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Title

Investigating social, ethical and communicational aspects of uncertainty management in emergency and post-accident situations- a multi-disciplinary approach in the CONFIDENCE project

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Text

Experience from past nuclear accidents and incidents, notably the Chernobyl and Fukushima accidents, showed that stakeholders' values, ethical considerations, requirements for public communication and the contrasting needs and concerns of people in different environments are key factors influencing the effectiveness of risk assessment and management. In particular, the inherent scientific and societal uncertainties, the different perceptions of risk, and the societal (dis)trust issues pose important challenges to radiological risk governance.

Previous studies in social science and humanities research attended to several aspects of accident and post-accident decision-making. However, the social, ethical and communication aspects of uncertainty management have not been addressed yet in a structured and multi-disciplinary way. Furthermore, there is a need to elucidate the uncertainties that citizens, decision-makers and other stakeholders face during or after an emergency, and to investigate how they make sense of and respond to scientific and societal uncertainties, since this can have a strong impact on the efficiency of the overall decision-making process.

The H2020 CONFIDENCE project aims to improve decision making in the case of a nuclear accident by, among others, identifying social and ethical issues related to uncertainty management in emergency and post-accident situations and clarifying how stakeholders at the various levels deal with uncertainty in their own decision making processes. At the same time, the project will support and improve the communication of uncertainties.

For this purpose, a dedicated work package in CONFIDENCE (WP5) will investigate:

- i) Lay persons' and emergency actors' understanding and processing of uncertain information and their subsequent behaviour in nuclear emergency situations;
- ii) Societal uncertainties and ethical issues in emergency and post-accident situations from the early phase to recovery;
- iii) Improved tools for communication of uncertainties, specifically for low radiation doses.

This paper outlines the multi-disciplinary approach undertaken in CONFIDENCE to address these issues, drawing on risk perception and communication, behavioural sciences and science and technology studies, and using qualitative and quantitative research methods and empirical investigation of case studies.