The role of experts in post-accidental recovery : lessons learnt from Chernobyl and Fukushima

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Introduction

- IRSN and CEPN have been involved in the ETHOS and CORE projects in Belarus after the Chernobyl accident

→ Importance of involving the population with the support of national and local authorities and experts to ensure the effectiveness and sustainability of protection actions.

- Following Fukushima accident, IRSN and CEPN have been involved in ICRP Dialogue seminars :
  - Bringing a testimony on the works performed with the population in Belarus
  - Learning from the experience
- 12 Dialogues between 2011 and 2015
  - To identify the problems and challenges of the rehabilitation of living conditions
  - Various topics : foodstuff controls, role of measurements, education, value of culture…

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 in 2013 to identify the main lessons which can be learned from these dialogues and benefit to RP experts.

- Done 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 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**

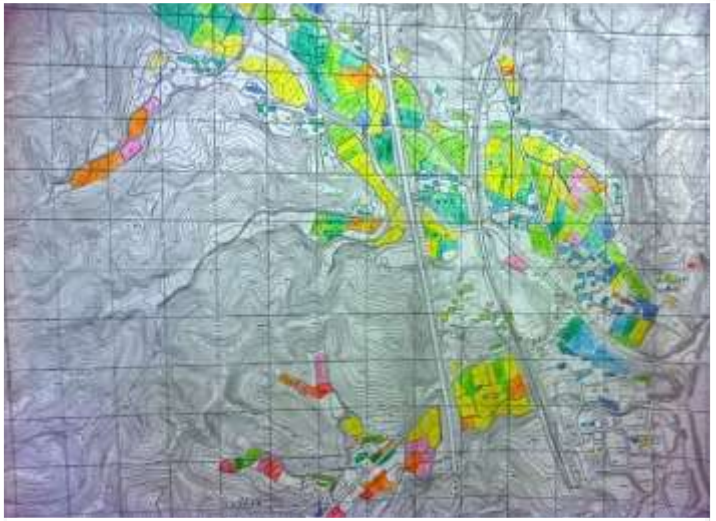
The stakeholder engagement: authorities, the public and experts

- 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
- Experience feedback from these experts
  - 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 to be at their service
  - **Respect the values and choices of each person**

The co-expertise process

- The process of co-expertise 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

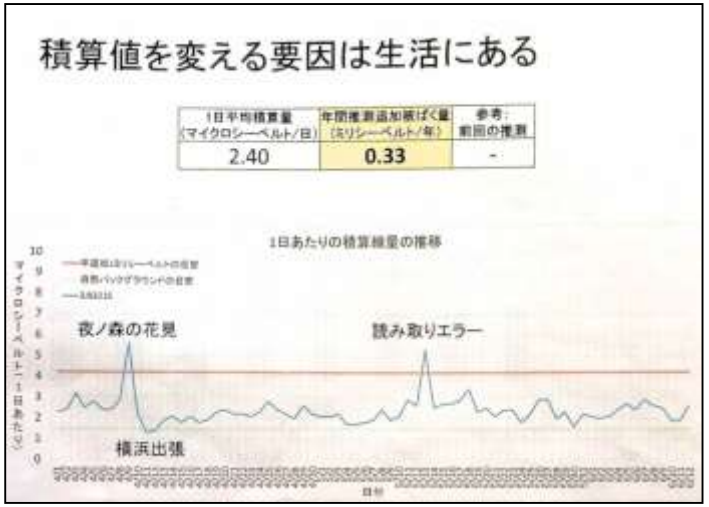
Meeting in Suetsugi with ICRP
July 2012 - questions and concerns

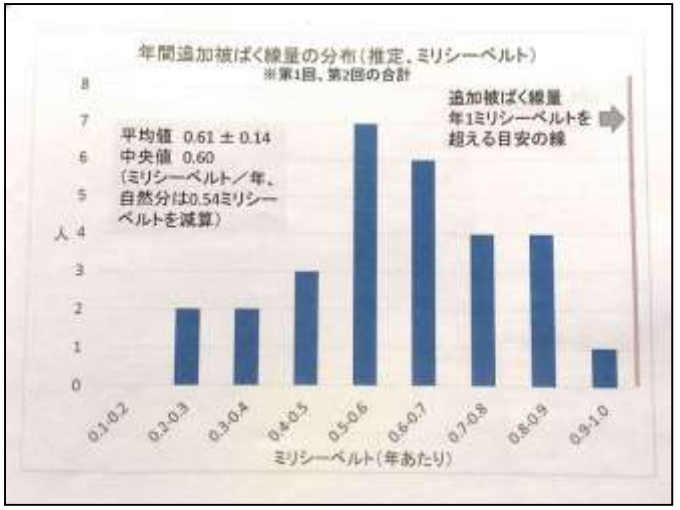


The development of the practical radiological protection culture

- 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 her/his own **benchmarks against radioactivity in day-to-day life**
  - To make her/his **own decisions** and protect her/himself and loved ones = self-help protection
- In this approach, **access to individual measurements** by the people with suitable devices is critical

Assessment of external exposure by citizens in Suetsugi





Tentative summary and challenges

- The **co-expertise process is the key** to regain (some) trust between authorities/experts and inhabitants
- To be helpful, scientist need to understand that, as necessary as **radiation protection** is, it is not the only problem inhabitants are facing and it **can not handle people's lives**.
- It must be at the service of individuals and the community. **It must help them to make their own choice**

But does helping people protecting themselves means that authorities/experts have no responsibilities ?

Which responsibilities for authorities/experts after a nuclear accident ?

- **Authorities are responsible to quickly implement a level above which it is not authorised** to reside permanently and the adoption of different criteria to guide actions taking into account the prevailing circumstances (food contamination levels, ..).
- Authorities and experts must ensure **radiation monitoring and health surveillance** of the population.
- Authorities and experts have the **duty to accompany and support all affected people in their local projects** to restore decent spiritual, moral and material living conditions
  - Support the establishment of **places for dialogue**
  - Contribute to a **joint assessment of the radiological situation**
  - **Help the development of radiation protection culture**