

IAEA Member State Board of Governor's Nuclear Safety Technical Briefing 22 February 2013



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IAEA

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GOV/2013/4: Nuclear Safety Review 2013

GOV/INF/2013/1: Implementation of the IAEA Action Plan on Nuclear Safety

GOV/INF/2013/2: Fukushima Conference on Nuclear Safety



Global “Big Picture”

- Noteworthy **progress** in strengthening nuclear safety in 2012.
- Operational safety level remained high | **there is room for further improvement.**
- Long term operation and **ageing** continue to **challenge** NPP and research reactor operators and regulators.
- Continued to share lessons learned from the Fukushima Daiichi accident | **IEMs** | **CSS** | **CNS** | **Fukushima Ministerial Conference.**
- Continued to **strengthen** regional and international **knowledge networks.**



Radiation Protection and Transport Safety



- Complexity of radiotherapy procedures and challenges associated with **occupational exposure**.
- International **consensus required** on the *Code of Conduct on the Transboundary Movement of Radioactive Material Inadvertently Incorporated into Scrap Metal*.
- Long term management strategies and practical arrangements needed to strengthen the **safe and secure** control over **radiation sources**; expansion of security guidance also needed to help strengthen the radiation regulatory framework.
- Variations in the application of transport regulations in Member States have resulted in **shipping difficulties and delays**.

Strengthening the Safety of Waste Management, Decommissioning and Remediation.



- Establishing comprehensive **policies and strategies** for radioactive waste and spent fuel management **lag** behind.
- **No solutions** implemented for the disposal of high level **radioactive waste** and spent fuel.
- Continuing need for radioactive waste and spent fuel storage capacity; **dual purpose casks** could be an economical alternative.
- **Decommissioning** progress continues to be made, but some **impediments** persist; inadequate funding, regulations, management and training continue to be factors.
- Former **uranium production sites** continue to pose **risks** that must be addressed.

Strengthening Safety in Nuclear Installations



- “**Human error** bears a potential for jeopardizing defence in depth ...”— errors of commission in particular.
- Nuclear organizations tend to take an inadequate, ad hoc approach to **safety culture** in their nuclear operations, As a result, changes in safety culture have been insufficient and unsustainable **requires** a systematic, **long term commitment**.
- Recent events point to the fact that nuclear installations **need to be better prepared** to manage the unexpected.
- **Newcomer** countries do not use the Site and External Events Design (SEED) review service.
- **SAMGs** were **insufficient** in scope, not fully trained, or non-existent in some NPPs.

Improving Regulatory Infrastructure and Effectiveness



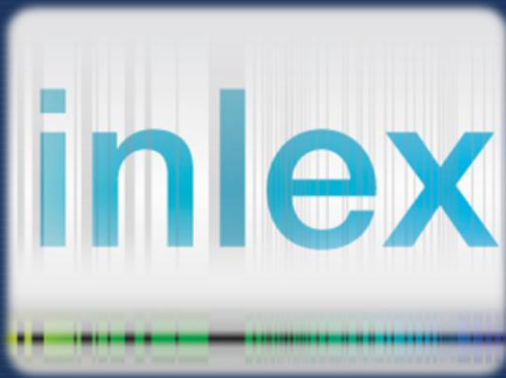
- **Existing Nuclear** Programmes: Review of 44 IRRS missions (31 at NPP MSs) worldwide found that **Requirement 24**, “*demonstration of safety for the authorization of facilities and activities*” **was most often referred to** among Regulators reviewed.
- **Newcomer** Countries: identified **many common weaknesses** and challenges: weak regulatory independence, lack of technical support, limited education and training programmes, short project schedules.
- Regulatory Infrastructure for radiation safety: new Member States often **limited, or no regulatory framework in place** to ensure the safety of people and the environment

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.

Civil Liabilities



- Effective civil liability **mechanisms to insure** against harm caused by nuclear damage
- Action Plan specifically calls on Member States to work towards **establishing a global nuclear liability regime** that addresses the concerns of all States that might be affected by a nuclear accident with a view to providing appropriate compensation
- Member States to **give consideration to joining** the international nuclear liability instruments
- Action Plan also calls on **INLEX to** recommend actions to **facilitate** the achievement of such a global regime.
- Challenge: **low number of Contracting Parties** to the existing nuclear liability conventions

The Board is **recommended to consider**
and take note of the draft

Nuclear Safety Review 2013

*NSR final version will be prepared in light of
discussions in the Board of Governors and
Member State comments received before 15
April 2013*

