cepn

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

Lessons learned from Living Conditions and Health Status of Populations living in affected territories after the Chernobyl and Fukushima accidents

Pascal CROUAIL, Mélanie MAITRE & Thierry SCHNEIDER *et al.*

SHAMISEN
Nuclear Emergency Situations Improvement of Medical and Health Surveillance

OPERA

Third NERIS Workshop
19 May 2017

ST2 - General Objectives

Review the Health and Concerns of Populations living in contaminated areas following radiation accidents.

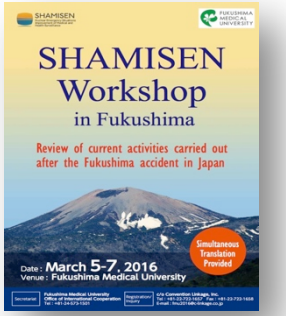
- Identify **impacts on living and social conditions**
- Summarise the **worries, needs and expectations of the affected populations** with regards to their health and welfare
- Analyse & discuss **socio-psychological consequences** of the Chernobyl and Fukushima accidents

Different case studies analysed

- Experiences with the **Sámi population** relating to Chernobyl fallout in **Norway**

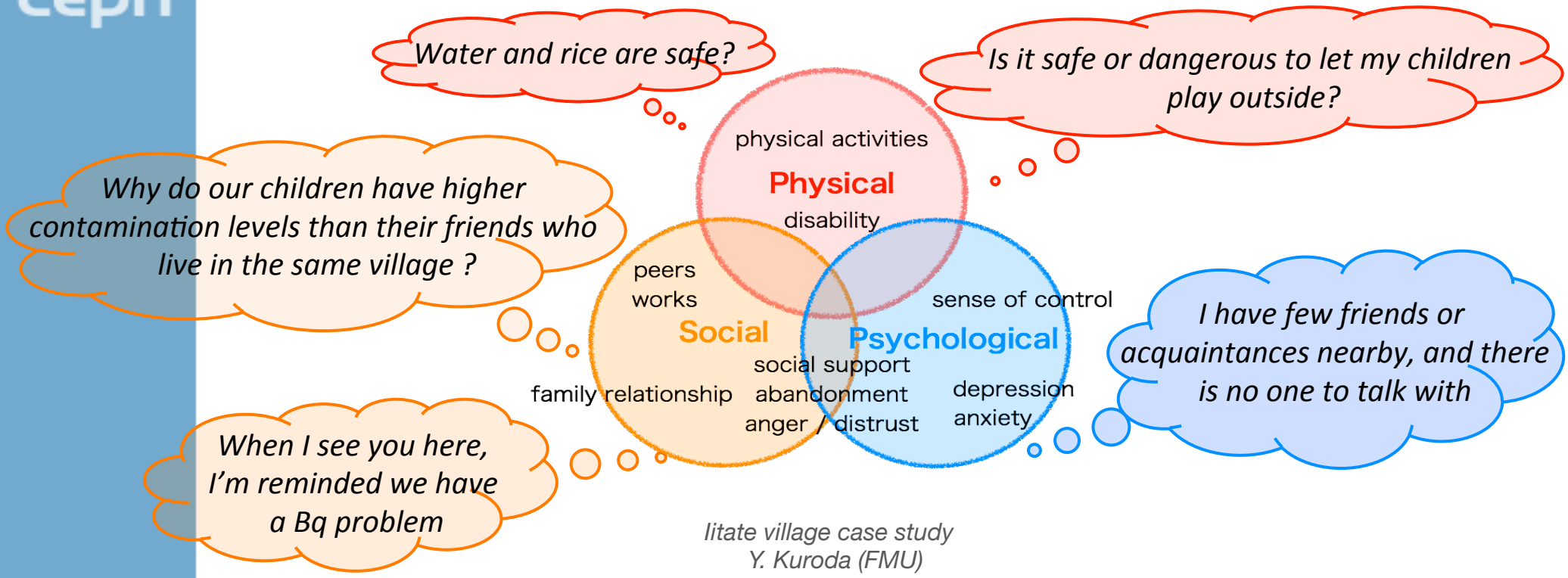
- Experiences of **ETHOS** and **CORE projects** in **Belarus** aiming particularly to improve the children's health in the post accidental situation after Chernobyl

- Review of current activities carried out after **the Fukushima accident in Japan**
  - 2 local case studies: Iitate Village & Miyakoji district
  - Organisation of a workshop (March 2016) with medical professionals, radiation protection experts and local stakeholders



Main lessons learned from the 3 different case studies

Expectations and worries

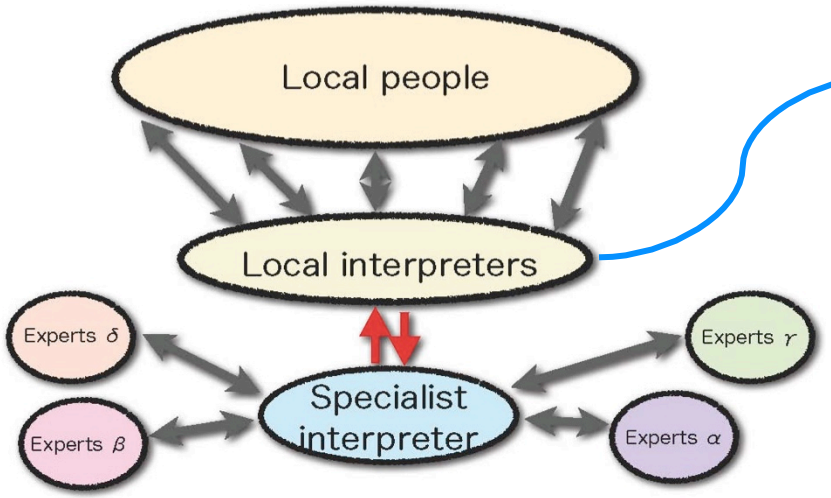


Iitate village case study
Y. Kuroda (FMU)

- Health surveillance needs to be **enlarged** to take into account the **health concerns and worries** of populations living in affected areas
- To be considered throughout **each** phase (early → recovery)
- **Radiation is not the only concern** but **health of the children** is clearly at stake

Role of the different stakeholders

- People refer to reliable persons *(medical doctors, nurses, elected people, teachers)*



Double interpreter system –
Myyakoji district case study – M. Miyazaki (FMU)

Key role of **local interpreters /facilitator**

- Ensure liaison between national and local levels
- Relay of scientific knowledge and local concerns
- Build face-to-face relationships with local residents.

- As soon as possible, build **facilitator-expert-population networks**
- Dedicated structures for the development of **practical radiological protection culture**

Contribution to well-being and direct benefits for participants (1)

- **Heath care response has to be adapted** to population needs
  - **Health Communities** play key roles as mediators between local people and experts
  - **Importance to implement a counseling approach**

✧ **Case of parental counseling at thyroid examination venues in Japan**

- Explaining the meaning of the findings, answering to the questions
- Accepting the thought, anxiety and feeling of the examinees and their families

⇨ **Relieve the anxieties of patients and help them to regain TRUST**

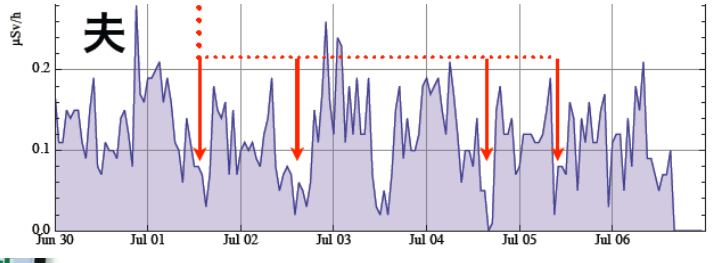
✧ **Case of WBC measurements in Norway**

- 15-20 minutes of measurements give opportunity to communicate face-to-face on diets, risks, etc.

Contribution to well-being and direct benefits for participants (2)

- **Self-help protection actions** provide opportunity for **affected population to regain control over their daily life**

  - Example of **D-Shuttle** in Japan described by Japanese experts as a **'positive virtuous cycle'**



Optimize the individual's protective measures

Measuring individual dose

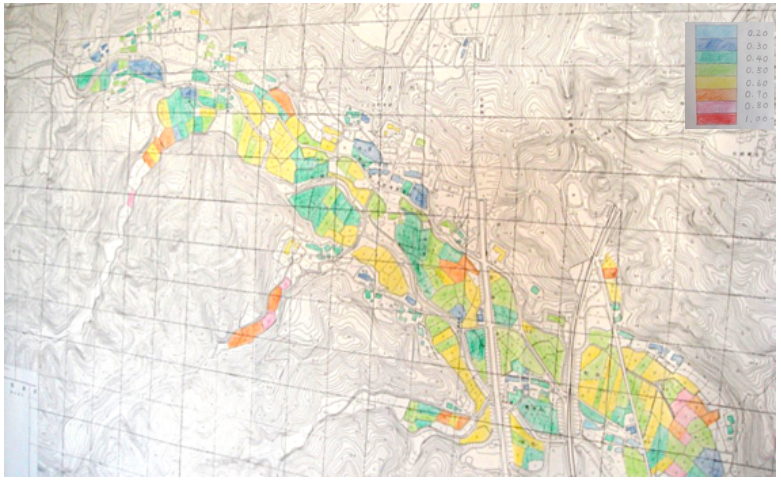
Less constraint/ More freedom in life

Find out potential measurement needs

Myyakoji district case study – M. Miyazaki (FMU)

Contribution to well-being and direct benefits for participants (3)

- Cases of **measurements of the environment and foodstuff monitoring** implemented in Belarus, Norway and Japan
  - **Allow them to characterize their own environment**
  - Help local people to understand **what is at stake in their own environment, how they can behave to avoid potential contamination**



Suetsugi Village contamination map

- **Importance of socio-economic aspects:** Development of infrastructures, *(transports, school, etc),* job opportunities… contribute to well-being

Sustainability and Continuity

- Most actions related to health surveillance **need to be inscribed in time**
  - To **build trust** with population (and avoid feeling of abandonment)
  - To give **scientific robustness** & provide **efficient results** *(e.g. epidemiology studies, health surveys)*
- Importance to develop a new framework to cope with long term issues, in order to maintain vigilance
- Favour **joint assessment with local populations**

✧ Case of Belarus & Japanese situations

• Actions implemented to Encourage **transgenerational transmission** of practical radiological protection culture *(exchange with experts at schools)*

• Actions favouring **intra-generation sharing experiences** *(e.g. school exchanges, etc.)*

Ethical issues

- Health surveillance programmes need to **respect autonomy** and **dignity** of affected populations

- Testimony of Y. Kuroda's experience from Iitate village
  1. Villagers are in **the best position to determine the local problems that need to be solved.**
  2. Villagers must regain confidence that they have control over their lives through **solving each problem by themselves**
  3. Each villager is not an "object" without knowledge or expertise, but a **"subject" who can make decisions in life and has multiple viewpoints.**

- Response to the accident may caused **more good than harm**
- Need to **balance scientific considerations and expectations from people**

- Case of Sámi population in Norway
  - Countermeasures have restricted the traditional use of reindeer materials in handicraft.
  - Losses of Sámi culture and traditions

Education and training

SHAMISEN
Nuclear Emergency Situations Improvement of Medical and Health Surveillance

OPERA

Project Number 604984

- Strong need to implement **Education and Training**
  - For **health professionals** to improve medical, psychological, social support of affected populations *(but maybe difficult to put in place in advance?)*
  - For **institutional** and **local stakeholders** to give them keys for better a understanding on radiological issues and potential health impacts
  - Not only a matter of risk communication or scientific explanations, but also on **practical day-to-day behaviour advises**, skill for **dialogue**, global **complexity** of the situation…

✧ Case of Iitate Village magazine

- Write about things that the villagers wanted to know.
- Emphasize the importance of the villagers to measure radiation by themselves.

✧ Case of training of public health nurses in Japan

- Trainings on risk communication with regards to nuclear disaster
- Provide to nurses some answer to parent's anxiety, improve their knowledge and skills on health promotion topics…

Conclusions

- Lessons learned have been taken into account on the **SHAMISEN recommandations**

Summary Table of Recommendations for Preparedness and Follow up of Populations Affected by Nuclear Accidents

DRAFT

General

- The fundamental ethical principle of doing more good than harm should be central to accident management
- Recognise the difference between medical surveillance, health surveillance and epidemiology
- Promote a health surveillance strategy that targets the overall well-being of populations
- Ensure that health surveillance respects the autonomy and dignity of affected populations
- Review existing health monitoring systems and if needed improve or establish new ones for epidemiological surveillance
- Adapt dosimetry and individual exposure monitoring to the phase of the accident , the situation and the needs
- Build a radiation protection culture

	Preparedness	Early and Intermediate	Long-term
Evacuation	• Plan sheltering, evacuation and stable iodine distribution protocols	• Optimise timing and support for sheltering and evacuation	• Have plans for lifting of evacuation orders as soon as possible
Training and Communication	• Establish early response and communication protocols • Prepare and facilitate training and education material and resources • Foster participation of stakeholders and communities	• Provide rapid, transparent and coherent information on the situation	• Build networks of experts-local facilitators - population to facilitate communication • Consider the preferences of people living in affected areas when revising mitigation actions • Foster long-term participation of affected communities
Dosimetry	• Prepare action frameworks focused on dose assessment	• Collect and store all radiation-related dosimetry data • Provide support to populations who wish to make their own measurements	• Continue dose assessment for workers and affected populations • Continue dose measurement support to populations
Health surveillance		• Create a common roster, collecting minimum information from monitored and evacuated people	• Expand the health surveillance programme to take into account economic, social upheavals • Launch health screening based on appropriate justification and design
Epidemiology	• Prepare frameworks for epidemiological protocols	• Create a common roster, collecting minimum information from monitored and evacuated people	• Ensure long-term sustainability of follow up of populations at risk • Launch analytical epidemiological studies only where appropriate and informative

Thanks to all SHAMISEN ST2 partners

- Koichi TANIGAWA, Yujiro KURODA & Makoto MIYAZAKI (FMU);
- Deborah OUGHTON & Yevgeniya TOMKIV (NMBU)
- Lavrans SKUTERUD (NRPA)
- Elisabeth CARDIS & Liudmila LIUTSKO (ISGlobal);
- Sylvie CHARRON (IRSN);
- Christiane PÖLZ-VIOL (BfS);
- Ausrele KESMINIENE & Evgenia OSTROUMOVA (IARC).

Thank you for your attention