

Decommissioning the Fukushima Daiichi Site: *Continued Progress*

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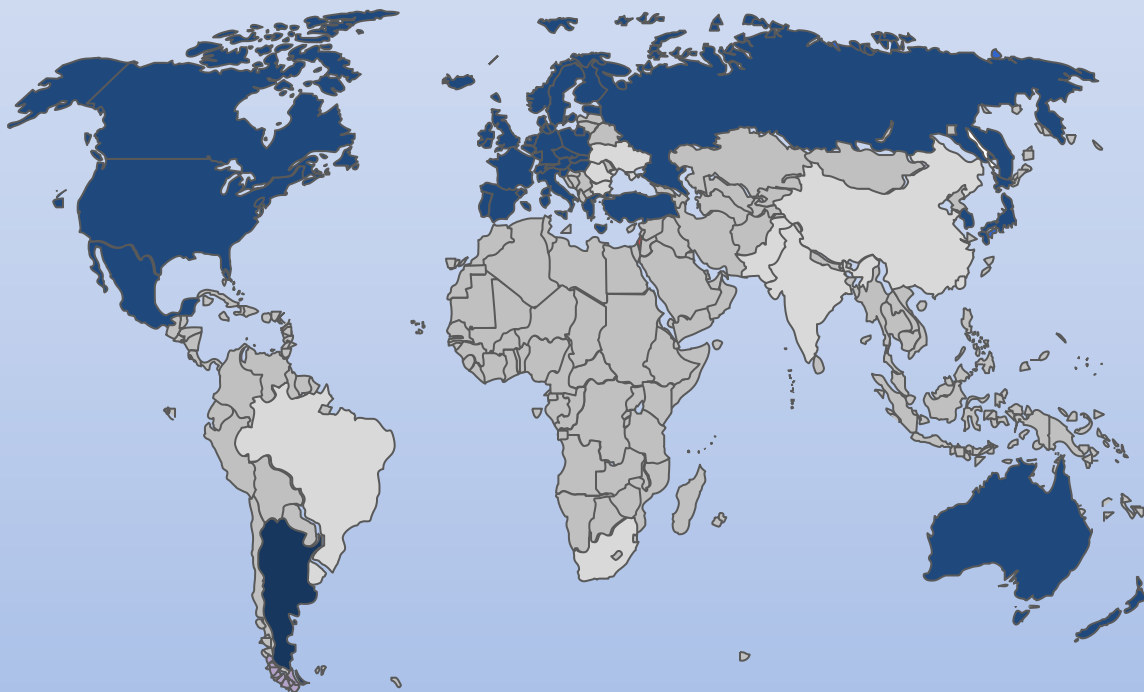
**Third International Forum on the
Decommissioning of the Fukushima Daiichi NPS**

August 5, 2018

NEA: Bringing Advanced Countries Together to Address Global Challenges

The Role of the NEA is to:

- Foster international co-operation to develop policies, best safety practices, and technologies related to nuclear energy .
 - Develop authoritative assessments and forging common understandings on key issues as input to government decisions on nuclear technology policy
- Conduct multinational research into challenging scientific and technological issues.






**NEA Countries Operate about 85%
of the World's Installed Nuclear Capacity**

Seven Years Since 3/11 Encouraging Recovery Process Continues

- **Many evacuation orders around 1F were lifted in 2017**
- **Support from international entities continues.**
- **Significant progress has been made in building new infrastructures, re-establishing agricultural markets, and helping to reconstruct the livelihoods of residents.**
- **Risks have been greatly reduced at the 1F site and work continues to ensure the safety and stability of the site.**



Legend

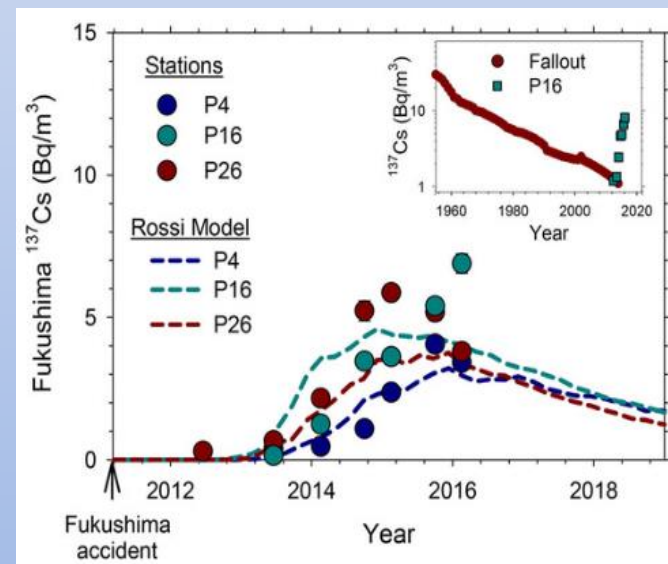
-  Zone in preparation for lifting of the evacuation order
-  Restricted residence zone
-  Difficult-to-return zone

Source: Cabinet Office of the Japanese government.

Stabilization Achieved – Now Moving Towards Decommissioning

- Fukushima Daiichi has long achieved a stable configuration:
 - Temperatures within the reactor pressure vessels and primary containment vessels of Units 1-3 are stable at between 15 to 30°C;
 - No significant changes in airborne radioactive materials released, i.e. qualifies as a ‘comprehensive cold shutdown’ condition;
 - Ocean monitoring for radionuclide concentrations indicate that levels are well within international health standards.
 - All rice produced in Fukushima has conformed to the regulatory limit since 2014.

The focus of work at the site must now be shifted to the decommissioning of the damaged reactors.



Peak levels of contamination from Fukushima in the northeast Pacific at stations P26 (offshore), P16 (intermediate) and P4 (coastal) since 2011 compared with Rossi model predictions

1F Decommissioning

- A significant volume of damaged fuel was generated, the melted-down reactors must be managed; also remaining spent fuel assemblies and fuel debris must be removed.
- The radioactivity of fuel debris has continued to decrease, however, fuel debris retrieval is crucial to reduce risks and to enable safe waste management.
- For longer term consideration, effective methods to monitor and manage the environment are necessary in order to manage uncertainties and to prevent potential contamination



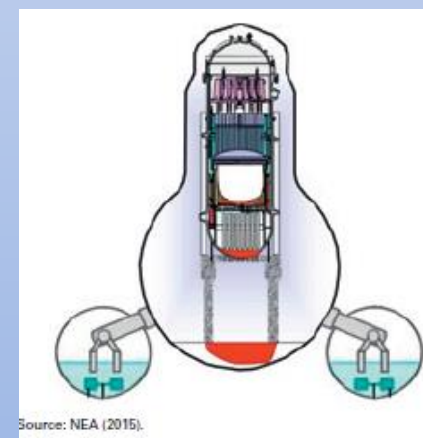
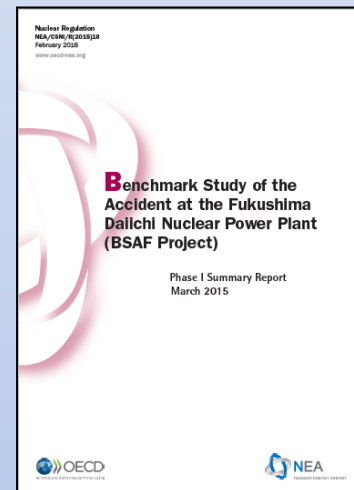
Defueling of the spent fuel pool at Unit 4



Fuel handling crane and machine

Areas of NEA Support and Collaboration Related to 1F Decommissioning and Fukushima Recovery

- **International workshops related to 1F waste management, robotics, and other subjects.**
- **Multinational research including projects to understand the behaviour of molten core material at 1F and anticipate its location and composition.**
- **Workshops related to food safety and development of methodologies to assure food safety in a post-accident environment and first steps toward an international assurance process.**



Public Involvement in Nuclear Activities: *An Ongoing Challenge for all Countries*

- In January 2017, NEA invited over 140 senior government officials from 26 countries to discuss how to involve public stakeholders in nuclear decisions in a 3 day workshop.



- The participants represented every aspect of civilian nuclear technology.
- They engaged in intensive “roundtable” dialogue sessions to conduct in-depth discussions of the issues and to compare experiences.

Main Findings from the NEA 2017 Workshop

- **There is no one-approach-fits-all** : The stakeholder involvement process needs to be adapted to country-specific context.
- **Officials must take the time to engage and debate.**
- **Time is not the enemy**, but an ally to reach a solution that is stable over time and built on trust.
- Stakeholder involvement should start by **listening to concerns**, then addressing these. Officials must use plain language.
- **Younger generations must be included** early in the process to ensure a sustainable dialogue with the public.
- **Stakeholder involvement is “not a vote”**. One informed comment weighs more than many uninformed comments.

Main Findings from the NEA 2017 Workshop

- **Stakeholder involvement is more than public information.**
Must take all stakeholders into account before decisions are made.
- **Face-to-face/personal interaction/learning how to listen is useful everywhere.**
- Even if officials spend 80% of their time answering the same questions from the same people - it's still an opportunity to explain their understanding of the situation.

**Patience – Dialogue – Time:
Successful Engagement requires PEOPLE talking to PEOPLE**

A New Workshop is Planned

- **NEA Stakeholder Involvement Workshop on Risk Communication – 24-26 September 2019 in Paris, France**
- Will take lessons from the public communications successes and challenges in Fukushima Prefecture since 3/11.
- Will point toward effective practices that can be applied in Japan and other countries to promote more effective public communications and involvement.
- **We would be interested in inviting one or two Fukushima citizens to share their experiences and thoughts with the international community.**
- We will coordinate with appropriate government officials to seek volunteer speakers from Japan.

Effective Public Communications are Essential in Every Country

- Effective communications are especially important in both recovery situations and conventional decommissioning activities.
- Successful decommissioning plans should reflect the needs and concerns of host communities, with public health and welfare the highest priority
- Must communicate risks, waste management issues, and unknowns.



The ICRP Fukushima Dialogues supported by the NEA point to an excellent model for public communications and engagement



A Few Final Thoughts

- **Stakeholder involvement in nuclear decisions is difficult everywhere.** The situation in Fukushima Prefecture is unique, but the challenges in communication are not.
- **Both sides must show patience.** The more complex and important the issues, the more time needed to achieve good understandings.
- **People can build trust, not web sites and faceless organizations.**
- **The global community continues to stand with the people of Fukushima – they are not forgotten and are not alone!**

Thank you for your attention



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