International Nuclear Emergency Exercises (INEX 5)

Flag ship Activity of WPNEM
Test, Investigate and Improve

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NERIS Workshop
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WPNE Background & Strategy

• International forum for emergency response experts from NEA countries to:
  – Improve nuclear emergency management systems, focusing on international interfaces
  – Share knowledge and experience widely

• WPNE activities focus on identified needs in planning, preparedness and response for the “early” and “intermediate” phases of a nuclear/radiological emergency with a view towards preparation of recovery actions.

• Key pillar: Develop, organise, analyse the International Nuclear Emergency Exercise (INEX) series
  – Collectively test, explore and improve national, international emergency management arrangements and interfaces
  – Bring together stakeholders to identify and resolve issues

• Membership: 60 delegates from 27 NEA countries, observers (IAEA, EC, WHO, FAO & IFRC)
INEX Exercises

INEX 1 (1993)
Early phase table-top exercise at a fictitious country and NPP; Countries played as fictitious accident state or neighbouring state
Goal: improve trans-boundary communications and coordination
Key findings: improving coordination of communication, short-term countermeasures; need for a more realistic exercise

INEX 2 (1996-1999)
Four early phase command-post exercises built on national exercises at real NPPs with simultaneous play of Accident “Host” Country; Near/Far-field Countries; International organisations
Goal: test real response arrangements; public/media aspects
Key findings: co-ordination of countermeasures, timeliness and completeness for decision making, provision of public information
INEX Exercises

INEX 2000 (1999-2001)
INEX 2-type exercise to test new data strategies; international coordination; aspects of Conventions on Third Party Liability. Included objectives from EC, IAEA, NEA, WHO and WMO
Key findings: INEX 2 exercises were valuable for proving state of readiness but many lessons remain to be implemented; investigate later phase issues.

INEX 3 (2005-2006)
Response to international interest in longer-term issues
• Table-top consequence management exercise focusing on decision-making in the medium-longer term after an event causing serious contamination
• Flexible and scalable to meet national needs
• Each country played as an “accident” state
Key findings:
• Better guidance for a broad range of countermeasures, recovery needed
• Cross-cutting issues such as long-term social, economic and technical aspects in decision-framing
INEX Exercises

INEX 4 (2010-2013)
Consequence Management and transition to recovery

Concept:
- a series of issues-driven national table top exercises addressing issues in consequence management and the transition to recovery arising from a radiological dispersion device in an urban area
- Identify good practice and facilitate improvement of national and international arrangements;

Timeframe: Sep 2010- Nov 2011 (exact date to conduct an exercise was the choice of each participating country, extended due to Fukushima impact)


Key findings:
- Participation at all levels (high level decision makers) with opportunity to experience and response to real situations
- Plans to updated in response to gaps identified
- Participation attitude- Several suggestions for improving scenario / I4 scenario/ material can be easily re-used
INEX 5

• Exercise on Emergency Management Aspects of Notification, Communication and Interfaces (NC&Is) Related to Catastrophic Events involving Radiation or Radiological Materials (for NPP and non-NPP countries)
• Initiated in 2013 for planning and approved in October 2014 by the WPNEM and announced in November 2014

Concept

• Conduct of a **table-top exercise** addressing EM aspects of NC&Is between and among each countries and IOs
• NPP countries to exercise individually, with other NPP and/or non-NPP countries
• Non-NPP countries to exercise individually, with other non-NPP countries and/or NPP countries
• Provide for regional exercise play
INEX 5

**Goal**

- Identification and implementation of corrective actions

**Objectives**

- Test and investigate the adequacy of national arrangements, where applicable international arrangements
- Review and share information on approaches to NC&Is to identify good practice
- Identify key areas and approaches to international coordination and communication in order to provide a basis for improvements in international EMS
- Country objectives to be added
INEX 5 was developed to enable NPP & non-NPP counties to exercise;
• Individually, Together, Regionally, Internationally

**Individually;**
• exercise the EPR systems (NPP or non-NPP country)
• Test internal procedures for notification, communication and interfaces between and among country and international organizations
• Identify system improvements
• prepare for regional TTX

**Together;**
• Can be NPP countries only; NPP and non-NPP country; or non-NPP countries only.
• Non-NPP countries do not need an NPP country to exercise.
• Scenario enables non-NPP countries to use role players (within country or other non-NPP country) to simulate NPP release.
• Exercise cross border EPR systems (NPP or non-NPP country).
• Test cross border procedures for NC&Is
• Identify system improvements
INEX 5

Regionally;
  • Exercise regional EPR systems (NPP and/or non-NPP country).
  • Test regional procedures for NC&Is between and among country and international organizations
  • Identify regional system improvements/enhancements.

Internationally;
  • Exercise national, regional and international EPR systems (NPP and/or non-NPP country).
  • Test national, regional and international procedures for NC&Is between and among country and international organizations
  • Identify national, regional and international system improvements/enhancements
INEX 5

Special topical areas

- Decision-making on notification and communication strategies, including issues in
  - optimisation (technical, economic and social factors)
  - international communication and coordination
- Public information and communication
- National and international support (personnel, equipment, etc.)

Important: These topical areas will be evaluated from both a national and international perspective and form the core of the common INEX-5 Evaluation Questionnaire

Scope

- Series of individual national exercises conducted by participating countries
- A single common set of questions;
  - To allow all participants to directly compare their approaches for managing the response to such events
  - To facilitate overall evaluation and experience exchange
INEX 5

NOT
a real-time exercise, free play exercise
intended nor designed to test any international conventions

May be accompanied with a full field exercise - national issues driven exercise -
(before or after the table top)

Exercise essentials
- Use of Generic Technical Materials
- Organisation and conduct of a TTX
- Possible extension for a full field exercise

To do list for the Participating Country
- To adopt the common objectives and scenario questions
- To conduct exercise within a common agreed window of 9 months
- Complete a common evaluation questionnaire (to perform its own assessment of their exercise with the intent to share, as appropriate, its experience internationally)
- To send the completed questionnaire to the NEA Sec
- To participate the international evaluation workshop / topical session
**INEX 5 - Participation**

- **Important note:** Open to all countries, including NEA member and non-member countries, and relevant international organizations
- Emergency planners, responders and technical decision-makers from national authorities
- Countries are encouraged to involve neighboring and other countries and international agencies that could be involved or provide resources in case of a catastrophic event involving radiation or radiological materials
- But
  - Participation of relevant stakeholders (*governmental and non-governmental*) in the national exercises is both encouraged and supported by the INEX 5 scenario
  - The extent of participation within a country will be the choice and responsibility of each country
INEX 5 - Participation

• In case of a regional INEX 5 exercise (*which is expected*)
  - Recommendation: All participants first conduct localized table top exercises to support the common exercise evaluation

• This exercise *excludes* the intermediate and late phases, except for appropriate notification and communication activities within the scenario questions

• Technical materials support intermediate and late phase play
INEX 5 - Documentation

• Responsibility of participating country
  – Detailed planning, conduct and evaluation of its own exercise
  – National exercise materials should base on INEX 5 docs
• A set of generic technical materials has been prepared to support INEX 5 national exercise planning committees, including generic guidance, key objectives and topic areas, exercise scenario and master scenario events list, and exercise evaluation tools
• However,
  – National requirements for a notification, communication and interfaces related to catastrophic events exercise may differ between countries (*modification is necessary*)
INEX 5 - Scenario

1. Based on a NPP event, exacerbated by a natural disaster
   - Radiological release of significant levels to affect trans-boundary locations

2. For countries without NPPs, to consider participating with neighboring countries with NPPs for receiving and requesting information
   - Requiring national decision makers
     • to make decisions and provide information based on little to no technical data
     • to establish and maintain communications with the international community
INEX 5 – Regional Play

<table>
<thead>
<tr>
<th>Region 1</th>
<th>Region 2</th>
<th>Region 3</th>
<th>Region 4</th>
<th>Only National</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria, Hungary, Slovak Rep., Slovenia</td>
<td>Greece, Turkey</td>
<td>Sweden, Norway, Russian Fed.</td>
<td>Ireland, UK</td>
<td>Japan Chinese Taipei</td>
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<tr>
<td>Germany, France, Italy, the Netherlands, Poland</td>
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<tr>
<td>Spain, Portugal</td>
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Participating Countries

<table>
<thead>
<tr>
<th>Date</th>
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<tbody>
<tr>
<td>Sep 2015</td>
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<tr>
<td>Oct 2015</td>
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<td>Nov 2015</td>
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<td>Dec 2015</td>
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<td>Jan 2016</td>
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<td>Feb 2016</td>
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<td>March 2016</td>
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<td>April 2016</td>
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<td>May 2016</td>
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<td>June 2016</td>
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International aspects
# INEX 5 - Timeline

<table>
<thead>
<tr>
<th>Time</th>
<th>Action</th>
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<tbody>
<tr>
<td>14-15 October 2014</td>
<td>Approval of the INEX 5 Technical Materials</td>
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<td>13 November 2014</td>
<td>Official invitation and distribution of the INEX 5 General Information</td>
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<td>31 March 2015</td>
<td>Deadline to notify the NEA of intention to participate</td>
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<tr>
<td>16 - 17 June 2015</td>
<td>INEX 5 National Exercise Coordinators meeting (OECD NEA, Paris)</td>
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<td>September 2015 – June</td>
<td>Official time window for INEX 5 conduct</td>
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<td>End of October 2016</td>
<td>Completed INEX 5 Evaluation Questionnaire</td>
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<td>Spring 2017</td>
<td>INEX 5 Evaluation workshop/ topical session</td>
</tr>
<tr>
<td>End of 2017</td>
<td>Publication of INEX 5 Evaluation/Summary report</td>
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</tbody>
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- Announcements;
  - @ USIE web – site (Dec 2014)
  - @ IAEA IEC & WHO REMPAN newsletters (Jan 2015)
INEX 5 - Social media

NEA’s Facebook, Twitter & LinkedIn

Advanced thinking on nuclear energy

The NEA’s International Nuclear Emergency Exercise (INEX) series has proven successful in testing, investigating and improving national and international response arrangements for nuclear accidents and radiological emergencies.

Built on the outcomes of the last exercise on consequence management and transition to recovery, the INEX-5 exercise will address emergency management aspects of notification, communication and interfaces between and among countries and international organisations during the early phase of a release from a nuclear power plant due to a catastrophic natural disaster. The exercise will be conducted from September 2015 to June 2016. Find out more at: cdQn

OECD Nuclear Energy Agency - Working Party on Nuclear Emergency Matters (WPNEM)

The Nuclear Energy Agency (NEA) is a specialised agency within the Organisation for Economic Co-operation and Development (OECD), an intergovernmental organisation of industrialised countries, based in Paris, France. The mission of the NEA is to assist its Member countries in maintaining and further...
INEX 5 - NEOs Coordination Meeting

• 16-17 June 2015 at the NEA Headquarters

• Objectives:
  • to introduce the exercise status with support documents,
  • to present national arrangements & national objectives to be added to the exercise concept (if any)
  • to discuss and organise regional play arrangements.

• NEA Secretariat is in close collaboration with the IAEA to facilitated the use of USIE Exercise module
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More information @
http://www.oecd-nea.org/rp/wpnem/ (reports & previous exercises)
http://www.oecd-nea.org/rp/inex/inex5.html