would lead to disastrous results.

The fissile materials existing in considerable amount and distributing around the globe only mean a risk objectively persisting, the intention and efforts that international terrorists have already demonstrated and made would make the risk become an imminent threat to the international community since they target at those fissile materials and related nuclear facilities. It has been estimated that in previous decades there occurred hundreds of terrorist operations whose targets ranging from nuclear weapon storage bases to civilian nuclear reactors. It is safe to conclude that it is first and foremost the severe present situation of global nuclear security and the possible deteriorating future that makes the Obama Administration identify neutralizing nuclear terrorist threats as the top goal in the agenda of the U.S.’s nuclear policy.

Secondly, the impotence of international governance on nuclear security has made it urgent

for the Obama Administration to invest considerable political and diplomatic resources to fuel international cooperation on nuclear security. Since the reality that nuclear security has long been considered by the majority of international society as trivial matter in the international security agenda, there is no specific global governance structure having been established or any efforts towards this direction having been made, leading to an evident capabilities deficit to address the nuclear security challenges. The gap between the current capabilities of international community to confront the nuclear security challenges and tasks that the international community has to undertake to address the nuclear security has provided the Obama Administration another reason to pursue international approach to enhance nuclear security.

Lastly, President Obama's decision to promote international cooperation and host nuclear security summits has also involved American domestic political considerations as well as his personal preference. As a Democratic president, Obama undertakes to repair and restore the American international reputation and image compromised by the Bush Administration's unilateralism, which has made the multilateral approach like hosting nuclear security summit to confront the concerns like nuclear security with both urgency and importance for the U.S. but also posing threat in various levels for the countries in international community a desirable method to address nuclear security challenges. Besides, nuclear issue has consistently been placed as the priority in President Obama's personal agenda, whose enthusiasm for nuclear issues could be dated back to his tenure of Illinois senator acting as a full advocate for Nunn-Lugar initiatives aiming to help Moscow to reduce the threat posed by nuclear weapons retired.

The Progress of Nuclear Security Summits

The 2010 Washington Nuclear Security Summit initiated the nuclear security summit series and the previous 6 years had seen three summits held respectively at Washington D.C. in the U.S., Seoul in South Korea and Hague in Netherlands and a variety of achievements achieved.

First, the nuclear security summits have helped the international community to reach consensus on the nuclear security issue both in terms of the importance and urgency. Through three summits, the international community has recognized the necessity to address the nuclear security challenges in a cooperative fashion. And the broad participation of top leaders from the major countries

and international organizations has demonstrated the will and determination of international society to launch joint efforts to meet nuclear security threats. In 2010 Washington Security Summit attracted top leaders from 47 countries and the IAEA, and the number of countries participating further raised to 53 in the subsequent summits in Seoul and Hague, which make the summits a sound outlet to exchange ideas and conduct further cooperation among various actors in international community.

Secondly, the nuclear security summits have enabled international community to set the priorities in international cooperation agenda on nuclear security and have helped to further enrich the content to this agenda. The 2010 Washington Summit placed its focus on the minimal use of highly enriched uranium and in 2012 Seoul Summit, the protection of radioactive sources, cyber security of nuclear facilities as well as protection of sensitive information were put into this agenda as priorities needed to be addressed. And given the considerably negative impact that Fukushima accident has exerted on nuclear industries and more broadly on international security, the measures that should be taken both to enhance the safety of nuclear reactors design, construction and operation and to assure the personnel working in nuclear power plants as well as community in vicinity be free from negative environmental impact were intensely discussed as well, which, although were supposed to be within the domain of nuclear safety, makes the international cooperation on nuclear security issues a more comprehensive process.

The Hague Summit preceded the international partnership on nuclear security with a call for all participants to control the stockpile of separated plutonium within the reasonable limit according to demand of commercial use, which would have great implications for the global governance on nuclear security in the future. In fact, the previous years have seen the production of separated plutonium continuously rising due to the booming of nuclear power industries while the demand of uranium has been relatively on decline actually. The positive implications of controlling the stockpile of separated plutonium lie in the basic fact that the enhancement of plutonium security could reduce the risk of this dangerous material with rather strong radioactivity as well as toxicity from being employed by terrorists to launch a terrorist attack, which could cause much severe consequences compared with other nuclear materials.

Thirdly, the nuclear security summits have

greatly promoted the norms-making for nuclear security global governance as well as the nuclear global governance regime-building. For the term “governance”, the UN Global Governance Commission has referred it as “the sum of many ways individuals and institutions, public and private, manage their common affairs. It is a continuing process through which conflicting or diverse interests may be accommodated and co-operative action taken. It includes formal institutions and regimes empowered to enforce compliance, as well as informal arrangements that people and institutions either have agreed to or perceive to be in their interest”. This definition has presented that the norm and regime are of extreme importance for the global governance and related international efforts. For nuclear security global governance, norms- making and regime building are of great implications as well. The previous decades have experienced the absence of a specific governance structure and a leading organization for enhancing nuclear security global governance, leading to the gap between capabilities that the international community possesses and the tasks in nuclear security that the international community needs to undertake. The nuclear security summits in this regard have served as the bridge for the gap through promoting the participants to ratify the existing conventions like Convention on Physical Protection of Nuclear Materials and its 2005 amendment and to promote to further cooperation and partnership in various forms like gift baskets and regional partnership. More importantly, the IAEA’s position as the leading organization in international governance architecture has been further confirmed, which means even in post summits period, there would be an organization that could undertake the leading role that the Obama Administration is currently taking to further the international cooperation on nuclear security issues. The previous nuclear security summits already have constructed an international governance architecture for nuclear security preliminarily consisted of global conventions and treaties, multilateral partnerships as well as national unilateral commitments.

In general, the international community has established and further strengthened the consensus on the necessity and importance of enhancing nuclear security, and has made impressive achievements. Due to the summits, the most countries participating in the process have taken measures to reduce the amount of highly enriched uranium in domestic use. It has been estimated that the total amount of highly enriched uranium has

been reduced from 1600 tons in 2009 to 1390 tons in 2013. Since the 2010 Washington Summit, there have been 12 countries that have removed all the highly enriched uranium stored in their territories. More importantly, the summits have fueled the efforts made by an increasing number of countries to have either signed or ratified the important conventions on nuclear security such as Convention on Physical Protection of Nuclear Material and its 2005 amendment and International Convention on Suppression of Nuclear Terrorism, making increasingly promising the prospect for Convention on Physical Protection of Nuclear Material to take effect. For the convention, the distance away from its taking effect has been much shortened due to momentum reached through the summits with only 14 countries’ ratification needed compared with more than 30 countries needed in 2010.

The Prospect for 2016 Nuclear Security Summit

The 2016 summit, serving as the conclusive battle of the entire nuclear security summit campaign, would have significant implications for the future’s nuclear security global governance in post-summit period. If the summits could be seen as the sprint in the marathon of nuclear security global governance process, the 2016 summit would be the final sprint of the sprint, which ideally should be a bridge connecting the achievements already made and the challenges needs to be addressed in the future. However, whether this ideal situation could be reached or not would largely be depended on how the Obama Administration would address a variety of challenges remaining for the 2016 summit and to be more specific, whether those challenges could be properly handled would largely determine the fate of the 2016 summit.

Firstly, the pivotal challenge for the Obama Administration need to be addressed would be to refine the major goal of the 2016 summit so as to set the tone for the entire summit and provide the board picture for the summit’s agenda. To be more specific, whether the 2016 summit should be a summit focusing on consolidating the achievements of the previous summits or seeking further breakthrough would to a large extent determine the agenda for the summit and the result of assessment in post summit.

It is well known that nuclear security issues cover a broad range of areas and domains, and actually pose a barrier difficult to overcome for addressing all the nuclear security challenges through a single process like nuclear security

summit. Furthermore, there are issues of relatively low sensitivity as well as issues of relatively high sensitivity, making it an objective reality that the cooperation in certain areas requires more efforts than those in other domains. For the sake of assuring success of the summits, the Obama Administration has on purpose kept some issues of high sensitivity excluded from summit's agenda. And for the 2016 summit as the conclusion, the Obama Administration has evidently manifested its intentions to seek some breakthrough by introducing some issues widely regarded as of high sensitive ones into the agenda for the coming nuclear security summit.

Taking the fissile material security for military use for example. Generally, the nuclear material could be categorized into two baskets in terms of the purposes that those materials would be used, which are military purpose and civilian purpose with the former actually accounts for more than 85% of the total amount of nuclear material worldwide. Since the nuclear material for military use is an important index to assess nuclear weapon capabilities that certain nuclear states have and the insecurity of those military fissile material would inevitably lead to the exposure of some sensitive information on those materials to the outside, the nuclear weapon states are rather prudent when touching the issues related to the security of military nuclear materials. It is also due to this consideration that the discussion of security of military nuclear material could cause controversies that made the Obama Administration choose to consistently focus the three summits already held on security of civilian nuclear materials thus able to assure the smooth proceeding of the summit process.

At the conclusive stage of the 2014 Hague Summit, President Obama has explicitly expressed his interest in including the security issue of military nuclear material. In the national progress report issued by the U.S. Government, the Obama Administration has presented the measures that the U.S. government has taken to enhance the security of military nuclear materials and made new commitments to procedures for information release on the security of those nuclear materials through the existing regimes established by the UN and other organizations such as UN resolution 1540. Besides, the Obama Administration has suggested that the latest index of nuclear security issued by the IAEA should be introduced into the making of military security norms. President Obama hopes that the issue of security of nuclear materials could

be included into the agenda for 2016 nuclear security summit.

However, the proposal raised by the Obama Administration failed to receive positive responses from the nuclear haves. Because of the sensitivity of this issue, most nuclear weapon states have been cautious regarding the security of military nuclear material, which makes it difficult for the Obama Administration to include the security of nuclear material for military use into the agenda of 2016 summit. Actually, this is not the first attempt ended in failure made by Washington to discuss security of military nuclear materials at nuclear security summits and would definitely not be the last either that would have to suffer setbacks. The effort that the Obama Administration pursued to include the military nuclear material security into the nuclear security summit agenda could originally be dated back to the "Sherpa" conference for the Hague Summit, where the U.S. Government seek to make the issue of security of military nuclear materials an item in Hague summit's agenda, which received no positive response from the nuclear haves and eventually died without any outcome. For the officials in the Obama Administration, the task of including the security of nuclear material for military use in nuclear security summit is almost too far a bridge to reach, whose difficulties have been broadly recognized.

In fact, the dilemma that the Obama Administration is facing on the issue of security of nuclear material for military use is rooted in the ambiguity of goal set by President Obama for the nuclear security summits and could therefore be employed as a perfect example to demonstrate the importance of a clearly defined goal for the success of nuclear security summit. Although in the speech made at Prague in 2009, President Obama called for the enhancement of nuclear security of all the vulnerable nuclear materials, he neither define the term "vulnerable" nor outline the calibrations for assessing the levels of vulnerability which left a question mark on which kind of materials could be indeed regarded as the "vulnerable materials" thus fail to provide an clear road-map outlining the security measures that should be introduced accordingly. Since the nuclear assets such as nuclear weapons and nuclear materials as well as the related facilities are without exception cherished as "the pearl of crown" by the countries that owns them, for which the highest level security measures that the countries are able to provide would have been provided without any doubt, making it unconvincing to tag those nuclear materials for

military use as “vulnerable” nuclear materials. And further and more broadly, it makes sense to make distinctions between the issue of sensitivity and the issues of urgency for the simple reason that the sensitive issues are not necessarily the ones of high urgency, the logic of which could also be applied to the case of the military nuclear material security. Regarding this, the question for President Obama is whether the 2016 summit should focus on consolidating the achievements already in hand or seeking further breakthrough on some issues of high sensitivity and even some issues of high sensitivity but of low urgency without a loss of the entire summit.

Secondly, how to keep the momentum created by the previous summits in the post summit period has become another issue needing to be addressed by the Obama Administration especially in the context of spiral escalation of confrontation between great powers. It has been widely shared that the interactions of great powers relations in last two years have made the great powers relations derail from the relatively desirable track as it used to enjoy, which has already exerted negative impact on the 2016 summit and would possibly further undermine the future’s nuclear security global governance. For Moscow and the Washington D.C., the Ukraine crisis has made the relationship between the two countries fall into a freezing point. Since the current confrontation with the U.S., Russian president Putin has confirmed his absence from the last nuclear security summit. Given the pivotal role that the Russia has in nuclear domain in terms of its large nuclear arsenal and considerable amount of nuclear materials, the Moscow’s absence has been casting a rather grim shadow on the 2016 summit as well as the future of nuclear security global governance. And for Beijing and Washington D.C., the recent interactions between the two countries have demonstrated more uncertainty instead of certainty. The analysts in both Washington D.C. and Beijing are speculating a rather pessimistic future of U.S.-China interaction. The debates on the future’s policy toward each other are intensely ongoing in both capitals in the context of coming next U.S. presidential election and more broadly the changing dynamics in terms of relative power status between the two countries. And in the nuclear domain, the American nuclear posture is also undergoing reviewing and discussions given the incoming nuclear posture review process. Those dynamics have greatly contributed to the uncertainties of future’s U.S.-China relations, which would unavoidably

influence the future’s U.S.-China interactions on nuclear security summit and more broadly, on nuclear security global governance.

Besides, how to maintain a robust leadership for nuclear security global governance in post summits period remains to be an urgent issue in despite of the repeated confirmation by the international community that the IAEA would undertake the role that the Obama Administration used to undertake in the process of nuclear security summits in post summit period. One of the most inspiring experiences the international community could draw from the nuclear security summits is that the role of a robust and constant leadership is irreplaceable for any international joint efforts like nuclear security global governance. It is fair to conclude that the impressive progresses in nuclear security global governance by the nuclear security summits have demonstrated once again the extremely important role that the leadership of the Obama Administration played in promoting the nuclear security global governance, without which even the happening of nuclear security summits would be of little possibility let alone those impressive achievement having been accomplished through the summits.

In order to keep the momentum of nuclear security global governance after the conclusion of all nuclear security summits, the participants of the 2014 summit agreed that the IAEA would assume the leadership position for the nuclear security global governance as the “core” in the future’s nuclear security architecture. However, over previous decades the IAEA has constantly struggled to fulfill its duty of non-proliferation under extremely restrained resources both in terms of finance and personnel, which has greatly undermined the organization’s capability in preventing nuclear proliferation. And the similar scenario would also possibly emerge in nuclear security global governance in post nuclear security summit period especially in the absence of the top leadership supports once there would not be any high-profile international events such as the nuclear security summits. Originally, the IAEA was tasked to primarily focus on the prevention of nuclear proliferation by employing safeguards to the nuclear have-nots, which means the nuclear security was not the major task of the IAEA thus making some IAEA member states reluctant to provide financial supports for the nuclear security related activities. Although the summits have helped the international community to reach consensus on nuclear security issues and the IAEA’s position in

nuclear security global governance, which removed some of the barriers that prevent the IAEA from receiving supports from its member states, it has not provided the proper next steps to assure the consistence of those supports for the IAEA, which is currently fulfilling its duties by nuclear security fund established through states' voluntary donations. The risks lying in this process are that the accessibility of those supports for IAEA would be at stake in the context of the weakening consensus of nuclear security and therefore compromise the agency's capability of fulfilling duties related to nuclear security.

Finally, the reality that the 2016 summit would mark the conclusion of nuclear security summits series has made the arrangement in post summit period for nuclear security global governance another issue with both importance and urgency. Despite the progress already made through the summits, there are remaining distances to the destination of comprehensive and balanced nuclear security global governance architecture.

Specifically, the current global governance architecture for nuclear security lacks generality in despite of the great achievement in terms of architecture constructions in nuclear security of global governance. Even in the civilian nuclear domain, there are remaining important issues waiting to be properly addressed. Currently, the globe has seen an increasingly booming nuclear power industry, which has made the protection of those nuclear facilities an increasingly severe issue. Seoul, while hosting the nuclear security summit in 2012, hosted another summit specific for nuclear industries, but the two summits proceeded in parallel simultaneously without any interaction between each other. The reality that nuclear industries in various countries differ considerably between each other in terms of the regulatory regime and operation status, which pose obstacles to embed the nuclear industry into the nuclear security global governance architecture. And furthermore, the nuclear industries in some countries are privately owned sectors, thus challenging the norms reached through international cooperation.

Besides, with the continuing proceeding of nuclear security global governance, the necessity of maintaining the balance between the rights and obligations of participating countries is becoming an issue of increasing urgency. Those contradictions if not properly addressed would undoubtedly

undermine the further proceeding of nuclear security global governance. In this regard, Chinese president Xi Jinping's approach to nuclear security serves to help construct a relatively balanced nuclear security global governance architecture, which features "equal emphasis on development and security, and developing nuclear energy on the premise of security; rights and obligations be given same attention, and recognition of rights and interests in international nuclear security process pushed forward; equal importance on independent and collaborative efforts, and seeking universal nuclear security through win-win cooperation; equal emphasis on treating symptoms and causes, and advancing the nuclear security endeavor in all respects in a bid to remove risks at the root."

Moreover, the global governance architecture requires further refining and properly arranging the existing international conventions, regimes and institutions. Presently, the international regime for nuclear security remain a basket filled with a variety of conventions, treaties, regional partnerships as well as national commitments including Convention on Physical Protection of Nuclear Materials and its 2005 amendment, Convention of Suppression for Nuclear Terrorism and UN resolution 1540 and 1887, and so on, among which overlaps as well as blanks exist and persist. Regarding this, further refining those conventions, treaties as well as partnerships in terms of their roles and functions are increasingly of importance, making it an urgent task for 2016 summit.

Conclusion

It has been widely discussed among the international community what the prospect of the 2016 summit as well as the global governance of nuclear security beyond the summits could be. And most of the conclusions are quite conservative and pessimistic, given the current international dynamics in general and a variety of challenges posing on the road ahead. The possible solution to unlock the dilemma that the 2016 summit is currently facing is that the Obama Administration should firstly define the goal for the 2016 summit that is both attainable and of importance, based on which further arrangement of the nuclear security global governance architecture could be made so as to keep the momentum reached by the summits and further promote the international cooperation on the enhancement of nuclear security globally.