

NUCLEAR NONPROLIFERATION AND SECURITY:

WHERE TO GO AND HOW?

Daejeon, ROK

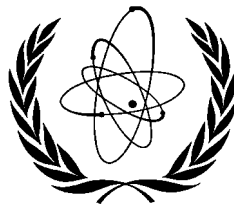
20 - 21 February 2014

Nuclear Security Status and Challenges

Denis Flory

Deputy Director General

Head of the Department of Nuclear Safety and Security



INTERNATIONAL ATOMIC ENERGY AGENCY

Review of past

I am pleased to have the opportunity to address today the status and challenges of nuclear security in a country which so successfully hosted the Nuclear Security Summit two years ago. As we are gathered here to discuss future directions for nuclear security, one thing is clear, nuclear terrorism continues to be one of the most challenging threats to international peace and security. Collective and sustainable action must be a priority for all States to address this threat. Nuclear security is a national, sovereign responsibility, but it is also a common, shared, responsibility.

Let me emphasize the need for collective action. Terrorists will find and exploit the weakest link. While nuclear security is a national responsibility, it is increasingly accepted that a terrorist incident, involving nuclear material or facilities, would have consequences beyond the borders of any individual State. It is also increasingly clear and accepted that this global threat requires a truly global response, a response that cannot be imposed by one small group on others.

Today, following the Fukushima Daiichi accident, it is recognised that terrorists could provoke a severe black-out at a Nuclear Power Plant with catastrophic consequences. This recognition of the risk of sabotage makes somewhat clearer, today, that the objective of nuclear security is not so much protecting facilities or material, than protecting people, the environment and society. This is indeed the shared ultimate goal between safety and security.

The statutory role of the IAEA in assisting States to improve nuclear security has been recognized in many important fora, and through many high level documents: the Ministerial Declaration adopted at the IAEA conference on nuclear security in July 2013, numerous IAEA General Conference Resolutions, Nuclear Security Summits and the UN High-Level Conference on Nuclear Terrorism held in 2012.

At the 2013 IAEA International Conference on Nuclear Security: Enhancing Global Efforts, there were over 1300 registered participants from 125 Member States and 21 organizations. Thirty-four Member States were represented at the Ministerial level. The interest in, and commitment to, nuclear security was clear, as was the central role of the IAEA itself. Indeed, in the Ministerial Declaration, Ministers “Affirm the central role of the IAEA in strengthening the nuclear security framework globally and in leading the coordination of international activities in the field of nuclear security, while avoiding duplication and overlap”.

In the Nuclear Security Summit Communique in 2012, in this very country, the role of the IAEA and its work in the face of this threat was clearly articulated at the highest levels of Government.

“Noting the essential role of the International Atomic Energy Agency in facilitating international cooperation and supporting the efforts of States to fulfill their nuclear security responsibilities, (leaders) further stress the importance of regional and international cooperation, and encourage States to promote cooperation with and outreach activities to international partners”.

Why does the international community hold this view? The answer is simple. The IAEA offers a unique platform, as the scope and reach of its work in nuclear security extends to all

States. This central role has been strengthened since its programme on the protection of nuclear materials was enhanced in 2002 with the adoption by the Board of Governors in March that year of the first Nuclear Security Plan. Since then, we have successfully implemented two further Nuclear Security Plans which ran until the end of last year. We are now just starting the fourth such plan.

Since the adoption of our first Plan, the IAEA has trained over 15,000 individuals from 120 States, repatriated more than 1800 KG of research reactor fuel and provided over 4,000 detection instruments, conducted more than 120 peer review and advisory services (both IPPAS and INSServ), published more than 20 guidance documents in the nuclear security series. This is in addition to conducting more than 200 field visits and agreeing more than 70 Integrated Nuclear Security Support Plans. These Plans help States identify areas in their national nuclear security regimes, where further improvements are required and these Plans act as tools for their relationship with the Agency in assisting them to bring about necessary improvements.

But the Agency's work is more than numbers; it is about ensuring robust and sustainable national nuclear security regimes so that States themselves have the capacity to ensure secure borders, events, and facilities.

Strengthening Nuclear Security

Naturally, we believe that our efforts to date have made a significant contribution to improving global nuclear security. Some people claim that the absence of any terrorist event involving nuclear or other radioactive material means that we can declare victory. This is a short-sighted approach. We cannot be complacent. It is like claiming that we should still use Windows 3.1 because that was perfectly adequate software. It did the job, but it had vulnerabilities which were addressed and continue to be addressed by updates and improvements. The same applies to nuclear security. As threats evolve, we must be responsive and vigilant. We have come a long way but more remains to be done, and therefore, continuous improvement is necessary.

What can the IAEA do?

The IAEA Board of Governors approved the 2014-2017 Nuclear Security Plan in September last year, so that we are equipped to continue to support States in building a global response to a global threat.

The Nuclear Security Plan is organised around 7 programme-areas, namely: Needs Assessment, Information and Cybersecurity, External Coordination, Supporting the Nuclear Security Framework Globally, Coordinated Research Projects, Self-assessment and/or Peer Review Missions, Human Resources Development, and Risk Reduction and Security Improvement.

This work cannot be done alone.

Let me just highlight a couple of points in this comprehensive programme.

ITDB

We offer a unique opportunity to study and measure the performance of the global regime of prevention, detection, and response through the Incident and Trafficking Database. This is an authoritative collection of incidents and trafficking reports submitted by the 125 Member States who take part in the programme. Together they make up a network of security minded professionals that seek to combat illicit trafficking and regulatory lapse by sharing their collective experience.

The numbers of incidents concerning radioactive or nuclear material out of regulatory control continue to grow, and as of 31 December 2013, the grand total reached 2477 confirmed incidents. These incidents include acts of unauthorized enterprise, criminal activity, theft, and loss. The inventory of radioactive and nuclear material reported out of regulatory control includes the full range of industrial, medical, and nuclear materials and represent a threat to our security if these materials were to be involved in an accident or employed in malicious acts. International groups have been identified in such criminal activities, which underscores the necessity that nuclear security be managed as an international priority. Initiatives to enhance the effectiveness of the nuclear security regime can benefit by using the ITDB network of national points of contact to communicate not only real-time trafficking information, but can also form the focus in guiding the activities of the Centres of Excellence, counter-smuggling response, the Global Initiative, and other international cooperative initiatives.

Another integral component of the IAEA's nuclear security programme is the legal and regulatory assistance provided to States upon request, to help facilitate adherence to relevant treaties and to establish national legislative and regulatory systems. An effective global nuclear security framework requires all States to recognize the importance of the legal framework – those with active nuclear programmes and those conducting more limited nuclear activities. I do not know of a State which does not use, store, or receive radioactive sources. Any State can be a point of transit for nuclear and other radiological material. Therefore, it is a priority of the IAEA to bring the 2005 Amendment to the Convention on the Physical Protection of Nuclear Material into force. The IAEA holds regional workshops on the CPPNM to encourage those States to act now.

The Nuclear Security Series publications provide a strong basis to assist States in meeting requirements set out in binding international legal instruments.

Nuclear Security Guidance

The IAEA is the only global organization that can produce and disseminate global consensus guidance on nuclear security. As I have already said, nuclear security is and will remain a national responsibility, and few States have the capacity to meet that responsibility without any external help or advice. Most States want and need guidance that they can trust to help them apply globally accepted good practices in meeting their national responsibility. Since global nuclear security depends on effective nuclear security in all States and cooperation between States, even those States that do not themselves need guidance from the IAEA, benefit from other States receiving the best possible guidance.

For decades, we at the IAEA have produced and disseminated global consensus standards for nuclear safety, and in the past decade we have laid the foundations to do the same for nuclear security. In safety, the standards are central to everything else we do – our peer review and advisory services review national arrangements or measures at a facility against the standards; our education and training programmes teach people how to apply the standards; and our assistance is focused on helping States meet the standards.

The original nuclear security guidance document was the famous INFCIRC/225 which stemmed from a recommendation by the Tokyo Panel on Safeguards Methods and Techniques in December 1969, that the IAEA should develop a set of guidelines for the physical protection of nuclear material which could be applied at national level and form an essential background for the application of a national safeguards system. During 1970 the IAEA developed a draft of possible guidelines and in 1971 convened a working group of Member State representatives to review them. Following several meetings, the panel of experts agreed the Recommendations for the Physical Protection of Nuclear Material in March 1972 and they were published by the IAEA later that year.

The IAEA convened an Advisory Group in 1975 to review these Recommendations. The outcome was a much expanded document (published as INFCIRC/225) which has regularly been updated in consultation with Member States.

We have come a long way since then. We now have in place the top tiers of the hierarchy of guidance. The Nuclear Security Fundamentals, published last year, set out the objective and twelve essential elements of a State's nuclear security regime. The three Nuclear Security Recommendations publications then set out in more detail what a State needs to do to establish and sustain effective nuclear security in relation to the three broad categories of materials and facilities: nuclear material and nuclear facilities (that is, INFCIRC/225/Revision 5); radioactive material and associated facilities; and nuclear and other radioactive material out of regulatory control. And over the next few years we will complete the third tier: the implementing guidance that describes for States how they can meet the Recommendations. Eight of these Implementing Guides have already been published – and indeed we have already started work to update three of them – another five are approved and should be published this year, and around ten more are being developed.

Already, our other nuclear security activities are being aligned with the published guidance, and as the suite of guidance is completed, so too will be this alignment. The IPPAS service, which I will address in a minute, has always been based on the recommendations in INFCIRC/225, but the principle that our activities support the application of our guidance is now applied across all of nuclear security.

If we are to use the guidance in this way, indeed, we need to ensure that our work is of high quality and that it really reflects global consensus on good practice. To achieve this, we have always used experts from our Member States to draft and review our guidance, along with internal processes to assure quality, and drafts of higher level guidance have always been submitted to all Member States for review. This will continue, but the Nuclear Security Guidance Committee, or NSGC, which was established in 2012, is an important further element in ensuring consensus, coherence and quality by further formalizing and enhancing Member States' involvement in the process. In its first term, more than 50 Member States have nominated members to participate in NSGC, and the Committee now reviews and

approves, on behalf of the Member States, all draft guidance at three key stages in its development. NSGC has also been working with the Secretariat to agree a 'roadmap' of all the supporting guidance that will ultimately be needed, and priorities for filling gaps to complete the guidance.

I repeat, nuclear security is a national responsibility, and no State is obliged to follow any of this guidance, or to receive any of the IAEA services or assistance that help apply the guidance. We firmly believe that global consensus guidance – and perhaps in the future global security standards – are crucial to enhancing nuclear security globally and their development is crucial to continuing an exchange of ideas and ensuring an open dialogue on all facets of nuclear security. And we now have the foundations in place to provide that guidance.

Peer Reviews and Advisory Services

The IAEA International Physical Protection Advisory Service (IPPAS) was initiated in 1995 and is a fundamental part of the Agency's efforts to assist States, upon request, to establish and maintain an effective national physical protection regime to protect against an unauthorized removal of nuclear and other radioactive material and against sabotage of nuclear and other associated facilities and material. IPPAS is not an inspection. It provides peer advice on implementing international instruments and IAEA guidance on the protection of nuclear and other radioactive material and associated facilities. At the request of a State, IPPAS assembles a team of international experts who assess the State's physical protection regime, compare it with international instruments and guidance and best practices and make recommendations for improvements to ensure the effectiveness and sustainability of this regime. This appraisal includes a national-level peer review of the legal and regulatory framework as well as peer review of measures and systems in place to execute that framework at facilities and during transport. To better address the needs of the host countries, a modular approach has been introduced comprising five modules...

From a historical point of view, the first IPPAS mission was organised in 1996 when experts used as their benchmark INFCIRC/225/Rev3, which at the time was the only internationally recognised, technically based guidelines on nuclear security. This first mission was conducted in Bulgaria from 20 to 29 November 1996 and I myself supported the participation of one of my staff from the French Institute for Radiation Protection and Nuclear Safety as a member of this first IPPAS team. Up to the end of 2013, 61 IPPAS mission were conducted in 39 countries, including 15 follow-up missions. A new step was also achieved with the IPPAS conducted at the IAEA Nuclear Materials laboratory in Seibersdorf in March 2013.

The recognition of IPPAS Missions has steadily increased during the last few years, as demonstrated by conduct of IPPAS Missions in the countries with large nuclear industry such as the UK, France in 2011 as well as in Sweden, Finland and the Netherlands. Latest IPPAS missions were conducted to Hungary in May-June 2013, to the USA in October and to Australia in November 2013. The Republic of Korea will be the 40th country to host an IPPAS mission in the next few days (from 24 February to 7 March 2014). The conduct of IPPAS mission has been already requested by Armenia, Belgium, Canada, Japan and Norway.

It is important to mention, that the First International Seminar to Share Experience and Best Practices from Conducting International Physical Protection Advisory Service (IPPAS) Missions was held by the IAEA in cooperation with the Government of France in Paris, France, from 4 to 5 December 2013.

The decision to hold the Seminar had been prompted by a number of recent Agency initiatives and wider developments. Notably, in March 2012, the French Prime Minister announced at the second Nuclear Security Summit in Seoul, Republic of Korea, that France would host the First International Seminar on IPPAS in 2013 in Paris; and the Ministerial Declaration which was approved at the July 2013 'International Conference on Nuclear Security: Enhancing Global Efforts' noted that participants 'supported efforts to strengthen the IAEA's nuclear security programme to respond to Member States requests for peer reviews and advisory missions such as IPPAS missions, and to meet follow-up requests to enhance and sustain effective nuclear security regimes'. The General Conference Resolution on nuclear security adopted in September 2013 included a specific encouragement for the voluntary use by Member States of the Agency's nuclear security peer reviews and advisory services for exchanges of views and advice on nuclear security measures, and welcomed the increased recognition of the value of IPPAS missions by Member States. The General Conference also encouraged the Agency to organize meetings to allow Member States to share experience and lessons learned from IPPAS missions, and welcomed the proposal to hold this Seminar in Paris in December 2013.

The purpose of the seminar was to share the lessons learned and to discuss the benefits received from conducting IPPAS missions and their follow-up activities, as well as the options for further enhancement of this service. 127 participants from 43 Member States (including 13 participants from the ROK) took part in the seminar.

On the first day (4 December 2013) of the Seminar, participants considered 'the Role of IPPAS in Enhancing Nuclear Security' during two sessions and a panel discussion. For Day 2 (5 December 2013), the Seminar concentrated on a 'Future Vision of IPPAS', again with two sessions, each with an associated panel discussion. Four key note speeches and 29 other presentations were provided during the seminar.

The seminar was very useful to the IAEA as strong support has been provided to the Agency activities on nuclear security and very useful proposals have been received related to IPPAS and its future activities. The IAEA is committed to support the efforts of Member States in enhancing nuclear security and will continue to provide required assistance. The IPPAS will continue to be one of the priority topics at future IAEA meetings and conferences, and that efforts will be made to continue the organization of the international seminars on IPPAS periodically.

Based on the seminar findings the IAEA is developing a Comprehensive IPPAS Strategy and an Action Plan for its implementation.

The biggest challenge for the future is to universalize nuclear security- it has to be seen as an enabler not a hindrance for States adding nuclear to their energy mix.

What can States do?

States must give greater recognition to the fact that while security is a national responsibility the consequences of an incident of nuclear terrorism, similar to a nuclear accident, go beyond the borders of any one State.

States must accept that this means greater collective action involving all States. Without exception!

States can do this through working with us, through the bodies that we have set-up such as the Nuclear Security Guidance Committee: a forum for all IAEA Member States to provide input to the development of our guidance documents.

States can do this by living up to their commitments. I understand that there is a great temptation to react to new threat assessment by proposing new measures. However, speaking frankly, this seems premature when States have yet to implement what they have already agreed. A hugely significant milestone continues to elude us as we seek to achieve ratification of the 2005 Amendment to the Convention on the Physical Protection of Nuclear Material. Some nine years after its signature, despite the widespread recognition of its importance expressed from Heads of State downwards, it still has not entered into force. It remains a source of great frustration to us, and to me in particular, after the seven full weeks I spent chairing the group of Legal and technical Experts who had drafted the Amendment over a period of 15 months that still some twenty additional States need to ratify the Amendment to allow it to come into force.

States can do this by adopting a holistic approach to safety, security and safeguards, particularly as integral building blocks for newcomers to nuclear techniques and applications. We must avoid the “add on” approach of the past. In this respect, I welcome the approach by suppliers such as those from Korea, who look at safety, security and safeguards from the start of the supply process.

States can do this by being sensitive to the concerns of others. They must demonstrate that security is not being used as an excuse to stop people exercising treaty-based rights or as a means of gaining commercial advantage, for instance in radioisotope production. Security is a global concern; it requires a level playing field.

Finally, states can do this by supporting international efforts. And here I would again point to Korea as an example for the international community at large for its on-going contributions to the IAEA’s Nuclear Security Fund, its provision of experts, and its hosting of an IPPAS Mission. We will look to Korea to continue to set the standard for others to follow.

Conclusion

Let me conclude by again emphasizing that nuclear security is a national responsibility that has to be exercised in a global context. While the international community has undoubtedly made significant improvements to global nuclear security, more remains to be done as the threat is real and immediate.

This requires a global platform. The Agency will continue to provide the global platform where every Member State has a voice; we will continue to work to support both the establishment of a global nuclear security framework and national efforts to have sustainable

nuclear security regimes which meet the requirements and obligations of that framework. We will do so by giving priority to the production of internationally agreed guidance covering all aspects of nuclear security; we will give priority to providing services to States to assess themselves or to receive advice on how their national regimes measure up to the framework; and we will give priority to building capacities in States to address any weaknesses identified.

To do so will require additional resources: not just financial but also human resource and political support. The Director General has made it clear that he regards nuclear security as one of the Agency's main priorities. He has also made it clear that he is willing to devote more resources to addressing nuclear security. Last year, we held a unique conference which brought together political leaders, policy makers and technical experts to examine all aspects of nuclear security in a holistic manner. The outcome of that conference will help guide our actions over the next four years. And we will repeat the Conference so that we again can offer a global platform to develop a global response to a global threat.

We must not lose sight of the fact that at the end of the day, it is people that we are working so hard to protect. As an oncologist in Ghana pointed out...

"Without our radiotherapy machine, I don't know where we would be. ...If the machine breaks down for one day, it makes national news. You can imagine what would happen if the Cobalt-60 source itself went missing! The whole country would be in turmoil. If it was stolen, the loss would be horrendous, people would lose hope. We must make sure that it is properly protected, that our facility is secure. Nuclear security measures matter. We cannot let anything threaten hope..."

With that, I thank you for your attention and your commitment to international peace and security.