

The background of the slide features a photograph of a nuclear power plant, specifically the containment domes and cooling towers, partially obscured by a series of overlapping, semi-transparent geometric shapes in shades of blue, purple, orange, and yellow. The text is overlaid on this background.

International Conference on Physical Protection of Nuclear Material and Nuclear Facilities

IAEA HQ, Vienna, Austria
13-17 November 2017

Good afternoon Excellencies, distinguished delegates, Ladies and Gentlemen. Dear colleagues.

Summary of the Conference: Insights and Conclusions

Kathleen Heppell-Masys
Conference President

My name is Kathleen Heppell-Masys, Director-General of Security with the Canadian Nuclear Safety Commission, and it has been my privilege to have been asked to be the President of this prestigious Conference. Over the next few minutes, it is my goal to give you a flavour of what has happened this week and where I suggest that the nuclear security community considers focussing their attention in the future.

Participation

- Almost 700 participants
- 74% male / 26% female
- 95 Member States
- 11 International Organizations

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The scale of the Conference is described here, with almost seven hundred participants registered, from almost one hundred Member States and eleven international organizations.

One point in which I take great pride personally is the growing participation of female professionals in the field of nuclear security. (add here).

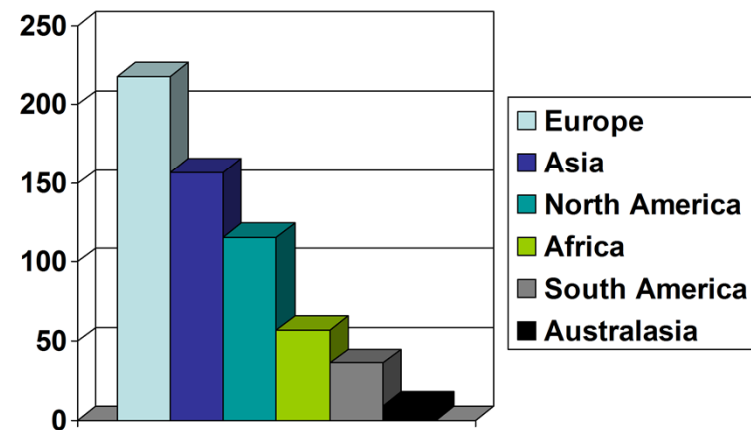
Overview – Conference Program

- Thirty-nine technical sessions in four parallel tracks
- Forty poster presentations
- Six panel sessions
- Four side events
- Exhibition
- Interactive content presentations
- Scenario-based policy discussion

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As you can see from the information on this slide, this has been a very busy Conference with many varied activities.

Geographic Breakdown



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This shows the global reach of security concerns. The Conference has benefitted from representatives from all continents.

Four Side Events

- Evolving threats and advanced technology
- Shapash nuclear research institute 3D model
- Nuclear security e-learning
- Opportunities for training with virtual/augmented reality

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Four side events were held during the lunch breaks from Monday to Thursday. I hope that you were able to attend one or more of these and found them useful.

Six Panel Sessions

- Universalization of CPPNM and/A
- Implementation of CPPNM and/A
- Legislative and regulatory framework for physical protection
- Developing and sustaining a physical protection regime
- Protection against unauthorized removal and sabotage of nuclear material and facilities
- International cooperation for physical protection

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Six panel sessions have been held, starting with two on Monday which I Moderated, then one more each day, including today. For convenience, their titles have been shortened on this slide. These describe key elements of the nuclear security regime and the important role played by the Convention on the Physical Protection of Nuclear Material, and its Amendment.

Universalization of the CPPNM and its Amendment

- Even Member States without nuclear material should ratify/accede
 - Leave no safe haven for malevolent actors
- IAEA encouraged to continue to promote ratification/accession
 - Conferences, Workshops, POC meetings
- States Parties reminded to inform the depositary of their laws and regulations, as per Article 14

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Panel Session 1 was on the Universalization of the CPPNM and its Amendment. We concluded that all IAEA Member States should become States Parties in order not to offer weak links for malevolent actors to exploit, reinforcing that the nuclear security threat is truly global. The IAEA Office of Legal Affairs described their Action Plan to encourage Member States to ratify or accede to all Conventions developed under the auspices of the IAEA, including the CPPNM. States Parties were also reminded to inform the Depositary of the laws and regulations by which the CPPNM is implemented in their country.

I hope that this Conference has helped to convince those Member States which have not ratified or acceded of the

practicality of doing so.

Implementation of CPPNM and its Amendment

- Becoming a State Party is not enough
 - Obligations must be implemented in national frameworks
- Amendment encompasses essential elements of physical protection
- Balance confidentiality with information sharing
- Start of preparations for 2021 Review Conference welcomed

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The second panel session was closely linked to the first, reinforcing that not only should Member States become States Parties to the CPPNM and its Amendment, they must also implement its provisions.

Legislative and Regulatory Framework for the Physical Protection of Nuclear Material in Use, Storage and Transport and of Nuclear Facilities

- No ‘one-size-fits-all’ approach
- Performance-based regulatory approach
- Use of IAEA Nuclear Security Series guidance
- Importance of international cooperation

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This panel session highlighted the broad use among States Parties of the IAEA’s Nuclear Security Series guidance documents. Several States Parties indicated that they had moved to a ‘performance-based’ or ‘goal-setting’ approach in their regulatory requirements, noting that prescriptive requirements are sometimes an inappropriate way of dealing with different kinds of nuclear installations or facilities.

Developing and sustaining a physical protection regime for nuclear material in use, storage and transport and for nuclear facilities

- DBT flexible enough to facilitate rapid and appropriate changes to threat environment.
- Education and training of nuclear security professionals
- A strong nuclear security culture is an essential factor

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The development of a Design Basis Threat is a key element of a State's nuclear security regime, and allows prevention and/or response mechanisms to be prepared. The DBT needs to be flexible enough that the State can respond rapidly and appropriately to changes in the threat environment. Further guidance from the IAEA could be helpful here.

Protection against unauthorized removal of nuclear material during use, storage and transport and sabotage of nuclear material and nuclear facilities

- Performance-based regulatory approach
- Flexibility in systems to respond to new and evolving threats
- Consistency in training regulators/operators

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Once again, the performance-based regulatory approach was highlighted.

Not only does the DBT need to be flexible enough to respond to changes in the threat environment but also the physical protection system needs to be robust enough to respond to new or evolving threats.

CPPNM/A: International cooperation for physical protection of nuclear material and nuclear facilities

- International cooperation was encouraged but it was recognized that there are challenges.
- IAEA has a central role as coordinator
 - Sufficient and balanced resources are necessary

Systems View of Physical Protection – Four Elements

- Organizations - International
- Organizations - National
- Individuals and Technology
- Interaction among these elements

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The common themes emerging from the panel sessions speak to the need to adopt a systems view to nuclear security, which is my key recommendation. We must not be constrained by the current ways of thinking or operating if we are to truly be able to anticipate and effectively respond to security threats

Organizations - International

- Universalization and implementation of CPPNM and /A go hand-in-hand
- International Cooperation
 - States should learn from one another
 - States should share their DBT process
 - Malevolent actors work globally
- IPPAS/INSServ/INSSP important
- IAEA to facilitate

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Universalization and implementation of CPPNM and its Amendment go hand in hand and I repeat my call and that of the DDG at the start of this Conference for states that have not yet ratified to do so.

I want to challenge States Parties to break down some of the barriers to sharing information, so that we can respond globally to a global threat and the IAEA to facilitate this.

Organizations - National

- Nuclear security must focus on credible threats but keep pace with evolving threats
- Take a national systems approach
 - Performance test in an integrated manner
 - Look for cross-cutting vulnerabilities
- Balance is needed between confidentiality and information sharing
- Clearly define responsibilities of all stakeholders

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Not only must physical protection evolve but it must be developed using a systems approach that accounts for cross-cutting vulnerabilities.

It is important of course for States to balance the information sharing I mentioned in the last slide with the need for confidentiality.

I also want to share with you a quote from the Panel Session on Monday afternoon:

“The shield must evolve because if it doesn’t, the sword wins”

Individuals and Technology

- Strong nuclear security culture underpins everything
- Begin with security by design
- Realistic and integrated training/exercises/drills are key
- Cyber security impacts everything
- Technological advances can be seen both as threats and opportunities to improve

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Turning now to some common themes that I have drawn from the sessions, I offer what seem to me to be the key insights.

Nearly every session at the Conference mentioned cyber security in some way.

Interactions

- Physical protection cannot be considered in isolation
 - Everything is interconnected
- Need to better protect against credible cyber and insider threats in PPS
- Effective nuclear security must be coordinated with nuclear safety
 - Organizational culture may include both security and safety

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I emphasize the importance of a systems approach to nuclear security.

We must work more closely with our colleagues in nuclear safety, with whom we share the common goal of protecting the public and the environment.

Exercise scenarios must consider blended attacks.

Interconnections include organizations, people

What happens next?

- Take what you have learned back home
 - Convert ideas into concrete action
 - Continue to share lessons with other States
 - Exchange ideas to improve resilience of regimes
- Consider holding a further Conference
 - Follow-up on the lessons learned here
- Plan for the 2021 CPPNM/A Review Conference
 - Focus preparations on substance
 - Resolve procedural issues
 - Address contemporary and emerging issues

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So, where do we go next. Well, that is up to you. I hope that you have been able to participate actively in this Conference, as I called for in my Opening Statement and I hope that you have learned lessons and good practice to take back home and implement.

Finally, I hope that you agree with me that this Conference has been so useful that we should consider calling upon the Secretariat to plan to hold a further Conference in a few years' time.

A more fulsome description of the content and conclusions of the Panel Sessions and Technical Sessions will be contained in the President's Report.

Thank you!

- Thanks to the all who participated:
 - Programme Committee, Chairs, Rapporteurs
 - Secretariat
 - Technical Officers, Writers, Conference services
 - Sponsors, Exhibitors
 - And, most of all, you who attended

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In addition to these remarks, Secretariat staff has been working to prepare a formal President's Report, containing summaries of each session along with any Conclusions and Recommendations proposed by the Chair.

And now I ask that you join me in a round of applause for all those who worked so hard to plan, prepare for and service the smooth functioning of this Conference.

Thank you and I wish you safe travels home.