

Radon real time monitoring system

>A tool to assess Radon risk perception in the framework of EU LIFE-Respire Project (Action C)

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Action C: Socio-economic Impact assessment

A Social-Economic Impact Analysis will assess the potential for the LIFE RESPIRE. The analysis of people risk perception, is one of the quantitative parameters to be considered.

In brief, we have to develop a questionnaire to evaluate both the basic level of perception of the Radon Hazard and the level of interest in the project approach (including remediation measures) in a sample of residents in the areas investigated by RESPIRE. The results will be useful in the development of dissemination activities taking into account the project outcomes.

The survey instrument is purposely designed for the specific contexts of the test areas. The questionnaire will investigate many aspects. The most important are: knowledge of the hazard and of hazard mitigation strategies, feelings of self-efficacy regarding preparedness, sources of received information about the hazards and the emergency plan, preferred methods of receiving such information, willingness to take remediation measures respect Radon exposure.



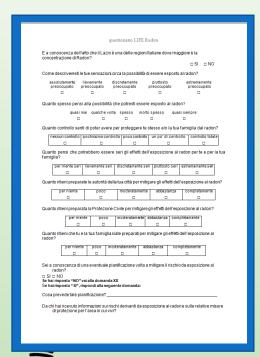
Radon hazard and risk perception survey: PHASES

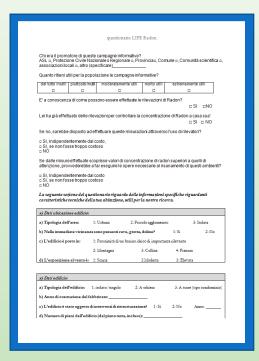
- Sample Choice: Population living in RESPIRE investigated areas.
- Survey tool development and validation: questionnaires (OMR) with a series of items, oriented on the peculiar aspects of the surveyed areas.
- Questionnaire Distribution and Collection: The survey distribution will be designed to reach a representative sample of population (gender, education level...). Teachers, students, volunteers of local civil protection associations and community groups will collaborate with the researchers to distribute questionnaires.
- Data Analysis: Results will be crucial to plan communication and information activities based on the project outcomes.

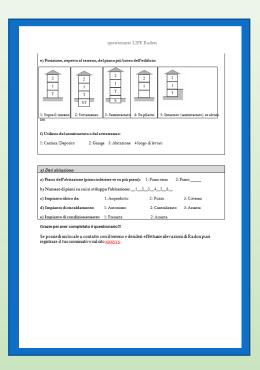


Questionnaire development

A preliminary draft of the survey instrument has been developed. It takes into account both questionnaires' structure and items already tested in our previous studies (Davis & Ricci, 2004; Davis et al., 2005; Barberi et al., 2008; Ricci et al., 2013a,b; Nave et al., 2016), and peculiar items for Radon Risk perception (INAIL P19L06).







The questionnaire (OMR) will be designed for general population target represented by residents in RESPIRE investigated Municipalities.

monitoring system

Questionnaire distribution

On the bases of number of residents in the four surveyed towns, we propose to hand out about 1000 questionnaires:

Municipality	# questionnaires	# residents
Caprarola	200	5k
Ciampino	500	40k
Celleno	100	1.3K
Ardenne	200	8k



Communication efficacy of Hazard and Risk Maps

In the communication chain between scientists and decision makers (stakeholders), maps represent a fundamental tool and the widespread source of information on hazards zoning and risk areas definition. Anyway, the relationship between the natural hazard, their probability and potential impact can be complex and the geospatial information not easily decoded or understood by not expert, even if decision makers. Focusing on Radon hazard, the goal is to improve the communication efficacy of scientific outputs, like maps, shaping them taking into account opinions and needs of the different stakeholders, on the bases on authors previous researches. An Evaluation/Validation procedure will be applied on the hazard tools developed by RESIPIRE.

Nave, R., Isaia, R., Vilardo, G. and Barclay, J. (2010). Re-assessing volcanic hazard maps for improving volcanic risk communication: application to Stromboli Island, Italy, J. of Maps, v2010, 260-269. 10.4113/jom.2010.1061

MEDSUV REPORT http://cordis.europa.eu/result/rcn/191839_it.html (WP6 : Hazard assessment, disaster preparedness and mitigation. Task 6.3 : Capacity building and interaction with decision-makers.)

Maps Evaluation/Validation Procedure: PHASES

- Sample Choice: decision makers, local civil protection officials, teachers, working in the municipalities included in RESPIRE investigated areas.
- Survey Methodology: Semi-structured interviews, providing both quantitative and qualitative data.
- Maps: A set of maps showing peculiar hazard/s data and field info, will be selected and presented during the interview.
- Analysis of indications from the interviews: The outcomes' analysis will assess the level of respondents' understanding of content as displayed, and their needs in representing the complex information embedded in the thematic representation.
- New geospatial representations of information related to Radon hazard and risk will be produced by means of GIS tools. A second round of semi-structured interviews on the new maps is requested to complete the evaluation/validation procedure.



Thank you for the attention!!

