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Title

Citizens measurements: their role in radiation protection and emergency preparedness and response - the pros and the cons

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Text

An important issue of involvement stakeholders and general public into the process of effective solving problems of emergency preparedness and response and of remediation of the affected territories is obtaining confidence of them to Information on radiation situation provided by the authorities.

Experiences gained from the Fukushima Dai-ichi NPP accident in Japan in 2011 have shown, that especially in case of severe accident with significant consequences in large inhabited areas around lack of public confidence to officials was caused mostly by rather poor communication between official authorities and the public and the stakeholders, as well by restricted access to the information for them, what may have extremely negative impacts on the public and stakeholders understanding of actual situation and its possible risks, and on their acceptance of necessary protective measures and their participation in remediation of the affected areas.

A rather effective way to improve the situation can be implementation of citizen radiation monitoring on voluntary basis in this field. Making sure, the official results are compatible with public self-measured ones, the public probably gain more confidence in them.

In the Czech Republic the implementation of such approach is tested in the framework of security research founded by the Czech Ministry of the Interior - the research project RAMESIS solved by SURO, aimed at supporting establishment of a citizen monitoring network based both on net of fixed monitoring point, based on newly developed simple and cheap fixed monitoring stations, and on mobile monitoring performed using the Safecast Geigie nano portable devices, and prepare methods and tools for incorporation of these citizen networks into a national radiation monitoring network operated by the state to improve efficiency of obtaining information necessary for fast and effective evaluation of the radiation situation ion case of accident.

Analysis of possible capabilities of such networks shows, that with their help all roads on the whole territory of the CR can be monitored in one day using only about 300 devices, and areas with higher levels of contamination which need professional monitoring can be easily identified. From our survey it is clear that the civil monitoring network can provide useful information not only during the first phase of a radiation accident, but also in the phase of remediation of the territory as details for the population as well as for the assessment of development of radiation situation and the effectiveness of remedial measures.

The paper shows selected results of selected security research projects aimed this field, supported by the Czech Ministry of Interior ("RAMESIS" and "STRATEGIE ŘÍZENÍ NÁPRAVY ÚZEMÍ PO RADIAČNÍ HAVÁRII").