

Impacts of Fukushima Daiichi Accident on Nuclear Safety

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Content

- Impacts
 - Internationally and regionally
 - On the regulatory frameworks
 - On safety of the NPPs
- Some other considerations
- Summary

Developments within the IAEA context

- IAEA Action Plan on Nuclear Safety 2011
- Developments in the Nuclear Safety Convention 2011-2017
- Vienna Declaration on Nuclear Safety 2015
- Revision of the IAEA Safety Standards 2011-2016
- IAEA Comprehensive report on the Fukushima Daiichi Accident 2015
- Development of the IAEA Peer Reviews 2011-2016
- INSAG Report on Institutional Strength in Depth



Finnish report on nuclear safety

Finnish 7th national report as referred to in Article 5 of the Convention on Nuclear Safety



The Fukushima Daiichi Accident

Report by the Director General and Technical Volumes



Action 2 - IAEA Peer Reviews

"Strengthen IAEA peer reviews in order to maximize the benefits to Member States"

Five Challenges at the 6th CNS Review Meeting 2014

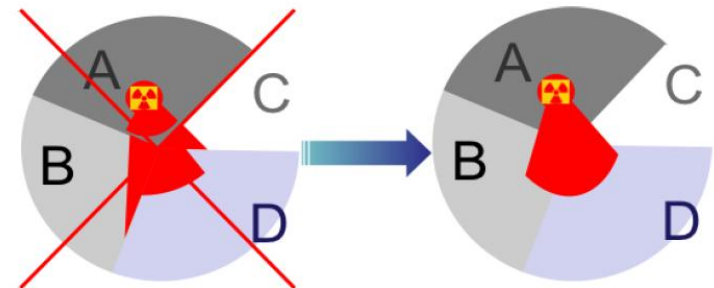
1. How to minimize gaps between Contracting Parties' safety improvements?
2. How to achieve harmonized emergency plans and response measures?
3. How to make better use of operating and regulatory experience, and international peer review services?
4. How to improve regulators' independence, safety culture, transparency, and openness?
5. How to engage all countries to commit and participate in international co-operation?

Developments in the European context

- Stress tests and their follow ups 2011-2015
- Revision of the Nuclear Safety Directive 2014
 - New and updated WENRA safety reference levels
 - National updates on regulations
- HERCA-WENRA Approach on Emergencies



Nuclear Safety in Europe



Enhancements in Regulatory Frameworks

- Strengthening the power and independence of national regulatory authorities
- Higher level safety objectives to prevent accidents and avoid radioactive releases, in particular concerning extreme natural events
- Enhanced utilization of peer reviews
- Increased transparency and public engagement in nuclear safety matters
- Promotion of an effective nuclear safety culture
- Enhancements in Emergency Preparedness and Response

IAEA Mission Reviews Finnish Regulatory Framework for Nuclear Safety

2015/22

JUN
16
2015

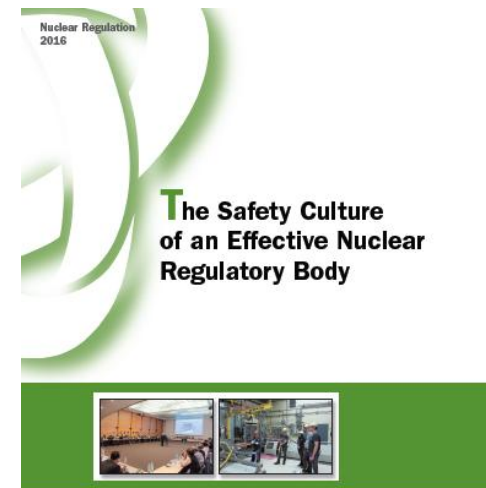


Related Resources

[IAEA Department of Nuclear Safety and Security](#)
[In Focus: IAEA Action Plan on Nuclear Safety](#)

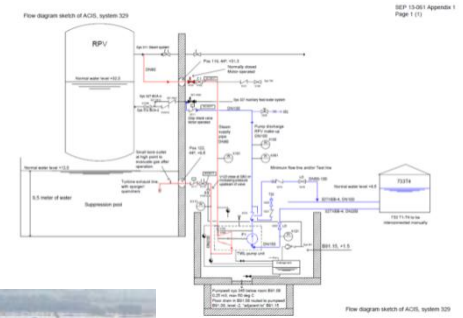
Contact

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Safety Enhancements at Nuclear Power Plants

- Additional analyses and protection against extreme natural hazards (seismicity, flooding)
- Less dependency on AC power and ultimate heat sink, increased autonomy at the sites
- Mitigation capabilities of severe accidents
- Enhanced on site emergency preparedness including multi-unit events



Further considerations

- Consequences of a severe accident (doses, sociological, psychological and economical)
- Post Accident phases and recovery, decommissioning and decontamination, Waste
- New research and development activities
- Sharing and utilisation of Operating and Regulatory experience
- Communicating radiation risks – before and during crisis
- Industry initiatives to improve safety (WANO, INPO, WNA etc.)

SHARE Fukushima residents exposed to far less radiation than thought



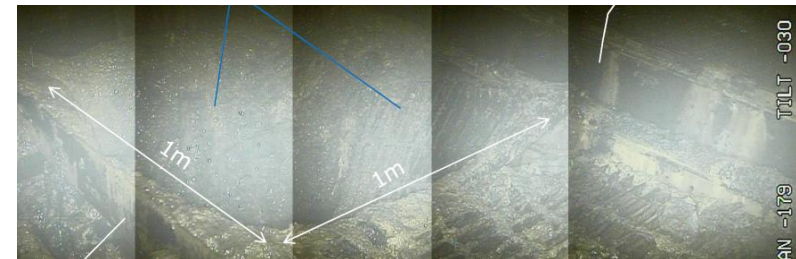
4K



By Katherine Kornei | Jan. 23, 2017, 2:30 PM

BUSINESS NEWS | Fri Dec 9, 2016 | 6:01am EST

Japan nearly doubles Fukushima disaster-related cost to \$188 billion



Management
of Radioactive Waste
after a Nuclear Power
Plant Accident

Summary

- Improvements within IAEA domain and regionally
- Improved safety of NPPs and enhanced regulatory frameworks
- Further learnings will follow
- But did we need to have the accident for all these improvements?

