The Need for a Comprehensive Approach to Reduce Nuclear Risks

By Irma Arguello

There is broad international consensus about reduction of nuclear risks as one of the most relevant drivers to enhance global security. However, degrees of involvement, priorities and approaches adopted to deal with the issue differ from state to state. They are dependent on interests and self-perceived roles as well as cultures and traditions of nations. As in the past, the recent statements at the Preparatory Committee for the 2015 Non-Proliferation Treaty (NPT) Review Conference are again a good sample of such different postures.

While nuclear-armed states and their allies are primarily focused on demanding more nonproliferation and nuclear security\(^1\), the majority of states without nuclear weapons mainly demand the fulfillment of nuclear disarmament commitments. States on each side tend to think that they have done more than enough, but it is clear that there is much more to be done.

In today’s multi-polar world, nuclear threats have undeniably increased, and even more so since nuclear terrorism became a plausible threat. At the same time the fragility of international trust progressively becomes more evident, mainly due to lack of global common goals and frustration over ineffective multilateral action. This fragmented scenario puts traditional strategies for reducing nuclear risks at a crossroads.

Global threats require global solutions

In order to understand the global dimension of nuclear threats, it is worthwhile to analyze potential scenarios from the perspective of their consequences.

\(^1\) The current working definition of Nuclear Security accepted by the IAEA is, “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.” Taking into account the evolution of global threats more comprehensive and explicit definition of Nuclear Security would be: “The prevention (including deterrence) and detection of and response (including emergency preparedness) to theft, sabotage, unauthorized access, illegal transfer, cyber attack, or other malicious acts involving nuclear material, other radioactive substances, their associated facilities (including security concerns in the design), equipment, technology, and related security sensitive information.” Irma Arguello, John Bernhard, Caroline Jorant, Chang-Hoon Shin, private discussions, Nov 2012.
The negative consequences of any potential incident would be twofold: those directly affecting the target of the attack in terms of casualties and destruction, and those indirectly stemming from the high degree of global interconnection. Such global impacts would surely include political disruption, environmental damage, disturbance of the global economy, restrictions to international trade (including that of primary resources), and deep psychosocial commotion. Also, they would encompass a deferral in the delivery of humanitarian international aid to developing countries due to a change in funding priorities of the developed countries. In other words, almost every aspect of human activity around the world would suffer chaos and disruption.

Furthermore, in the case of a large-scale nuclear exchange, there would be severe impacts on the climate and food supplies, which would lead to extreme poverty. It is clear that in terms of nuclear risks, what happens to one happens to all.

The existence of more than 16,000 nuclear weapons deployed in 14 countries and in the oceans of the world (many of them on a high state of alert), implies risks of intentional or unintentional detonation. A recent study by Chatham House revealed 13 known cases involving six nuclear-armed states, from 1962 to 2002, when the arms were on the verge of being detonated by error or accident.\(^2\)

Besides the risks of potential use, the mere existence of the weapons entails more negative impacts. Nuclear-armed states jointly spend around $11 million dollars per hour to maintain their nuclear weapons complexes, and the rate of spending follows an upward trend. Despite reductions in the number of weapons, such expenditures are sustained by on-going modernization efforts.\(^3\)

These funds are constantly drained away from investments to close basic social deficits in several of the states, and international aid, which developed nations normally devote to fight extreme poverty. The socio-economic impacts are extremely significant as these expenditures- if used for another purpose, would be enough to reduce world poverty by 60 percent over ten years.

Nuclear weapons are also a factor of global inequality, as they fictitiously divide the world in two different categories of actors: the “haves” and the “have-nots.” In fact, the possession of nuclear arms leads to international power in the hands of very few, and in this way, contaminates multilateral dialogue at the expense of respect and equal treatment of the interests of the non-possessors. In addition, the high relevance of nuclear weapons in national/collective security doctrines acts as a powerful attraction for further proliferation, as they are perceived as icons of international power and prestige.

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In terms of potential terrorist and criminal acts, the facilities where these arms are stored are protected in different ways and therefore may be subject to intrusion or theft, among many other threats. There is weapons-usable material distributed in 25 countries which involve similar risks.\(^4\)

The immediate conclusion is that the detonation of nuclear weapons (be it sophisticated or improvised, carried out by states or non-state actors), would impact every member of the global community in many different dimensions and there would be little distinction as to the perpetrator— or to the reason for use: intention, error or accident.

The strategies to avoid potential devastating incidents (by the elimination of current arsenals, and the prevention of proliferation and of terrorist use), are in essence mutually dependent. In other words, an integrated system to reduce nuclear risks would be the most efficient option as it would harmonize the strategies adopted to promote nuclear disarmament, nuclear security and the prevention of further proliferation.

**Integrating disarmament, nonproliferation and nuclear security efforts**

The goal of opening paths toward efficient integration of strategies for the reduction of nuclear risks poses big challenges, but is well worth the effort in view of the current crisis of the traditional instruments that rule the global nuclear order. It is key to recognize that separation and imbalances among disarmament, nonproliferation and nuclear security efforts are factors that play against the stability of the present system.

Experience shows that even the most valuable and innovative approaches in nuclear risks reduction tend to miss out on opportunities to promote integrated views and synergic actions. For example, the Second Conference on the Humanitarian Impact of Nuclear Weapons held earlier this year in Nayarit, Mexico (which brought together 146 states and many non-governmental organizations), focused almost exclusively on the humanitarian impact of nuclear exchanges between states. Even though the Conference took place a short time in advance of the Nuclear Security Summit (NSS) in the Netherlands (which focused on preventing nuclear terrorism), only a few voices pointed out in Nayarit the similarities in terms of risks and humanitarian consequences with nuclear terrorist attacks. On the other hand, at the NSS in The Hague, there was little debate about how to link nuclear security, disarmament and nonproliferation efforts as building-blocks of a common strategy.\(^5\)\(^6\)

\(^4\) 2014 Nuclear Security Index, NTI. <http://ntiindex.org>
To do away with these conceptual silos opens up a broad range of opportunities. To take advantage of them requires a change of beliefs and paradigms—from both internal politics and international relations—that have been firmly in place for years. In order to advance in this direction, it is absolutely necessary that states take into consideration not only their own interests—and those of their strategic allies—but also the interests of other different actors and those of the international community as a whole.

**Restoring balance and building confidence**

Today, limited progress in disarmament can be attributed to the prevailing role of nuclear weapons and nuclear deterrence in the security doctrines of key states and alliances. For example, NATO’s 2012 Defense and Deterrence Posture Review reaffirms the role of nuclear weapons by recognizing them as “a core component of the Alliance’s overall capabilities for deterrence and defense alongside conventional and missile defense forces.” It also recognizes strategic nuclear forces as the supreme guarantee of the security of the Allies.\(^7\)

However, the performance of nuclear weapons as an effective deterrent is increasingly questioned by the expert community. It is accepted that they are of no use to deter acts of nuclear terrorism, and in practice, history has also made it clear the unlikeliness of use against non-nuclear armed states, even in the worst conflict. The belief in nuclear deterrence as a source of power contrasts with the plausibility of any use, and only finds a place within the framework of the strategic dialogue among nuclear-armed states. It is crucial that possessors re-think deterrence in light of such evidences in order to progressively reorient towards the use of less risky means. They owe this effort to the entire global community.

Nuclear sharing and extended deterrence also poison any intent of a positive evolution toward nuclear disarmament and should be reconsidered. It seems at least questionable to see non-nuclear weapons states hosting nuclear weapons in their territories, or others benefitting from nuclear umbrellas and requesting security based on these weapons. It is essential that those states jointly work with their strategic allies to make conscious decisions to favor other kinds of deterrence in order to satisfy their security needs. A virtuous example could be the creation of a strategic dialogue among Japan, South Korea, the United States and China to agree upon a solution involving other means regarding North Korea’s security threats.

The tensions between possessors and non-possessors lead to disagreement about disarmament strategies. The traditional step-by-step approach conflicts with the humanitarian initiative put forward by non-nuclear weapons states, which gained momentum after the 2010 Non Proliferation Treaty

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(NPT) Review Conference. The NPT’s “P5 nuclear weapons states” (China, France, Russia, United Kingdom and the United States) made their beliefs clear that the humanitarian initiative contradicts the adopted step-by-step approach and is “a distraction” from the current disarmament efforts. In this sense, the absence of most of nuclear weapons possessors from both the Conferences on the Humanitarian Impact of Nuclear Weapons, in Olso and Nayarit showed reluctance not only to act, but also to enter into any kind of innovative disarmament dialogue.

In order to be successful, any progress in this area should be carried out with – and not without - those in possession of the weapons. It implies bigger challenges in terms of integrating not only diverse interests, but also diverse rhetoric and mindsets.

Nuclear-armed states should seriously consider joining the open dialogue about innovative ways to speed up nuclear disarmament, given the damage to their credibility caused by their absence. For example, they should participate in the Third Conference on the Humanitarian Impact of Nuclear Weapons, to be held on December 8-9 in Vienna. The international community needs to do as much as possible to persuade those states to attend and to debate.

At the same time, the implementation of safeguards is evolving to more enhanced schemes. There has been international pressure to make the more restrictive Additional Protocol (AP) the brand-new standard of verification (in replacement of the current Comprehensive Safeguards Agreements (CSAs) prescribed by the NPT for non-nuclear weapons states). In addition the IAEA is transitioning to a state-level approach aimed at controlling more efficiently the compliance of safeguards agreements. But the trust in the nonproliferation system is seriously damaged and many states show resistance to these proposals. The perceived paralysis in disarmament is politically counterproductive to encourage non-possessors to accept enhanced nonproliferation obligations as well as initiatives which could set limits to their rights to fully develop nuclear energy for peaceful uses. However, states should recognize the relevance of extra nonproliferation guarantees to close the NPT loophole in terms of the control of non-declared nuclear facilities.

The high-level political process of the Nuclear Security Summits promoted by the United States since 2010 has brought to the international agenda the protection of civilian nuclear materials and related

9 The First Conference which gave an official launch to the Humanitarian initiative was held in Oslo, Norway on March 4-5, 2013. More information on the Norwegian Ministry of Foreign Affairs’ website: <http://www.regjeringen.no/en/dep/ud/selected-topics/humanitarian-efforts/humimpact_2013.html?id=708603>
facilities from nuclear terrorism and criminal use. Nevertheless, there are still major tasks pending that should be positively resolved with the end-of-cycle Summit in the United States in 2016. A key point is to define the Summits process’ legacy. It intends to reach the necessary agreements to set up a stable and efficient global system for nuclear security. The agreements should ensure continuity to the nuclear security effort beyond the Summits. Taking into account that the totality of nuclear weapons and the 85 percent of weapons-useable materials (HEU and separated plutonium) that are stored in non-civilian facilities, it is essential to include them as an integral part of any realistic global system to prevent nuclear terrorism and illicit trafficking.

Another challenge is to promote the adoption by states of binding, minimum nuclear security standards, which would give assurances to the international community regarding the responsible protection of each state’s materials and facilities.

As recognized by the 2014 NSS Communiqué, there is still much to do to achieve universal adherence to the key binding instruments on the matter, including the Convention on the Physical Protection of Nuclear Material (CPPNM), its 2005 Amendment (which will enter into force once ratified by 22 more states to reach the two-thirds of signatory states of the original convention) and the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT).12 13

It is necessary for the future of the initiative that the United States overcomes the current domestic stalemate in Congress and move ahead by ratifying both the 2005 CPPNM Amendment and the ICSANT. In fact, such ratifications are essential not only to enhance the whole nuclear security effort, but also to recover the eroded international confidence and good will concerning U.S. proposals and initiatives on the matter. In both cases, as with the ratification of the Comprehensive Test Ban Treaty (CTBT), the United States should lead by example.14

The Strengthening Nuclear Security Implementation initiative led by the United States, South Korea and the Netherlands is a document in which the signatories recognize that nuclear security is an international, not just a national responsibility. The 35 subscriber states commit themselves to embed the objectives of the nuclear security fundamentals and IAEA recommendations in national rules and regulations, and to host peer reviews to ensure effective implementation. In addition, the signatories pledge to act to further ensure continuous improvement of the nuclear security regime.15 16

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13 The CPPNM requires state-parties to maintain an appropriate physical protection of materials during international transported. The 2005 Amendment extends such commitments to protection to the domestic framework, and therefore includes not only nuclear materials, but also nuclear facilities. The ICSANT sets an international framework to combat nuclear terrorism including measures of cooperation among states.
14 The US ratification of the CTBT is seen as a key step for the Treaty’s entry into force as many states have declared that they are waiting for the United States move before proceeding with their own ratification processes.
The NSS process shows that positive initiatives would reach broader acceptance within a framework of enhanced understanding, credibility and confidence among states with different backgrounds. A way to achieve such virtuous framework is by restoring a relative balance of commitments concerning disarmament, nonproliferation and nuclear security, for which every state should have a clear role.

**A pragmatic approach**

The ideas shared here involve pure pragmatism. The unrealistic belief that nuclear weapons can grant global security at the cost of deep international imbalances should progressively give way to innovative thinking on how to break the “status quo” to achieve deeper understanding of threats and design cooperative ways to prevent any further catastrophic incident. The need to define integrated strategies to efficiently reduce nuclear risks is now both indispensable and urgent.

Concerning state-level actors (even in the multi-polar environment), the preeminent roles of the United States and Russia is without question, as they together possess 95 percent of nuclear weapons and the majority of weapons-usable material. Any realistic approach to nuclear security should be based on the close cooperation of both states. For example, it is important that the Ukraine crisis be carefully managed to preserve their nuclear understanding of further deterioration. Leaders on both sides should deeply reflect with responsibility on the negative global consequences of breaking such substantial common ground.

Today the majority of states are paying a very high price in terms of insecurity to satisfy the false perception of security of a small few. It is crucial to bring back the balance between rights and responsibilities of states of different positions and define common goals for the international community, in terms of nuclear risks reduction. Determined actions and gestures of disarmament by nuclear-armed states could become powerful drivers to restore the necessary global confidence.

From a global perspective of threats and consequences, the common goal would be to ensure in realistic terms that no security vulnerability in any state could directly or indirectly contribute to any catastrophic nuclear incident, regardless of where it would happen.

Pragmatism should guide leaders toward innovative approaches to reduce nuclear risks based on comprehensive views and coordinated efforts. Multiplication of conflicts and a resulting and almost uncontrollable global insecurity are enough evidences that such joint efforts should be now maximized.
Irma Arguello is the Founder and Chair of the NPSGlobal Foundation, Secretary of the Latin American and Caribbean Leadership Network for Nuclear Disarmament and Nonproliferation – LALN, member of the Steering Committee of the Fissile Materials Working Group – FMWG, and Associate Fellow of Chatham House.