

Consequence Management Lessons from the People of Fukushima

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Overview

- CRPPH Stakeholder Involvement History
- CRPPH Involvement after Fukushima
- CRPPH Lessons Learned

Coordination and Collaboration

- Common issue discussed yesterday
- No clearly existing “universal” mechanisms
- The INEX 5 exercise has been designed to help to identify:
 - Aspects where coordination would be of value
 - An idea of the magnitude of resources needed

INEX 5

Goal

- Identification and implementation of corrective actions

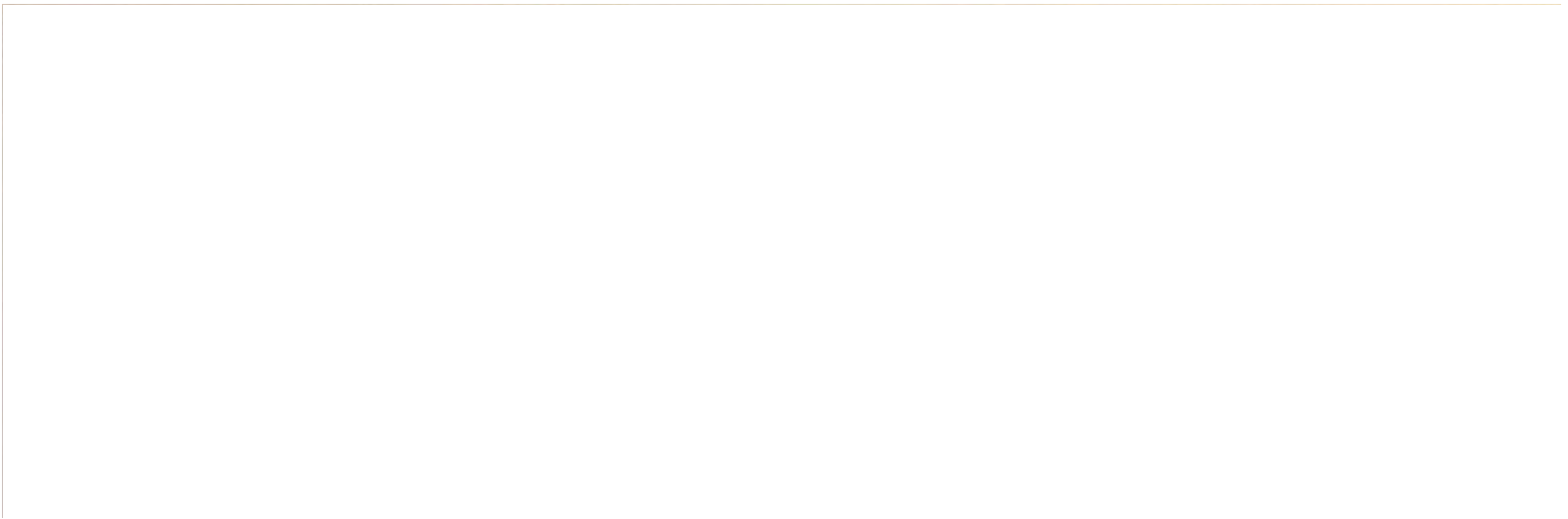
Objectives

- Test and investigate the adequacy of national arrangements, where app. 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

CRPPH and Stakeholder Involvement

- In 1992 the CRPPH held a workshop on **Radiation Protection on the Threshold of the 21st Century**
- A key outcome of this meeting was the recognition of the importance of stakeholder involvement in RP decision making
- At that point, “stakeholder involvement” was generally viewed by the RP community as “explaining decisions to the public”

Values?



Stakeholder Involvement Evolves

- From 1992 to 1998 the CRPPH discussed the nature of optimisation, “social and economic aspects being taken into account”
- In 1998 a landmark workshop was held in Villigen, Switzerland: **The Societal Aspects of Decision Making in Complex Radiological Situations**

Radiophobia?

Chernobyl Lessons

- During the 1990s and early 2000s the CRPPH continued to study the radiological impacts of the Chernobyl accident
- In 2006 the CRPPH published “**Stakeholders and Radiological Protection: Lessons from Chernobyl 20 Years After**”

Science and Values

- Based on studies and experience, the CRPPH undertook to better understand the elements that are considered when making radiological protection decisions
- The distinction was made between “RP science” and “social values”
- To study these aspects the CRPPH organised workshops on “**Science and Values in Radiological Protection**”

CRPPH Stakeholder Work

- **Villigen Workshops** (1998, 2001, 2003)
 - Integrate RP aspects into societal decisions, rather than integrating societal values into RP decisions
- **Chernobyl Work** (1987 – 2006)
 - The RP expert should be at the service of stakeholders
- **Science and Values Workshops** (2008, 2009, 2011, 2012)
 - Decisions are informed by science, but are driven by social values

**Some still thought they knew
everything**

ICRP Stakeholder Dialogue Seminars

	Dialogue Focus	Date
1	Initiation of a new process of discussion among affected stakeholders	November 2011
2	Understand what has been accomplished in Date	February 2012
3	Food production, distribution and marketing	July 2012
4	Education and memory	November 2012
5	The difficult decision to stay/return or go/not return	March 2013
6	The situation and challenges faced by the citizens of Iitate	July 2013
7	Self-help actions taken by local people in cooperation with experts	Dec 2013
8	The situation and challenges faced by the citizens of Minamisoma	May 2014
9	The challenges of raising children in a contaminated area	August 2014
10	The importance of tradition and culture for recovery	December 2014
11	The importance of measurements for recovery	May 2015
12	The future, in particular the future of the Suetsugi region	September 2015

ICRP Dialogue Experience

The experience gained from the ICRP Dialogues has all been in the context of post-accident recovery

The following aspects are the key examples of what has been learned to assist the rest of the NEA member countries to be better prepared to more efficiently recover from a nuclear or radiological event

Experience from the People of Fukushima: Obvious Lessons

- Before any accident, government should establish:
 - active stakeholder-interaction presence around hazardous sites
 - generic criteria for starting and ending countermeasures
- After an accident, government should:
 - Use local knowledge as key input for decisions
 - Engage with stakeholders to rapidly allow people to choose whether or not to return home
 - Support experts to address stakeholder questions
 - Encourage stakeholders to share experience
 - Help stakeholders to access and understand data
 - Establish health follow-up processes

What Obvious Lessons Imply

Responsibility for protective actions will shift away from central government, but central government will need to support protective actions such as:

- Individual dosimetry: equipment, training, meaning, database creation and accessibility, etc.
- Whole body counting: equipment, operators, training, meaning, database creation and accessibility, etc.
- Environmental monitoring: equipment, training, meaning, mapping, availability, etc.
- Addressing concerns: process / venue for all parties to ask questions and receive honest, factual answers, generally best accomplished through trained staff who are physically present or easily accessible

The resources needed to address these lessons are extremely significant
and need to be planned

A multi-risk, integrated national approach can be effective

Recovery Planning Implies Resources

Experience from the People of Fukushima: Less-Obvious Lessons

- RP experts are rarely decision makers, but advise taking into account “practical” considerations of social and economic aspects
- There are no wrong protection decisions, only personal decisions
- Any individual’s decision must be respected and appropriately supported
- Protection decisions should be well informed
- Decisions regarding returning home should be taken as-soon-as-possible
- For such decisions, expert advice can:
 - Put data and understanding into people’s hands to help them regain “control”
 - Help individuals develop their vision of the future, for which understanding of RP science and circumstances is important
- Cultural aspects will need to be taken into account

What Less-Obvious Lessons Imply

- There is no “average person” or “average concern”
- Cultural aspects can play a role in decisions, and in planning and implementation of protective actions
- Concerns should be addressed in the context of culture, and as individually as possible

A huge effort may be needed from experts to appropriately interact with affected individuals to address their concerns

Resources for such an effort should be pre-planned

Training of experts in public interactions, to facilitate effective, non-confrontational exchanges, would be of great use

Some traditions are hard to imagine in other cultures



Plain Language for Engineers

Experience from the People of Fukushima: Behavior Lessons

- Affected stakeholders will address their situations themselves, with or without government assistance (e.g. dose and dose-rate measurements, cleanup, etc.)
- Stakeholder trust in government can strongly influence confidence in government actions (e.g. farmers worked with university volunteers to clean fruit trees, to prevent Cs uptake in rice, etc.)
- Stakeholders will inform their protection choices with whatever science is readily available, big picture or not

What Behavior Lessons Imply

- Measurements are easy to achieve
- Understanding measurements needs scientific input
- Radiological context and judgement takes time to develop (e.g. cleanup should prioritise contribution to annual dose over hot spots)

Good judgement comes from experience

Experience comes from bad judgement

Looking Broadly at Risks and Benefits

Experience from the People of Fukushima: Lessons in Trust

- Trust and acceptance must be earned, and for this experts should become and remain locally connected
- Independent verification of information, measurements and data can be an important element of trust
- Unaffected populations will be concerned about food from and travel to affected area, and will need to establish trust in producers and in governmental decisions

What Trust Lessons Imply

- Trust is easy to loose and difficult to build
- Building or maintaining trust is a long-term process

Following an accident experts may emerge from universities, laboratories, hospitals and government organisations

Not all “experts” will be experts

For stakeholders to build trust in government, government must have trust in stakeholders

Experience from the People of Fukushima: Lessons in Setting Objectives

- Achieving recovery is a step-by-step process
- Radiological recovery is only one part of the accident recovery
- RP criteria, short- and long-term, are important government choices for which stakeholder input should be transparently considered and reflected

What Objective-Setting Lessons Imply

- Recovery is “achieved” when the “New Normal” becomes “Normal”. Affected individuals recognise that the situation is new, but new behaviours become “natural” and no longer cause significant stress
- Achieving this needs understanding of all aspects of an individual’s circumstances (e.g. RP, economic, social, political, physical, etc.)

Recovery is a state of mind

Achieving such a state will take time, and will need social and technical support

Setting Priorities with Stakeholders can be a Challenge

Conclusions

- The RP focus for stakeholder involvement in recovery should be on long-term technical support
- This support can be very resource intensive
- Trust is a necessary and central component of successful stakeholder involvement
- A positive vision of their future will help an individual to choose to stay or to go
- Individual decisions, whether to stay or to go, are all valid

LIFE IS A GIFT TO ENJOY
NOT A PROBLEM TO BE SOLVED!

