

# **Combating the Threat of Nuclear Terrorism**

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The 8<sup>th</sup> ROK-UN Joint Conference on Disarmament and Non-proliferation Issues

16 November 2009

## **1. Introduction**

The threat of nuclear terrorism is becoming an ever-increasing concern for international security. It is often argued that the concept of deterrence, including nuclear deterrence, does not apply to non-state actors and thus the reduction of the total number of nuclear weapons and the amount of nuclear material in military use in the world, namely, nuclear disarmament, is crucial to prevent such terrorism. In my view, this argument is valid and it is important that the international community shares this view. Some countries have expressed the view that nuclear security should be the fourth pillar of the Nuclear Non-Proliferation Treaty (or NPT), which indicates that nuclear security is an issue of high priority in the national security policy of these countries. Furthermore, in UN Security Council Resolution 1887 adopted in September this year, 8 paragraphs (para 21 to 28) out of 29 refer to measures against nuclear terrorism, which suggests that the resolution places strong emphasis on nuclear security for peace and security of the international community.

In my speech today, I would like firstly to give an overview of the efforts that the international community has been making to combat the threat of nuclear terrorism.

Then I would like to share my views on the issues we need to examine further in order to improve nuclear security at the global level.

## **2. Changes in International Perceptions of Nuclear Terrorism**

We can divide the history of nuclear security issues into three periods.

### **(1) During the Cold War**

The first phase is during the Cold War era, when the threat of nuclear terrorism already existed. From the 1960s to the 1970s, with the rapid increase in international transfers of research reactors and construction of nuclear power reactors, nuclear terrorism became a matter of serious public concern. With the start of the 1970s, views on the protection of nuclear material were actively being exchanged at the IAEA and the drafting of guidelines on this subject had begun. Thus it was in 1979 that the Convention on the Physical Protection of Nuclear Material (CPPNM), one of the major conventions on nuclear security, was adopted. This Convention stipulates protection measures for nuclear material during international transportation, as well as criminalizing the unlawful acts related to nuclear material within a country.

### **(2) From the End of the Cold War till 9.11**

The second phase runs from the end of the Cold War until 9.11. Following the end of the Cold War in the early 1990s, the issue of how to secure nuclear weapons

and nuclear material in the former Soviet States appeared. In particular, the illicit trafficking of such weapons and material became a matter of real concern and so various initiatives to prevent this were launched. For example, two US Senators, Sam Nunn and Richard Lugar, launched the Cooperative Threat Reduction Program (CTR). Under this Program, efforts were made in areas such as dismantling nuclear warheads and reinforcing controls over nuclear material, and large amounts of money were provided to the former Soviet States to that end. The CTR Program has made enormous achievements to date in reducing the potential nuclear threat coming from those States. Moreover, with the objective of preventing the brain drain of nuclear scientists who worked on the military projects in the former Soviet States, the International Science and Technology Center (ISTC) was established and those scientists were redirected to programs and projects for peaceful purposes. The US, Canada, the EU, Japan and also the Republic of Korea have played an important role in the activities of the ISTC. But more needs to be done in the area of nuclear personnel. The important future task in this area is whether or not the international community could take more intrusive measures to prevent the nuclear scientists or engineers from being recruited or misused by malicious non-State actors.

I would like to point out that during these first two periods, the issue of nuclear security was considered to be primarily an issue of nuclear non-proliferation and we

were concerned about nuclear weapons and nuclear material in military use. Nuclear material and nuclear facilities for civilian use were comparatively not of serious concern.

### **(3) Post 9.11**

The events of 9.11 in 2001 totally changed the international community's perception of the terrorist threat. The issue of nuclear security became synonymous with the threat of nuclear terrorism. 9.11 strongly reminded us that terrorists could sabotage a nuclear facility and create a radiological hazard. Also, we were reminded of the necessity of dealing with the threat of a so-called "dirty bomb". We became strongly aware that because terrorists work through international networks beyond their national borders, they would be able to target countries which do not have effective control over nuclear material or other radioactive substances, or sufficient export controls.

Accordingly, 9.11 was the catalyst for us to realize that nuclear security is not simply an issue for certain countries with nuclear weapons but for the entire international community, including countries with civilian nuclear facilities or those conducting international transport of nuclear material. Today, nuclear power generation is regarded as promising measure to help resolve global issues such as climate change and soaring energy prices. In this current situation where nearly 70

countries are expressing interest in embarking on a nuclear power program, this issue of nuclear security must be tackled urgently.

### **3. Norm Building for Strengthening Nuclear Security and International Efforts**

I would now like to touch on some of the various initiatives that the international community has been taking since 9.11 in order to build norms and to bolster national nuclear security measures. What is noteworthy is that these initiatives were not launched as part of an overarching framework but rather in a piece meal approach in response to various necessities.

#### **(1) Norm Building**

Firstly, I will look at norm-building measures.

(a) At the IAEA, the “Code of Conduct on the Safety of Radioactive Sources” was strengthened in September 2003 by incorporating elements of nuclear security in response to international concerns following the events of September 11. The following year, “Guidance on the Import and Export of the Radioactive Sources” was made to supplement the aforementioned new Code of Conduct. It gives guidance on matters such as authorization and notification procedures for import and export, and evaluating the credentials of the end-user of radioactive sources.

(b) In April 2004, UN Security Council Resolution 1540 on non-proliferation was adopted. With the recognition that the proliferation of the Weapons of Mass

Destruction (WMD) and their means of delivery constitutes a threat to international peace and security, this resolution obliges UN Member States:

-firstly, to refrain from providing any form of support to non-State actors which attempt to develop, acquire, manufacture, or use WMDs and their means of delivery;

-secondly, to adopt and enforce appropriate effective laws which prohibit any non-State actor to conduct acts such as to manufacture or acquire WMDs, or to assist non-State actors to conduct those activities;

-third, to develop and maintain appropriate effective physical protection measures, border controls, law enforcement measures, and appropriate effective national export and trans-shipment controls over WMD related items.

The international community is suggested to explore the way to strengthen the 1540 Committee, with expanded staffing and funding. The G8, already had consultations with the Committee to find out the way of contribution to this matter. One possible suggestion is to make the Committee permanent.

(c) In 2005, the International Convention for the Suppression of Acts of Nuclear Terrorism (Nuclear Terrorism Convention) was adopted in April, and the Amendment to the Convention on the Physical Protection of Nuclear Material was adopted in July. This Nuclear Terrorism Convention came into force only two years after the opening for signature. The Convention aims at deterring nuclear terrorism through criminalizing

nuclear terrorism by national law and stipulating cooperation on information sharing amongst other things.

(d) In addition, at the IAEA, the work on the revision of the Guidelines on the Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC225/rev.4) is being carried out and it is expected that it will be revised next year. Some of the characteristics of these guidelines include the clarification of responsibility and roles of a State and operators, development of and review of a design basis threat (or DBT) by a State and informing operators of it, and ensuring confidentiality of sensitive information. The IAEA also has been working hard to develop a nuclear security series, which consist of documents detailing fundamentals, recommendations and guidance.

## **(2) Efforts for Policy Integration**

In addition to efforts to build normative guidelines of the nuclear security, efforts have been made in order to augment the nuclear security capabilities and policy integration among States and private operators.

(a) First of all, the IAEA established a “Nuclear Security Plan” in order for Member States to increase their nuclear security capability. It also established the Nuclear Security Fund as financial resource for implementing the Nuclear Security Plan. Australia, Canada, Germany, France, Japan, the United Kingdom, the United States and other countries have been making contributions to the Fund. Through the Nuclear

Security Fund, projects to enhance capacity building with regard to accounting for and control of nuclear material and training on the detection equipment for radioactive material have been conducted.

(b) At the G8, the “G8 Global Partnership” was launched at the Kananaskis Summit (in Canada) in 2002 and several projects aiming at the prevention of WMDs and their related materials were conducted. For example, projects such as the strengthening of the physical protection of nuclear material and the dismantlement of nuclear power submarines were carried out in Russia. In addition, at the Hokkaido Toyako Summit (in Japan) in 2008, the 3S Initiative (Non-proliferation/safeguards, safety and security) for countries newly embarking on a nuclear power program was launched.

(c) Furthermore, the US launched the Proliferation Security Initiative (PSI) in 2003, the Megaports Initiative (MI) in 2004, the Global Threat Reduction Initiative (GTRI) in 2006, and the Secure Freight Initiative (SFI) in 2006. These efforts are aimed at preventing proliferation of nuclear material, reducing the use of nuclear material, and strengthening border controls. Under each initiative, various concrete efforts have been made. For example, under the PSI, maritime interdiction exercises to prevent illicit trafficking and export of WMDs were conducted. Under the GTRI, the highly enriched uranium originating from the US and Russia were recovered, and under the SFI, examinations on freight destined for the United States using radiation detection

equipment and scanning devices were conducted at some international ports.

(e) In addition, the United States and Russia launched the Global Initiative to Combat Nuclear Terrorism (GI) in 2006. Currently 76 countries are participating in the Initiative and have been conducting exercises, workshops and seminars with a view to enhancing nuclear security.

(f) In the private sector, the World Institute for Nuclear Security (WINS) was established in 2008, aiming at sharing best practices and lessons learned on nuclear security among operators. Given that nuclear power plants are operated by private companies in most countries, there are many things that will fall to private companies to implement. In this sense, awareness-raising as well as practical measures for nuclear security will be important.

#### **4. Further Issues to address in order to Strengthen Nuclear Security**

As I have mentioned already, particularly since 9.11, various efforts have been made in order to combat nuclear terrorism and these efforts have had some success. However, the threat of nuclear terrorism still remains. According to the Illicit Trafficking Database Program of the IAEA, as of December 2007, 1340 incidents related to illicit trafficking in nuclear and other radioactive materials, thefts, losses and other unauthorized activities have occurred since the Program began in January 1993. Thus further efforts to combat nuclear terrorism will be required. I would like to talk

about the future roles that the IAEA, governments and private sector should play respectively.

**(1) The role of the IAEA**

**(a)** The IAEA has been playing a central role in building norms and standards on nuclear security by establishing and revising code of conducts, guidance and guidelines. And in accordance with these norms and standards countries have introduced domestic legislation and regulations to tighten their control over nuclear material and technologies.

I expect the IAEA to play a vital role to conduct a thorough and overall review of these activities by Member States for further strengthening nuclear security. For that purpose, the IAEA could drastically expand its work by sending review missions more frequently to countries to provide peer review services. We also hope that the IAEA will promote assistance in the implementation of UNSC Resolution 1540, especially in the area of technology transfer.

**(2) The Role of Governments**

**(a)** Next, I would like to talk about the role of governments. First, governments should implement fully relevant conventions, resolutions and arrangements. As well as establishing the necessary national laws and regulations, each government should make

the utmost efforts in areas such as training, awareness-raising and education.

(b) Their second role is to develop new technology with a mid to long term vision. In order to enhance the nuclear security capability of the entire international community, it is imperative for a government, or governments collectively, to establish nuclear forensics as a science and to develop equipment for detection of nuclear material for investigation. The ability to trace specific nuclear material would have a strong deterrence against nuclear terrorism, either by non-state actors or by states harbored terrorists.

(c) The third role of governments is to provide capacity building assistance to developing countries. Various efforts have been made in this regard. However, it is essential to expand such assistance, taking into account the nuclear renaissance. In assisting developing countries, we also need to take a regional perspective, and it might be useful to consider establishing or designating an organization to play the role of intelligence clearing house or nuclear-experts training center in each region.

Japan has been keen about this issue and hosted various seminars for Asian countries. Through these occasions, Japan has been assisting countries in the region in ratifying relevant conventions on nuclear security at an early date. Furthermore, bilaterally, and through the IAEA, Japan has been conducting projects for Kazakhstan, Georgia, Mongolia, Vietnam, Thailand and other countries to assist them in establishing

a nuclear security infrastructure. Following on from this, Japan will co-host the second seminar on nuclear security for Asian Countries with the IAEA in January next year.

### **(3) The Role of Industry**

Now, I would like to touch upon the role of industry. There has been recognition that the responsibility of the nuclear security rests with a government. However, it is the operators that actually deal with nuclear material, and run nuclear facilities. Therefore, it is critical to change industry's views on nuclear security and involve them in endeavors for strengthening nuclear security. Governments should urge the nuclear industry to change their mindset and start thinking about measures they can take to enhance the security of their facilities. I think that such contributions by the nuclear industry can be relatively easily made and we can expect them to be effective, as the number of operators in the nuclear industry is significantly less compared to the chemical or bio industry. And these spontaneous counter-terrorism measures by industry could be formulated in the form of voluntary codes of conduct, depending upon unique situation and industrial culture in each country. In this sense, the activities of the World Institute for Nuclear Security (or WINS) merits attention and we expect that they will promote further activities in the areas such as information and experience sharing, training and developing peer review system. I understand that

industry and research institutes in Japan have been considering participation in this Institute.

## **5. Conclusions**

To conclude, I would like to make three points.

(1) First, while the international community has been making various efforts to strengthen nuclear security, we should examine whether we need a mechanism which oversees the whole system of nuclear security and make an integrated evaluation on such issues as urgent matters to be tackled. As we need to avoid duplication or overlaps with existing organizations, I believe the IAEA could perform such a role, and we should examine this possibility further. Also up until now, we have been operating within a number of different frameworks, and it might be useful to have a certain organization that could review the entire process on a regular basis. In this regard, I welcome the UK's announcement that they will establish a Center of Excellence for nuclear security. I will pay close attention to what this looks like with great interest.

(2) Second, in relation to the countries which have been already using nuclear energy for peaceful purposes such as nuclear power generation and those countries which will embark on a nuclear power program, nuclear security should not be a discriminatory concept which divides "haves" and "have nots". Terrorism is not just an issue for developed countries to deal with and it is important to share the understanding that

nuclear security together with nuclear safety is an enabling factor for the promotion of peaceful uses of nuclear energy. This is the reason why international cooperation plays an important role.

(3) Lastly, regardless of whether or not we should make nuclear security the fourth pillar of the NPT, it is clear that nuclear security is a vitally important issue for international security. It is essential that discussions are conducted in a positive manner ahead of the 2010 NPT Review Conference and make concrete progress. In this context, paragraphs related to nuclear security in UN Security Council resolution 1887, which was adopted unanimously in September this year, are useful. And needless to say, the US proposal to hold a nuclear security summit next April is very timely and I very much hope that this summit will be a success.