Science, Values and Stakeholder Dialogue: NEA Experience in Fukushima

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Promoting confidence and understanding
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CRPPH Recent Focus and Results

Issues and Lessons

- Emergency Management
- Recovery Management
- Science and Values Aspects
- Criteria for Trade in Food and Goods
- Surveys of National Practices
- INEX 5 Exercise
- Occupational Radiation Protection in Severe Accident Management
- Support for Conferences
- CRPPH Workshops

Emergency Management Issues

- Communications (public, among national authorities, and between countries) was seen as important but posed problems. Improvements, in particular between countries and different national authorities, are warranted.
- Strategies for monitoring incoming products existed in all countries, but there was no common approach. Existing criteria were not directly applicable to the Fukushima situation.
- Technical assessments of early, uncertain accident situations are important to decision making. With insufficient information, there is a need to better share inter-country technical communications, to uniformly understand decisional information.

Emergency Management Needs

- Precaution is inherently judgemental, but has not been sufficiently internationally discussed so as to bring views closer together.
  - Mechanisms in support of urgent information exchange are in need of further improvement in the early phase.
- Expert and instrumental resources can be severely strained if insufficiently sized.
  - Instrumentation and procedures to measure releases and deposition need to be robust.
- Information provided to deciders in uncertain circumstances should better present uncertainty and bounds.
- Instrumentation, procedures and resources are needed to develop early and realistic individual dose estimates, in particular thyroid dose from radioactive iodine.
- Existing national environmental measurement and protection approaches should be assessed in the context of new ICRP recommendations

Possible EM Areas for CRPPH Activities

- Communication plans, precaution understanding
- Monitoring of food and goods
- Technical assessment tools, dose estimation
- Review of emergency planning zones
- Alignment of protective actions

Coordinate with IAEA to avoid overlap

Recovery Management Issues

- Nationally, there has been much less focus on recovery planning than on emergency planning
- Return to evacuated areas was seen as needing pre-determined criteria as a starting point
- There is a need to clarify the relationship and to bridge the gap between self-help actions initiated by stakeholders, and support activities supplied by government authorities and radiation protection experts.
- Survey responses viewed stakeholder involvement in recovery as decision-aiding with regard to national or regional decisions

Recovery Management Needs

Public involvement in planning: discuss and share experience in:

- Approaches to solicit stakeholder input to emergency response planning and preparedness
- Approaches to provide understandable and practical information to relevant populations regarding emergency response situations
- Approaches to involving/informing those indirectly-affected
- Approaches to build/rebuild trust following an accident

Public involvement in recovery: discuss and share experience in

- Moving from “top-down” to “bottom-up” situation management
- Radiological protection education and “radiological protection culture”
- Processes and procedures to assure governmental support of and advise to local protection initiatives
- Providing instrumentation, procedures and resources to perform very detailed contamination and dose-rate maps to support prioritisation of decontamination work, and to support self-help recovery projects

Possible RM Areas for CRPPH Activities

Discussion of national approaches to development of and stakeholder involvement in decisions on:

- returning to evacuated areas
- clean-up criteria
- waste temporary storage and disposal (with RWMC)
- communication strategies
- support for self-help initiatives

Coordinate with IAEA to avoid overlap

Science and Values

- The CRPPH has been a pioneer in study of stakeholder involvement in RP decision making
- RP decisions in complex situations (e.g. post-accident, new installations, waste management) are informed by science but are broadly driven by social and value considerations
- Science and Values workshops developed to better understand drivers
- The 3rd S&V workshop was held in Tokyo (6 – 8 Nov 2012) and addressed Fukushima-related issues:
  - Assessment and Management of Low Dose Exposures and Public Health
  - Protection of Children and Self-Help Protection Approaches
  - Non-Cancer Effects and Public Health Surveillance
- Key finding: protection of children is THE driving factor for post-accident situations; protection science for children needs further consideration
- Workshop summary report has been published
- The 4th S&V Workshop will be hosted by FMBA in Moscow (2015)

Framework for Trade in Food

- General Considerations
  - Accidents are rare
  - Limited number of export food products from any affected area
  - Export criteria are a matter of national choice and will evolve with the situation circumstances
- Framework Elements
  - Food will be banned / restricted during emergency phase, and trade will be resumed only after measurement / certification process has been established – there will be time to develop criteria
  - National criteria will be situation-based to protect the most exposed group – those living in the effected area
  - It will be ethically difficult for a country to use different criteria for its own population and for export
  - Criteria should be situation-specific, developed at the time of an accident

National Emergency Management Practices

- The WPNEM, prior to Fukushima, initiated surveys to evaluate the understanding and implementation of new ICRP recommendations
- As a result of the accident, countries were also asked about the influence of Fukushima on their EM planning
- The two surveys addressed
  - National understanding and implementation of new ICRP emergency management recommendations, which suggested optimisation of an overall protection strategy INSTEAD of simple application of Intervention Levels
  - National use of short-term countermeasures, and their initiation criteria. This was an update of a 2003 WPNEM report
- Both reports approved in May 2013 for publication
- Results showed that new ICRP recommendations are not yet universally understood or implemented, but are being broadly considered for implementation

INEX 5 Exercise

- The CRPPH approved the WPNEM INEX 5 proposal in May 2013
- INEX 5 Objectives
  - To test the mechanisms for decision making at the national level, particularly in uncertain circumstances or in the absence of data;
  - To test the arrangements for international cooperation and coordination of data and information between countries;
  - To test the arrangements for practical support and assistance between groups of countries or geographical regions; and
  - To investigate the longer term issues beyond the urgent response phase.

INEX 5 Details

INEX 5 Scope

- A table top exercise or moderated workshop
- Not a real time test
- Based upon a nuclear power plant (but NOT a re-enactment of the accident at Fukushima Dai-ichi)
- Based upon a common scenario
- Consider coincident impacts or multiple units
- Include impacts on other critical national infrastructure
- Consider mutual assistance
- Modular approach to materials

INEX 5 Timeline

- Prepare INEX-5 technical and other materials during 2014
- Approve exercise materials at October 2014 WPNEM meeting
- Initial INEX 5 exercise window: September 2015 – March 2016
- Summary Workshop, Spring 2017

Information System on Occupational Exposure (ISOE)

- The ISOE programme approved a report on occupational radiation protection in severe accident management in December 2013
- The report will be used as input material for a workshop on this topic, scheduled for 17 – 18 June 2014 (NEI, Washington DC)

NEA Support for Fukushima-related Conferences

In addition to the Science and Values workshop mentioned earlier, the NEA has been actively involved in organising technical workshops with the Japanese government, and stakeholder dialogue workshops with the ICRP.

Technical Workshops

- NEA Decontamination Conference (16 October 2011)
- NEA / ISTC Decontamination Conference (3 – 4 February 2012)

Stakeholder Dialogue Workshops

- ICRP Dialogue Initiative 1st Seminar (26 – 27 November 2011)
- ICRP Dialogue Initiative 2nd Seminar (25 – 26 February 2012)
- ICRP Dialogue Initiative 3rd Seminar (7 – 8 July 2012)
- ICRP Dialogue Initiative 4th Seminar (10 – 11 November 2012)
- ICRP Dialogue Initiative 5th Seminar (2 – 3 March 2013)
- ICRP Dialogue Initiative 6th Seminar (6 – 7 July 2013)
- ICRP Dialogue Initiative 7th Seminar (30 Nov – 1 Dec 2013)
- ICRP Dialogue Initiative 8th Seminar (10 – 11 May 2014)

CRPPH Workshops

- Workshop on Iodine Exposure and Thyroid Cancer Science (20 - 21 Feb 2014)
  - To gather state-of-the-art science on thyroid cancer incidence, and to share experience with stakeholder dialogue strategies
- Workshop on Occupational RP in Severe Accident Management (17 – 18 June 2014)
  - To collect international experience with occupational exposure management in severe accident conditions
- 7th Asian Regional Workshop
  - To provide an effective forum for collecting Asian views on RP evolution
- Webinar on Communications with Stakeholders (Early 2015)
  - To exchange of stakeholder dialogue experience from older to younger, and exchange of social media experience from younger to older
- Workshop on Science and Values (April 2015)
  - Hosted by the Russian Federation, in Moscow
  - Will most likely use protection of children as a breakout session topic

Conclusions

- CRPPH Fukushima-related work topics have slowly emerged as the situation in Japan and in other NEA member countries has evolved
- The CRPPH is striving to address issues within its competences, in coordination with other NEA committees and with other international organisations
- The CRPPH will work with the IAEA to develop a programme of work in the area of emergency management that is complimentary to other, ongoing work
- The CRPPH programme will continue to evolve with the post-accident situation