

## OECD/NEA Recent Activities on Nuclear Safety Regulation and Nuclear Emergency Matters

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OECD Nuclear Energy Agency

## Presentation Outline

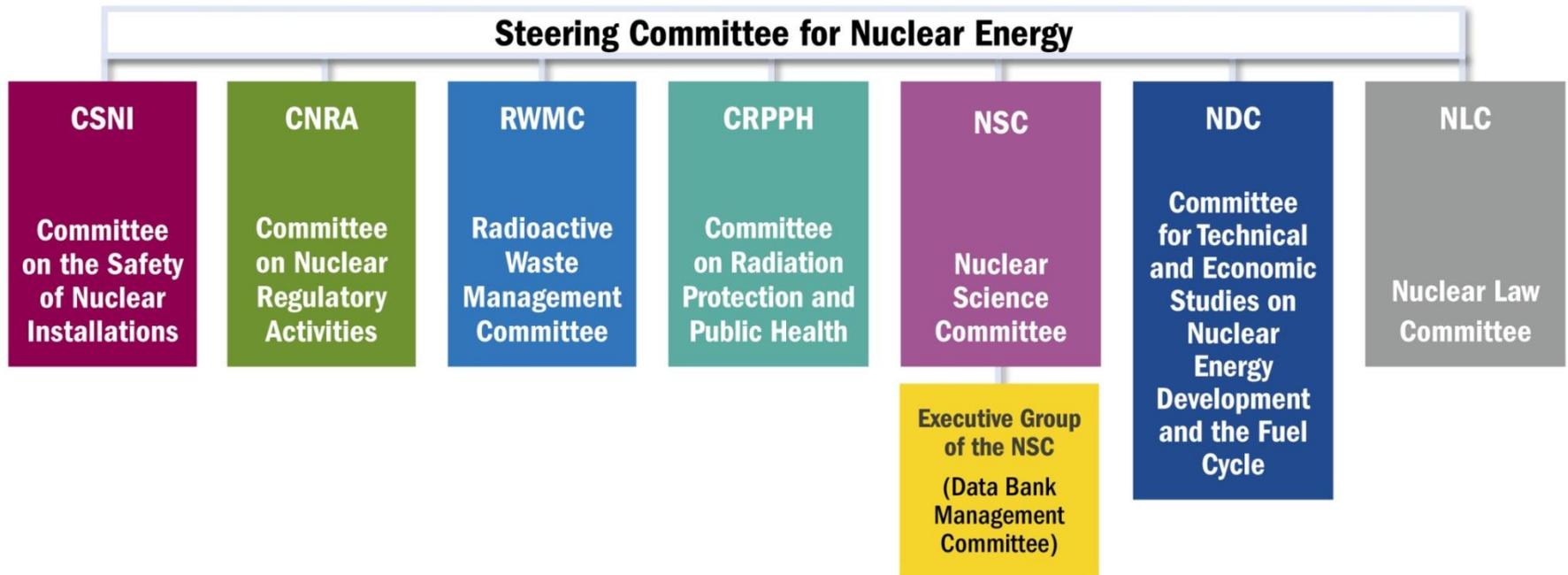
- Introduction to NEA
- NEA activities to enhance safety after the Fukushima Daiichi NPP Accident
- Emergency and Recovery Management Experience and INEX-5

## The NEA: A Forum for Cooperation

- Founded in 1958
- 31 member countries
- 7 standing technical committees
- 75 working parties and expert groups
- 21 international joint projects



## NEA Committee Structure



The NEA's committees bring together top governmental officials and technical specialists from NEA member countries and strategic partners to solve difficult problems, establish best practices and to promote international collaboration.

# NEA Management Structure



**William D. Magwood, IV**  
*NEA Director-General*



**Kazuo Shimomura**  
*Acting Deputy Director-General  
and Chief Nuclear Officer*



**Masahiko Fujihara**  
*Deputy Director-General for  
Legal Affairs and Strategic Resources*



**Cynthia Gannon-Picot**  
*Chief of Cabinet,  
Head of the Central Secretariat,  
External Relations and Public Affairs*



**Ximena Vásquez-Maignan**  
*Head of the Office  
of Legal Counsel*



**Ricardo Lopez**  
*Head of the Office  
of Administration*



**Javier Reig**  
*(Until Feb. 2016)*

*Head of the Division of  
Nuclear Safety Technology  
and Regulation*



**Ho Nieh**



**Javier Reig**  
*(Until Feb. 2016)*

*Head of the Division of  
Human Aspects  
of Nuclear Safety*



**Yeonhee Hah**



**Michael Siemann**  
*Head of the Division  
of Radiological Protection  
and Radioactive Waste  
Management*



**Jim Gulliford**  
*Head of the Division  
of Nuclear Science*

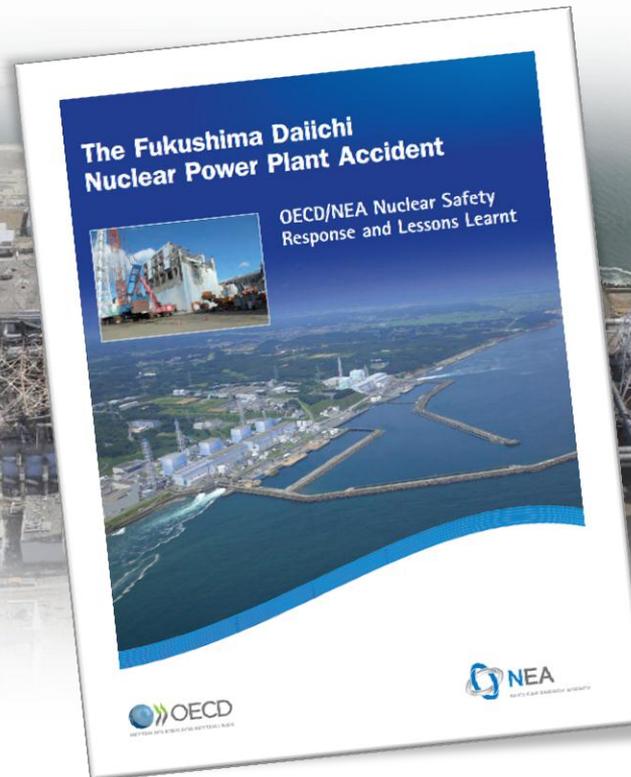


**Kiyoshi Matsumoto**  
*Head of the Data Bank*



**Jaejoo Ha**  
*Head of the Division  
of Nuclear Development*

## Moving Forward after Fukushima: OECD/NEA Nuclear Safety Response and Lessons Learnt (2013)



### Involved 3 standing technical committees:

- Committee on Nuclear Regulatory Activities (CNRA)
- Committee on the Safety of Nuclear Installations (CSNI)
- Committee on Radiation Protection and Public Health (CRPPH)

### Areas covered:

- Immediate response by NEA member countries, key messages and conclusions.
- NEA actions in follow-up to the Fukushima Daiichi NPP accident.
- Direct support provided to Japan by the NEA.

Nuclear Regulation  
2014

## The Characteristics of an Effective Nuclear Regulator



# The Characteristics of an Effective Nuclear Regulator

NEA Regulatory Guidance Booklets  
Volume 16, 2014, NEA/CNRA/R(2014)3

## NEA Current Activities on Nuclear Regulation (1/2)

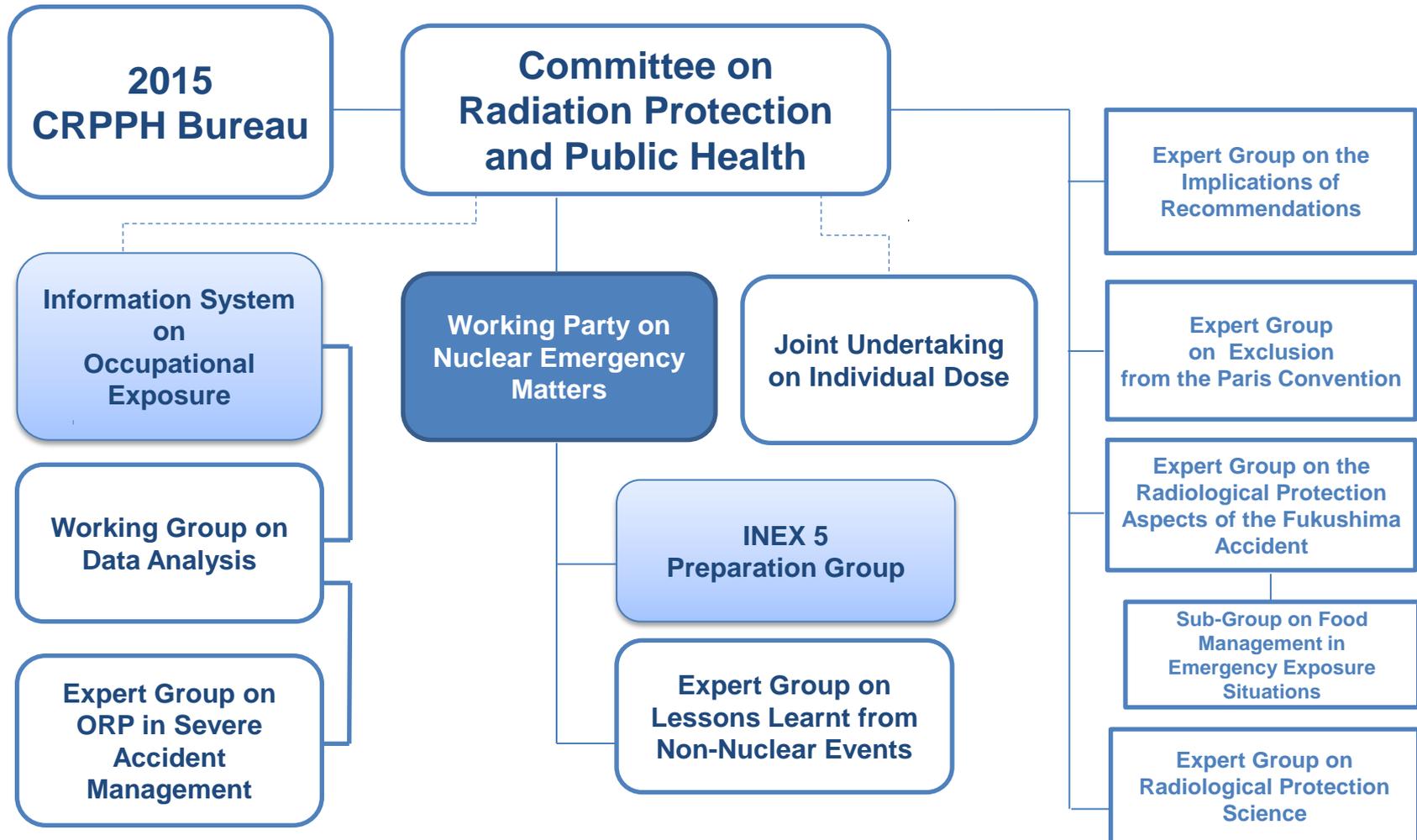
- New Division: *Human Aspects of Nuclear Safety (HANS)*
- Senior Level Task Group on the Safety Culture of the Regulatory Body
  - Developing a Green Booklet on the **Safety Culture of an Effective Nuclear Regulatory Body**
  - Using insights gained from the **Joint CNRA/CSNI/CRPPH Workshop on Challenges and Enhancements to the Safety Culture of the Regulatory Body** (Paris, France, 3 June 2015)
- Working Group on Human and Organisational Factors
  - Focus on operating organisations, **examining human performance** under extreme conditions and **influences of national characteristics** on Safety Culture.

# NEA Current Activities on Nuclear Regulation (2/2)

- New Report: *Five Years after Fukushima Daiichi Accident* (CNRA/CSNI/CRPPH)
- Senior Level Task Group on Defence-in-Depth
  - Developing Green Booklet on *Defence-in-Depth for Nuclear Power Plants Post Fukushima Daiichi NPP Accident* (CNRA/CSNI/CRPPH)
  - Using insights gained from the **Joint CNRA/CSNI Workshop on Challenges and Enhancements in Light of the Fukushima Daiichi NPP Accident** (Paris, 5 June 2013)

(Please visit this address: <https://www.oecd-nea.org/nsd/workshops/scrb2015/>)

## Structure of the CRPPH



## Working Party on Nuclear Emergency Matters (WPNEM)

- Helping its members to improve nuclear emergency management systems, focusing on international interfaces, and to share knowledge and experience widely.
- The CRPPH Working Party on Nuclear Emergency Matters (WPNEM) has published 50 reports in this area since 1987.
- This is achieved through the development, organisation and assessment of international nuclear emergency exercises – the INEX series.

## WPNEM Key Objectives

- INEX exercises focus on the international aspects of nuclear emergency situations:
  - Information gathering and sharing;
  - Communications with other competent authorities and international organisations;
  - Consequence management;
  - Making decisions in very uncertain and rapidly changing circumstances.
- Exercise structures and objectives allow countries with or without nuclear power plants to participate and to learn lessons.

## INEX Exercises [1/2]

- Since 1992, the NEA has organised 6 international exercises.
- Each has built on the lessons of previous exercises.
- The INEX exercises have all been coordinated with the IAEA and the EC to avoid duplication of efforts.

## INEX Series [2/2]

- **INEX 1 (1993)**: Table-top exercise with fictitious countries to improve trans-boundary communications and coordination.
- **INEX 2 (1996-1999)**: Four international command-post exercises built on national exercises to test actual arrangements.
- **INEX 2000 (2001)**: INEX 2-type exercise to test new data strategies; international co-ordination; nuclear 3<sup>rd</sup> party liability.
- **INEX 3 (2005-2006)**: Table-top consequence management exercise focusing on decision-making and international interactions in the medium-longer term.
- **INEX 4 (2011–2012)**: Table-top consequence management exercise, addressing issues arising from an RDD in an urban area.

# INEX 5: Large-scale Nuclear Emergency

## Exercise Structure

- Table-top exercise
- Large-scale NPP accident, multiple units
- Large-scale release, with significant on-site and off-site infrastructure damage

## Exercise Focus

- Decision making in uncertain circumstances
- Early availability and sharing of information
- Accident assessment based on limited, uncertain information
- Improvement of emergency communications
- Incoming trade issues
- Designation of emergency planning zones

## INEX 5 Participation as of April 2015

Austria	Poland
France	Portugal
Germany	Russian Federation
Greece	Slovak Republic
Hungary	Slovenia
Ireland	Spain
Italy	Sweden
Japan	Turkey
Netherlands	United Kingdom
Norway	Chinese Taipei

## INEX Exercise Follow-up Work

### Recent INEX reports

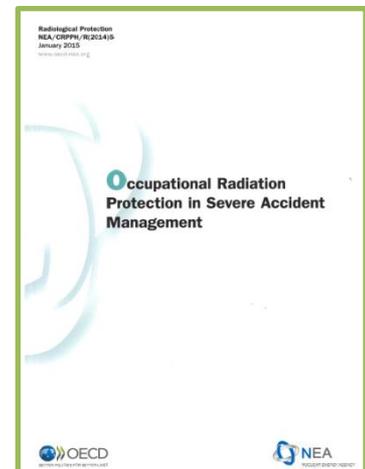
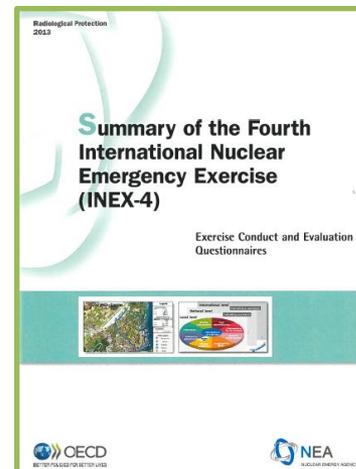
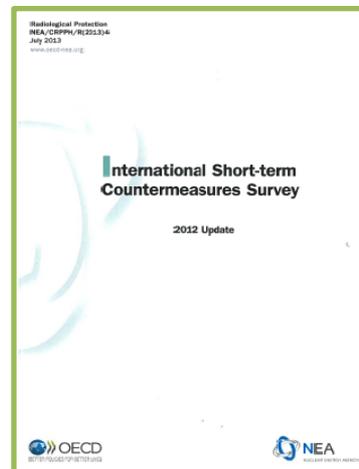
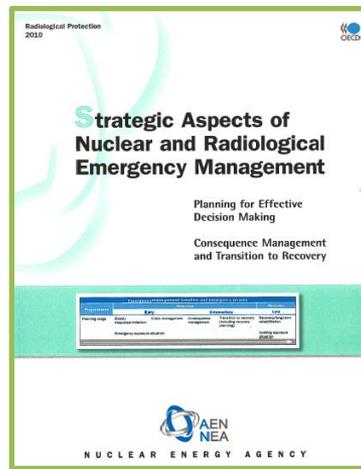
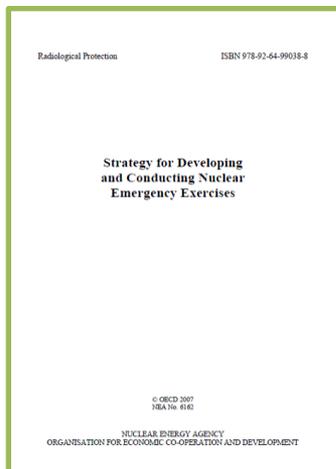
Strategy for Developing and Conducting Nuclear Emergency Exercises (2008)

Strategic Aspects of Nuclear and Radiological Emergency Management (2010)

International Short-term Countermeasures Survey (2012)

Summary of the Fourth International Nuclear Emergency Exercise (INEX 4) and Topical Session (2013)

ISOE Report on Occupational Exposure Management in Severe Accidents (June 2014)

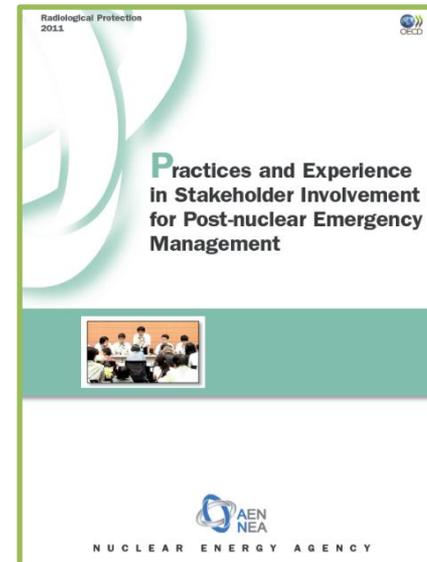


## INEX Exercise Follow-up Work

### Recent INEX workshops

Workshop on Stakeholder  
Involvement in Post-Emergency  
Management  
(October 2010)

ISOE Severe Accident  
Management  
EG-SAM International Workshop  
(June 2014)



Workshop on Stakeholder  
Involvement in Post-  
Emergency Management  
(October 2010)

## Conclusions

- Importance of Human Aspects of Safety and Regulation
- Many emergency and recovery management lessons have been learned through experience with the Fukushima Daiichi NPP accident, both nationally and internationally.
- The NEA will continue to assist its members to enhance activities on human aspects and to improve their emergency management capabilities.

## Thank you for your attention!



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