

***Continuous improvement of safety:
The response of OECD/NEA Framework
to Fukushima Daiichi Accident***

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OECD/NEA Framework

- NEA Forum
- CNRA Special Task Force
- Impact on regulatory programmes

NEA Forum on Fukushima Daiichi

- Combined with Ministerial Seminar on Nuclear Safety. 200 participants. June 8th OECD Conference Centre.
- Four sessions:
 - Opening
 - Session on *Insights*. What are we learning?
 - Session on *Approaches*. What are we doing?
 - Closing: *Moving Forward and International Cooperation*
- Top regulators from NEA and associated countries. Selected industry participation.
- Input/feedback to IAEA Ministerial meeting.

NEA Forum on Fukushima Daiichi

- The NEA Forum has been an important piece of the international effort being undertaken to ***learn from***, to ***share*** and to ***implement the lessons learned*** as a result of the Fukushima Daiichi accident.

- **KEY CONCLUDING MESSAGES**

- In terms of collective learning.
- In terms of sharing of insights and approaches.
- In terms of the implementation of lessons learned.

NEA Forum on Fukushima Daiichi

– In terms of collective learning (1/2)

- A lot of in-depth review and analysis of plant safety has taken place to-date by the regulatory authorities. Further follow-up actions will continue to be taken and the Forum has focused the attention of regulatory authorities on the key issues and priorities.
- Regulatory authorities remain committed to seek ways to make operating and new reactors even safer by learning from what has happened.
- Regulatory authorities are still learning from this accident and the on-going situation. They have already started implementing the lessons learned and will continue to do so on a continuous manner, since the completion of the overall assessment of this accident may take years.
- National experience feedback and practices provide valuable knowledge that needs to be shared both nationally and internationally. Regulatory authorities are committed to enhance their cooperation and they encourage the nuclear industry to do so as well.

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- In terms of collective learning (2/2)
- The ability of Regulatory authorities to provide comprehensive information in a transparent manner to the public and governmental institutions both nationally and internationally is a real challenge. Regulatory authorities are committed to share their experience in order to improve policies in that field and to identify areas for cooperation.
- The Forum highlighted the need for the proactive focus on safety culture by all parties: operators, regulatory authorities and international organizations.

NEA Forum on Fukushima Daiichi

- In terms of sharing of insights and approaches (1/2)
- Forum provided an excellent example of international cooperation among nuclear regulators to share insights and approaches.
- Identify the priority areas that need to be addressed together as we move forward. Regulatory authorities are committed to continuing to systematically advance the necessary knowledge needed for all plant designs and post-accident situations.
- Priority areas include:
 - extreme external natural events and resilience to external shocks, including combined risks,
 - plant design and the ability of safety systems to withstand severe accidents,
 - emergency response and management capabilities,
 - crisis communication, and
 - site recovery plans and their implementation

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- In terms of sharing of insights and approaches (2/2)
- Several approaches promoting continuous improvement of nuclear safety by carrying out targeted or comprehensive safety assessments of nuclear installations.
- Need to improve communication and transparency, especially during a crisis. Adequacy and challenges of the current tools that we are using to communicate with the public on accident severity, including INES scale.
- The regulatory authorities are sharing information and working together to ensure the continued safe operation of nuclear plants today and into the future, and towards improvement of their practices and of the international nuclear safety framework as required.

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- In terms of the implementation of lessons learned(1/2)
- Harmonize the national approaches being considered to incorporate the lessons learned from the Fukushima Daiichi accident.
- NEA framework provides an effective expert network able to work efficiently and to ensure coordination between regulatory authorities.
- NEA's Standing Technical Committees to carry out additional technical analyses according to the future priorities and to share the outcomes internationally.
- Regulatory authorities to come together on a periodic basis to review how the lessons learned have been implemented and if needed, to propose additional work based on further knowledge gained from the accident.
- National and regional approaches should be used as input to the programme of work within other international bodies such as the IAEA:
 - NEA and related activities such as MDEP.
 - Implementation of IAEA safety standards and IAEA instruments (i.e. IRRS, OSART).
 - National and regional initiatives on safety objectives for new reactors.

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- In terms of the implementation of lessons learned (2/2)
- Need for an early response for the management of accident situations and for the early and continuous release of reliable information. Possible routes such as regional/international resource pooling should be developed.
- A particular effort of coordination and consistency among all international bodies and organizations is also expected.
- Regarding the nuclear industry, the regulatory authorities stress that operators of nuclear installations have the prime responsibility for nuclear safety, and have a key role to play in order to improve nuclear safety at the international level .
- Welcome the declaration from WANO to commit themselves, notably through renewed peer review, enhanced international cooperation and a more ambitious transparency policy.
- It is important to note that this Forum has been held soon after the G8 declaration in Deauville, which makes nuclear safety one of the main international priorities. All countries at the highest levels of government are committed to ensuring the safe operation of nuclear plants well into the future.

CNRA Special Task Force

- CNRA established a Senior Task Group to coordinate the response of member countries activities, including exchange of information of national activities and assessing generic implications of the accident.
- All NEA countries with NPPs in operation plus IAEA:
 - Identify areas where in-depth evaluation would benefit on an international level.
 - Work could be undertaken by existing CNRA or CSNI groups or new groups with specific tasks.
 - Identify short-term versus long-term activities.
- First meeting May 4-6. Report to CNRA in June 6-7.

CNRA Special Task Force

Recommendations to CNRA:

- Exchange of national review results and insights.
- Re-assessment of approaches to identify DB and BDB events.
- A thorough review of accident management including decision-making.
- To enhance crisis communication (national and international).
- To assess and improve off-site emergency preparedness.
- To gain a thorough understanding of accident progression.
- To assess the implications on regulatory programmes.
- To look at the implications for existing and new NPPs.

Impact on regulatory programmes

- The regulatory authorities of NEA are committed to continuing to work together internationally.
- The current situation is a unique opportunity to enhance the international nuclear safety framework and to consider improvements of the legal international frame to increase the use of international tools and safety standards, recognizing that the prime responsibility for safety rests with the operator and the country in which it operates.
- Welcome the special meeting of contracting Parties to the Convention on Nuclear Safety, and encourage any improvements of the relevant international Conventions, when needed.
- Need to enhance regulatory programmes and requirements for existing and new designs, and to enhance the basis for regulatory decision making.
 - Implications of the accident on the regulatory programmes, such as Periodic Safety Reviews, License Renewal, Long-term Operation.
 - Proper balance between deterministic and probabilistic safety goals and use of PRA in regulatory decision making.