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## **The LILAS project: analysis of applying participatory approaches such as Living Labs to research on multiple environmental exposures to ionizing radiation, other stressors and chronic risks**

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## Context

**Participatory research approaches** in environmental health are still rarely applied to radiation research. **Opportunities for greater implication of the civil society and related challenges differ at each step** of such research activities. The LILAS project aimed, as a preparatory step toward the development of participatory research projects on multiple environmental exposures to ionizing radiation and other stressors, to :

- 1) **favor a mutual understanding** of the main problematics and research methods in environmental health, their stakes for different actors, but also the requirements, strengths and limitations of these methods and to
- 2) **identify expected benefits and points of vigilance related to stronger degrees of participation** as part of environmental health research projects.

## Objectives

As a **preparatory step toward the co-construction of participative research projects** on multiple exposures and disease risks, the LILAS project aimed to

- **co-construct**, among institutional researchers, academics and civil society representatives, **a mutual understanding** of the main problematics and **research methods in environmental health**, their stakes for different actors, but also the requirements, strengths and limitations of these methods
- **identify expected benefits and points of vigilance related to stronger degrees of participation** as part of such environmental health research projects.

## Methods

- LILAS **gathered institutional researchers, academics and civil society representatives** interested in multiple exposures (chemical, radiological).
- Bibliographic search to identify relevant examples
- **5 meetings** allowed to collectively identify different types of study (including environmental epidemiological studies) and reflect about the added value, limitations, and methodological principles related to the introduction of growing participation as part of such studies.
- An **analysis matrix was co-constructed and filled** by participants, as in a « Living Lab mode » project.

## Results and perspectives

For different types of studies (studies for assessment of environmental exposures, identification of their determinants, interventions on these exposures, development of sensors, quantitative risk assessment, environmental epidemiological studies, experimental research, studies on the health of ecosystems...), the matrix\* lists expected benefits for several categories of stakeholders, fundamental methodological principles and practical constraints, advantages and limitations related to the use of participatory or more “classical” approaches.

LILAS has allowed, through a cross-acclturation process, to **develop consolidated grounds for the co-construction of future participatory research projects** on multiple environmental exposures, including ionizing radiation and chemicals. **Such a community-based research projects is now being developed**, in the Dunkerque area (France) : the **ORRCH-IDEeS** project.

\*available here : <https://hal-irsn.archives-ouvertes.fr/irsn-03222498>

