CENTRE D'ÉTUDE SUR L'ÉVALUATION DE LA PROTECTION DANS LE DOMAINE NUCLÉAIRE

What is at stake for radiation protection experts to empower affected people in nuclear post-accident situations ?
Some lessons from Chernobyl and Fukushima

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Workshop on ethics, risk communication and practical radiological culture in post-nuclear accident situations: the role of experts in empowering affected people

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The context of nuclear post-accidental situation

- Great complexity of the situation
- Lack of experience of people
- Profound disturbances of living conditions in the affected territories
- Multitude of points of view of people confronted with an unknown situation
- Difficulty to reach a consensus on the way forward

What is at stake in the recovery phase?

- The rehabilitation of **living conditions** of the affected population
- The management of the **radiological situation** in the affected areas
- The long term organisation of the **vigilance** related to the health status of the population

About living conditions

- Key issues at stake:
  - Social and economic activities
  - Well-being of individuals
  - Quality of the living together
  - Traditions and culture
  - Value of homeland and environment
  - Dignity of individuals

About radiological protection

- Key issues at stake:
  - Radiological characterisation
  - Radiation monitoring
  - Control of foodstuffs
  - Support of business
  - Decontamination and waste management
  - Adaptation of agricultural activities
  - Forest management
  - ….

About health vigilance

- Key issues at stake:
  - Public health follow-up
  - Epidemiological studies
  - Health care provision
  - Adaptation of the health system
  - ….

The role of radiological protection experts

- To accompany the rehabilitation of living conditions of the population in the affected territories under the constraint of the presence of radioactivity in the environment and the uncertainty as to its potential effects on health.
- This implies:
  - Serving public authorities (traditional expertise) and affected people (co-expertise)
  - Empowering stakeholders
  - Respecting the ethical values that underpin radiological protection
  - Communicating about radiation risk

The co-expertise process

- Initiating and continuing a dialogue
- Performing a joint characterisation of the radiological situation
- Identifying together the room for manoeuver and possible actions at the individual, community and collective levels
- Promoting the practical radiological protection culture to allow individual to make informed decisions
- Developing and implementing protection strategies at the service of improving living conditions

Listening about concerns of villagers
ETHOS Project, Olmany, Belarus, 1996-2001

Stakeholder participation

- The empowerment of affected people through their direct engagement in the evaluation of the local situation is the condition for each individual to:
  - Regain control on her/his radiological situation
  - Restore her/his autonomy of decision, her/his freedom to make choices: i.e. to restore her/his dignity
  - Develop a practical radiological protection culture
  - Participate to the decision making processes addressing the rehabilitation of the living conditions

Values that should guide the action of radiological protection experts

- **Beneficence/non-maleficence**
  - Doing more good than harm - Justification principle
- **Prudence**
  - Maintaining/Reducing exposures as low as reasonably achievable taking into account economic and societal factors - Optimisation principle
- **Justice**
  - Seeking for fair distributions of exposure – Application of reference levels and dose limits
- **Dignity**
  - Respecting the autonomy of people – Stakeholder participation and empowerment
- **Accountability**
- **Transparency**

About radiation risk communication (1)

- When communicating about radiological risk, experts should:
  - Address properly the prudent approach for managing risk, recognising the assumption of the existence of this risk at low doses
  - Promote protection strategies improving the quality of life taking into account the specific situation
  - Engage dialogue with stakeholders while preserving their autonomy of choice
  - Keep in mind that the issue at stake is not to make people accepting the risk but allowing them to make informed decisions about their life choices and their protection

About radiation risk communication (2)

- Experience shows that the most effective way to communicate about radiation risk is on the occasion of individual measurements when people are directly involved and interact with experts to interpret results
- The keys factors for successful risk communication:
  - Starting from the concerns expressed by the affected people
  - Using as much as possible common language and narrative
  - Proceeding step by step starting from source to effects through exposure pathways and the exposures conditions
  - **And never forgetting that risk communication only works if there is trust**

Measuring and sharing information together
Fukushima Prefecture, Suetsugi village, 2013

Two unresolved challenges

- The experiences of Chernobyl and Fukushima highlighted the difficulty of:
  - Spreading the process of co-expertise
    - Education and training?
    - Intermediary relays?
    - Networking?
  - Maintaining in the long term the vigilance on the radiological situation and its potential consequences
    - Environmental and health monitoring?
    - Radiological protection culture?
    - Education and memory?

The crucial role of local projects

- Post-Chernobyl experience has shown the importance of local projects initiated and led by inhabitants and communities to:
  - Motivate and engage stakeholders
  - Rebuild the quality of living together
  - Revitalize economic and social life
  - Prepare for the future
  - Maintain vigilance
- Need for sustainable mechanisms and resources to support these projects
- Key role of experts to elaborate, evaluate, and accompany the implementation of these local projects together with authorities and concerned stakeholders

What is expected from experts in nuclear post-accidental situation? (1)

- Understand the scientific and technical issues of the situation
- Consider the ethical dimensions of proposed protective actions
- Take into account the concerns and expectations of stakeholders and their contributions for developing protective actions
- Communicate accurate and meaningful information about the nature, magnitude, significance and control of the risk
- Facilitate dialogue processes and be in a position of mediator if necessary

What is expected from experts in nuclear post-accidental situation? (2)

- Contribute to the global rehabilitation process, keeping in mind that radiological protection is only one facet of this process
- Favour networking and coordination of actions at the local, regional and national levels
- Identify need for further research and development
- Contribute to education and training
- Testify about the situation and share the experience

Dialogue with citizens

Fukushima Prefecture, Suetsugi village, 2013