Stakeholder involvement and research needs

IRSN
INSTITUT
DE RADIOPROTECTION
ET DE SÛRETÉ NUCLÉAIRE

Enhancing nuclear safety

« *Management of long-term exposure after a nuclear or radiological accident* »

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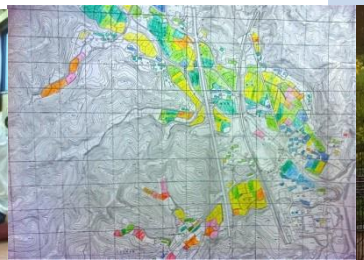


What is this presentation about?

- Chernobyl and more recently Fukushima accidents demonstrated the challenges involved when managing the consequences of large scale nuclear accident
- During these events, as time progressed, radiological, social and economical consequences became increasingly evident
- In parallel, decisional responsibilities shifted from central government to local authorities and finally to affected people.
- As a consequence, inclusive framework (*i.e.* including stakeholder involvement and research) needs to be considered to address the complexity generated by such long-lasting events

Summary

1) Stakeholder involvement during the recovery phase : what have we learnt from nuclear accidents? – Fukushima example

2) On-going research projects and research needs at the European level

3) Involvement of stakeholders in research activities : the IRSN experience

4) Conclusions

Stakeholder involvement during the recovery phase : what have we learnt from nuclear accidents? – Fukushima example

What we have learnt from Fukushima accident?

- Experience from the ICRP Dialogue meetings in Fukushima prefecture (2012-2018)

- Objectives of these Dialogue meetings :
  - to identify and exchange, with the affected people, on the problems and challenges of the rehabilitation of living conditions
  - Various topics : foodstuff controls, role of measurements, radiological risks, compensation issues, economic issues, education, value of culture, concerns in relation with social structure, return or no return…

Analysis performed by IRSN and CEPN

Should an accident happen in France or in Europe, how can we prepare ourselves to work with the population ?

- Analysis launched to identify the main lessons which can be learned from these dialogues and benefit to RP experts.
- Analysis in cooperation with Japanese stakeholders and experts involved in the dialogues in Japan through several workshops.

Major findings

- The human dimensions of the post-accident situation
- The stakeholder's engagement: authorities, public and experts
- The co-expertise process
- The development of the practical radiological protection culture

The human dimensions

- The human consequences in Fukushima are very similar to Chernobyl accident
  - Strong worry about health and especially on children health
  - But not only : the irruption of radioactivity is a rupture, which deeply upsets the relationship of man to himself, others and his environment → total loss of control on daily life
  - In addition loss of confidence in authorities and experts
    - Feeling of helplessness and abandonment
    - General feeling of discrimination and exclusion
  - The main key issues to be addressed by each inhabitant:
    - To continue to live in the affected territories or to leave them
    - To return or not at home for the evacuees

The stakeholder engagement: authorities, the public and experts

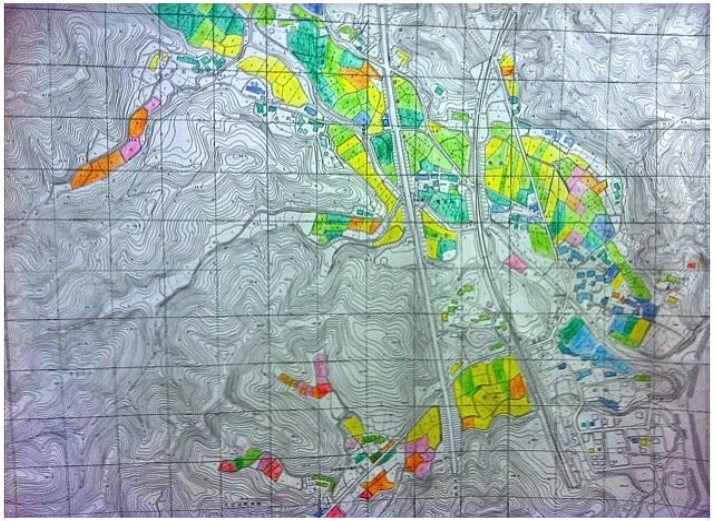
- In Belarus, the stakeholder involvement was mainly driven by the experts from abroad.
- In Japan, local authorities or local communities mobilized themselves to initiate actions with the help of experts personally committed.

- Feedback from these experts :
  - Each individual situation is different.
  - The major difficulty is to talk about the effects and risks associated with exposure to ionizing radiation :
    - do not easily conclude that the situation is safe
    - be consistent with the scientific knowledge and modest with respect to the uncertainties and limits of knowledge
  - Radiation protection is unavoidable but it cannot handle people's lives
    - Importance of focusing on individual data and their distribution within the community
  - Respect the values and choices of each person

The co-expertise process : how experts and stakeholders can work together?

- It relies on:
  - Establishment of places for dialogue allowing experts to listen and discuss together with affected people their questions, concerns, but also expectations
  - Assessment conducted jointly by locals actors and experts (voluntary experts and local professionals) on the situation of the people and their community
  - Importance of means to measure and characterize the radiological situation
  - Implementation of projects to address the problems identified at the individual and community levels with the support of local professionals, experts and authorities
  - Evaluation and dissemination of the results → importance of social media in Japan since 2011

Meeting in Suetsugi with ICRP July 2012 - questions and concerns



The development of the practical radiological protection culture

- The Fukushima experience has also confirmed that the co-expertise process is very effective to develop a practical radiological protection culture among the affected people, gradually allowing everyone:
  - To interpret results of measurements: ambient levels, external and internal doses, contamination of products
  - To build their own benchmarks against radioactivity in daily life
  - To make his own decisions to protect himself and relatives = self-help protection

- In this approach, access to individual measurements by the people with suitable devices is critical

Stakeholder involvement : conclusions on Fukushima experience

- Fukushima accident has reinforced the role of stakeholder on recovery situation
- To improve the efficiency and sustainability of protective actions, engaging stakeholders in the decision-making processes and empowering them to contribute to the assessment of the situation is crucial
- It's demanding for the experts who have to learn how to communicate/exchange with local stakeholders
- Need to further consider societal, ethical and economic aspects has been highlighted

On-going research projects and research needs at the European level

Recent and on-going research projects at the european level (2015-2020 EURATOM funded)

- **PREPARE (2013-2016) :** operational procedures for dealing with long-lasting releases
- **CAThyMARA (2015-2017) :** monitoring strategies and assessment of thyroid doses
- **SHAMISEN (2015-2017) :** recommendations for medical and health surveillance of affected populations
- **CONFIDENCE (2017-2019) :** reducing the uncertainties of radiological data in the area of long term rehabilitation
- **TERRITORIES (2017-2019) :** integrated management of contaminated territories characterized by long-lasting environmental radioactivity
- **SHAMISEN-SINGS (2018-2020) :** improvement of dosimetric, medical and health surveillance and stakeholder involvement
- **ENGAGE (2018-2020) :** enhancing stakeholder participation in the governance of radiological risks

Recent and on-going research projects at the European level (2015-2020 EURATOM funded)

- In all the recent and current projects, stakeholder involvement is addressed through the participation of panels (experts, decision makers, public through NGO…) that, usually, review and debate around recommendations proposed by the consortium.
  - What is the representativeness of the panels?
  - Why not to include stakeholders in the definition and the implementation of the research projects (co-construction)?
  - Necessity of integrating the main results of all these projects (WP2018-NFRP9?)

Research needs identified at the European level : NERIS roadmap

1) Challenges in radiological impact assessment during all phases

- Improvement of modelling, monitoring and development of data assimilation

2) Challenges in countermeasures and countermeasure strategies

- Better knowledge on countermeasures and countermeasures strategies
- Improvement of formal decision support
- New development in disaster informatics

3) Challenges in setting up a transdisciplinary and inclusive framework for preparedness

- Elaboration of strategies for stakeholder engagement, involvement and public participation (health surveillance, socio-economic aspects,..)
- Development of an integrated emergency management including non-radiological aspects
- Better addressing uncertainties and managing incomplete information (role of social media, development of education and training,..)

Involvement of stakeholders in research activities : the IRSN experience

- Ten years ago, IRSN established a "Research Policy Committee" (COR) which advises the IRSN board of directors
- The COR evaluates the relevance of IRSN's research programs and how well they meet the expectations of public authorities and society
- This Committee comprises various stakeholders : experts, ministry representatives, union representatives, NGO representatives…
- The research activities related to recovery situations have been examined by the COR in 2017-2018.

Main recommendations provided by the COR in relation with post-accidental-related research (1/3):

- Characterisation of the contamination : to increase the efforts in the domain of individual measurements (citizen science)
- Transfer of radioactivity in the environment : to initiate long-term collaboration with stakeholders in order to ensure the adequation of research programs with their needs
- Remediation : when analysing the situation in Fukushima, importance of the consultation of NGO and local resident (and not only Japanese authorities)
- Health issues : more interactions with stakeholders to collect their needs and expectations. Ethical issues related to health surveillance have to be addressed

Main recommendations provided by the COR (2/3) :

- Health issues : to develop cancer registry in order to gather data that will be used as reference in the case a nuclear accident occurs.
- Social sciences and humanities : necessity to address the issue of people that do not want to stay or to return.
- Off-site workers : necessity to address the issue of people that have to work on contaminated territories (decontamination workers, senior nursing home staff,…)
- Economical aspects : necessity of research programs on costs/benefits analysis in relation with remediation strategy, issues of compensations…

Main recommendations provided by the COR (3/3) :

- Scientific and societal assessment at the end of each individual research projects
- All reports and publications from IRSN should be in free-access and should be better publicized among the public.
- Creation of a portal that would gather all the IRSN works performed on the recovery topic and works from CODIR-PA and ANCCLI (National association of Local Information Committees).

CONCLUSIONS

- We will never be fully ready to manage a post-accidental situation…
- But at least, we can prepare ourselves on different aspects based on past events feed-back and on research activities in order to gain in agility in case the accident happens…
- During the planning/preparation phase (as well as when the real event occurs), stakeholder involvement is an absolute necessity…
- Stakeholders are involved in the majority of current research projects at the European level.
- Some questions about stakeholder involvement remain open such as representativeness or the extent of their role…

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Thank you
for your attention

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