

## **ST2 - LESSONS LEARNED FROM LIVING CONDITIONS AND HEALTH STATUS OF POPULATIONS**

### **Executive Summary**

The general objective of SHAMISEN Subtask 2 was to review the health and concerns of populations living in contaminated areas following radiation accidents. In particular, the Subtask aimed at identifying the impacts on living and social conditions, and summarising the worries, needs and expectations of affected populations with regards to their health and welfare. Socio-psychological consequences of the Chernobyl and Fukushima accidents are also analysed and discussed.

This general objective was achieved through a description and analysis of specific Chernobyl case studies in different situations (Norwegian Sámi reindeer herders and the general population in Belarus). Activities carried out in Japan after the Fukushima accident were also reviewed, incorporating an analysis of testimonies of medical experts and local stakeholders from two affected villages (Iitate and Miyakoji case studies) and the results of a dedicated workshop organised jointly with the Fukushima Medical University in Japan in March 2016.

The case studies clearly show the importance of sharing the well-being issues with affected population and to embrace many dimensions such as health and welfare, psychosocial issues, environment, social and economic aspects. The following points detail some important lessons learnt from the Norway, Belarus and Japan experiences.

- ▶ Post-accidental situations reveal that, in addition to direct radiation-induced effects, somatic and psychological diseases can appear as a result of the accident itself, the presence of radioactive contamination and consequent emergency and remediation measures taken, and/or uncertainties about radiation levels and health effects. Therefore, health surveillance programmes need to be enlarged to take into account the health concerns and worries of populations living in affected areas, with the aim of improving their well-being throughout the early phase of the accident (e.g. from the time of evacuation), the intermediate phase (e.g. during decontamination works, until the return of people is permitted) and the long-term recovery phase (e.g. life and welfare reconstruction and recovery activities in the affected areas, health surveys and care). The different case studies show that issues related to the development of infrastructures (transports, schools, care facilities, social assistance...), job opportunities and pleasant and secure living environments are major contributors to the population's well-being. This has been achieved in several case studies by developing a health surveillance programme in interaction with local authorities.
- ▶ In the different affected countries, post-accidental contexts share some commonalities: a long-lasting mistrust towards institutional experts and authorities, a lack of communication on health issues together with a strong demand for counselling and advice about appropriate behaviour and practices that minimise risks. However, the case studies demonstrate that this cannot be effectively done directly by traditional national experts. To grasp the situation and issues at stake and trust the information provided, local population refer to reliable local facilitators (e.g. local medical doctors, nurses, teachers and elected people). These local facilitators can ensure a liaison between the national and local levels, relaying and balancing the scientific expertise with local concerns and context. This calls for developing dedicated structures for dialogue contributing to the development of a practical radiological protection culture at the local level and the improvement of the well-being of affected populations.
- ▶ The case studies also testify that the participation of affected population to self-help protection actions, including making radiation measurements on their own (e.g. foodstuff and feedstuff, environment), provides them opportunities to regain control over their daily life. This empowers them, helping them to understand better what is at stake in their own environment and how they can take decisions to avoid or reduce their exposures.

- ▶ All the initiatives described in the case studies reveal that, to be effective, they should be supported by the authorities and by radiation protection experts and relayed by local stakeholders. This needs to be done over the long-term as uncertainties and concerns characterise all post-accidental phases. Such initiatives help to disseminate skills and competences in radiological protection at the local level. In this way, a highly developed radiological protection culture is gradually transferred and disseminated to all the local stakeholders and can be transmitted to future generations.
- ▶ Accordingly, to increase the awareness and vigilance of local populations in potential affected territories, specific education and training programmes, material and resources must be anticipated and developed before any accident occurs.
- ▶ Finally, the post-accidental situations often generate inequitable distribution of risks and impacts. Health surveillance programmes need to respect the autonomy and dignity of affected populations and consider justice and fairness.