

The 46th JAIF Annual Conference
*Session 2— Building Confidence - Thinking Together with
the World about Improving Nuclear Safety*

*Strengthening Nuclear Safety and Security globally:
a continued international challenge*



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IAEA

International Atomic Energy Agency

Security History: 9/11

- September 11, 2001 aftermath of terrorist attack
- Security risks from outside groups or insider threats became of paramount concern surrounding nuclear power plant critical infrastructure
- Questionable whether reactors would withstand such attacks
- Apart from radioactive sources, reactors and other parts of the nuclear fuel cycle vulnerable to attack, e.g., reprocessing facilities and transport between sites
- 2003 Office of Nuclear Security



Nuclear Security : IAEA's Vision

Achieving worldwide, effective security wherever nuclear or other radioactive material is in use, storage and/or transport, and of associated facilities.



A global threat demands a global response.



International Instruments

Platform of international legal instruments, binding and non-binding

- Convention on the Physical Protection of Nuclear Material , and 2005 Amendment – Not yet entered into force
- Nuclear Terrorism Convention and other counter terrorism conventions
- UNSC Resolutions 1373, 1540, 1977
- INFCIRC/225/Rev 5 published as IAEA Nuclear Security Series No. 13
- Code of Conduct for the Safety & Security of Radioactive Sources

All instruments support IAEA taking leading role for implementation through its programmes:

- Development of internationally accepted guidance and standards
- Provision of assistance (e.g. peer review & advisory services, E&T, equipment...)



The Role of the IAEA

The IAEA:

- Supports States in their efforts to establish and maintain effective nuclear security through assistance in capacity building, guidance or standards, human resource development and risk reduction;
- Facilitates adherence to implementation of international legal instruments related to nuclear security

through

- Security Advisory Missions
- Integrated Nuclear Security Support Plans (INSSP)
- Illicit Trafficking Data Base & INTERPOL
- Promoting and assisting countries in setting up Nuclear Security Support Centres
- Providing nuclear security measures at major public events
- Forensics

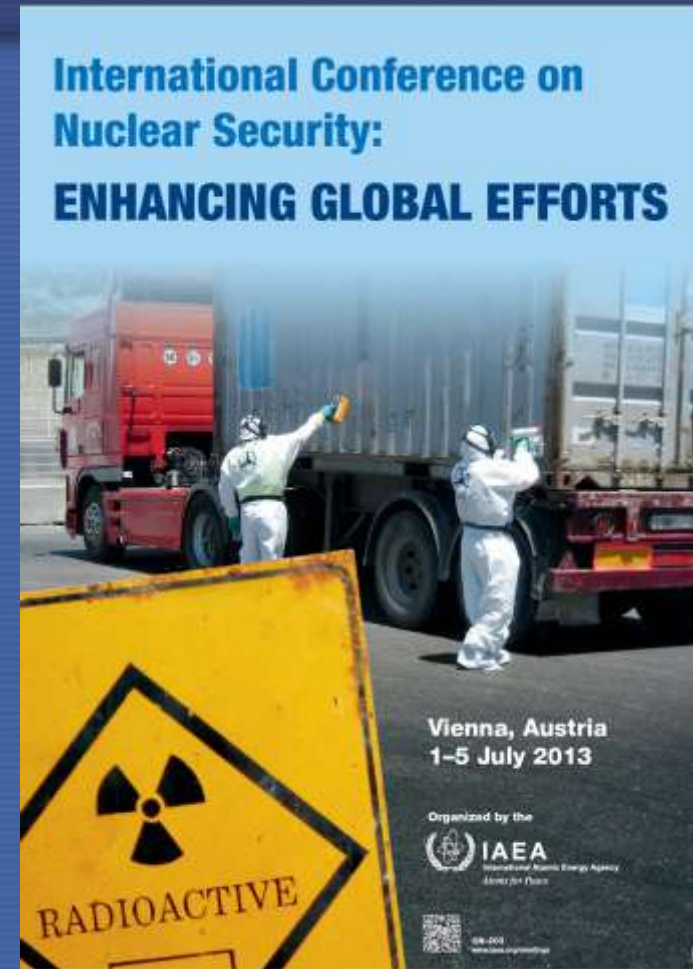


IAEA



Nuclear Security Conference 2013

- 1-5 July 2013 in Vienna
- A global forum for ministers, policymakers, senior officials, managers and experts from all areas of nuclear security to...
 - (1) Review experience and achievements to date
 - (2) Enhance understanding of current approaches and identify trends & issues
 - (3) Discuss policy, technical and regulatory developments and issues
 - (4) Formulate views on the future directions and priorities for nuclear security
 - (5) Provide input to the IAEA's Nuclear Security Plan for 2014-2017



Safety History: Chernobyl

- Nuclear Safety lessons learned from the accident focused on identifying the weaknesses in and improving the design safety of VVER and RBMK reactors
- Acceleration in development of safety standards, guidelines and services to assist countries affected
- Department of Nuclear Safety was created a decade later
- 25 years later: Fukushima



“...Radioactivity does not respect national boundaries, or national sovereignties. Rules ensuring the safe use of large-scale nuclear activities should therefore be worked out internationally and accepted to apply everywhere....”

**Hans Blix,
former IAEA Director General**



Safety Post Fukushima

- March 2011, accident at TEPCO Fukushima Daiichi nuclear plant.
- June 2011, adoption of the Ministerial Declaration at the Vienna Conference on nuclear safety
- September 2011, the IAEA Action Plan on Nuclear Safety was adopted by the IAEA's Board of Governors and subsequently unanimously endorsed by the IAEA General Conference. This is the first time in the life of the Agency that all Member States gather, in a comprehensive program, all nuclear safety tools to strengthen the global nuclear safety framework



“...It is essential that all of us - Member States, the IAEA and other key stakeholders - maintain our sense of urgency and our commitment to implementing the Action Plan in full.”

**Yukiya Amano,
IAEA Director General**

IAEA Action Plan on Nuclear Safety (NSAP)

1. Safety Vulnerabilities
2. Peer Reviews
3. Emergency Preparedness and Response
4. Regulatory Bodies,
5. Operating Organisations
6. IAEA Safety Standards
7. **Legal Framework**
8. Embarking countries
9. Capacity Building
10. Protection of People and Environment
11. **Communication**
12. Research and Development



✓ **Strengthen**

✓ **Enhance Effectiveness**

Actions for:
IAEA Secretariat
Member States
Other Relevant Stakeholders

Global Activities

- World nuclear community has made **noteworthy progress** in **strengthening** nuclear safety and security
- Overwhelming majority of Member States with NPPs have **essentially completed** comprehensive safety reassessments ('**stress tests**') with the aim of evaluating the design and safety aspects of plant robustness to protect against extreme events.
- **Capacity building** programmes have been built or improved, and **EPR** programmes have also been reviewed and improved
- Agency **shared lessons learned** from the Fukushima Daiichi accident through international experts' meetings (**IEMs**) (reactor and spent fuel safety, communications and transparency, and protection against extreme earthquakes and tsunamis)



Working the Plan: NSAP in Action



IRRS Improved: standardized reporting, revised guidelines, targeted modules, on-going analysis, formalized schedule

Developed better tools: Regulatory Safety Infrastructure software for current and newcomer countries (SARIS/IRIS)

Revised Safety Standards and developed Safety Guides:

- GSR Part 1 Governmental, Legal and Regulatory Framework for Safety (multiple severe hazards); DS472 “Regulatory Body Functions and Processes” and DS473, “Organization, Management and Staffing of a Regulatory Body”

Improved legal framework: Effectiveness and Transparency
Working group to discuss actions to strengthen the CNS and on proposals to amend, where necessary

Working the Plan: NSAP in Action



Assisted newcomers: implemented safety packages on SSG 16–IAEA Safety Guide on the Establishment of the Safety Infrastructure; implemented new training

Built capacity: in **publication:** *Managing Regulatory Body Competence* ; developed *Strategic Approach to Education and Training 2013–2020*; **updated software:** *Systematic Assessment of the Regulatory Competence Needs (SARCoN)*

Improved Communication: strengthened networks: Safety and Security Regulatory Network Portal (RegNet); Regulatory Cooperation Forum (RCF): developing safety guide covering stakeholder interactions for Regulators

Strengthened operators: through interaction with operators and industry / Memorandum of Understanding IAEA-WANO

Regulators Supporting Regulators



- **Cape Town 2009 Outcome:** Regulatory Cooperation Forum (RCF) supporting nuclear newcomers
 - **Goal:** to develop strong regulators of nuclear power while optimizing the use of limited resources when assisting embarking countries
 - **Missions:** Jordan, Poland, Viet Nam
- **Ottawa 2013:** Responsibility of the vendor country's regulator towards the embarking country's regulator

Strengthening Emergency Preparedness and Response



- Eight EPREV missions in 2012, the highest number since the programme began in 1999.
- States' increasing interest in EPR, will require more EPREV missions in the coming years, which will require more experts, and more resources from the Agency and the Member States
- IACRNE, et al, agreed to enhance international response arrangements in an emergency as well as in the post-emergency phase based on lessons identified in response to the Fukushima Daiichi accident (December 2012, Paris meeting)
- Developing minimum required guidelines that would help to harmonize response capabilities with some Member States for international assistance; to be effective, Member States need to comply with them.

Key Messages



- The IAEA Action Plan on **Nuclear Safety** has provided **renewed** impetus;
- Ongoing **commitment** by all parties to implement the activities under this plan is **vital**;
- The **IAEA** will continue to provide **support** and **assistance** in this regard;
- IAEA **comprehensive report** on the Fukushima Daiichi accident which is planned to be finalised in **2014**;
- Nuclear Security shares with Safety the **ultimate goal of protecting the public** and the environment.

Merci!

