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# Living Labs and other participatory approaches applied to research on multiple environmental exposures and chronic risks

Olivier Laurent<sup>1</sup>, Yara Carrejo Gironza<sup>2</sup>, Sophie Ancelet<sup>1</sup>, Olivier Armant<sup>1</sup>, Denis Bard<sup>3</sup>, Katia Baumgartner<sup>4</sup>, Sylvie Bortoli<sup>5</sup>, Céline Boudet<sup>6</sup>, Philippe Chamaret<sup>7</sup>, Michel Chartier<sup>1</sup>, Stéphanie Cormier<sup>8</sup>, Arthur David<sup>9</sup>, Hélène Desqueyroux<sup>10</sup>, Mariette Gerber<sup>11</sup>, Rodolphe Gilbin<sup>1</sup>, Sonia Grimbuhler<sup>12</sup>, Stéphane Grison<sup>1</sup>, Lionel Larqué<sup>13</sup>, Dominique Laurier<sup>1</sup>, Christian Mougin<sup>14</sup>, Laurence Payrastra<sup>15</sup>, Alain Rannou<sup>1</sup>, Pascale Scannff<sup>1</sup>, Arnaud Vanzemberg<sup>1</sup>, Simon Schraub<sup>16</sup>, Sylvie Supervil<sup>1</sup>, Eric Thybaud<sup>6</sup>, Brigitte Trousse<sup>17</sup>, Sylvie Charron<sup>1</sup>

1. IRSN; 2. IRSET; 3. SFSE; 4. FNE; 5. INSERM UMRS 1124 - Université de Paris; 6. Ineris; 7. Institut Ecocitoyen pour la Connaissance des Pollutions; 8. CPIE des Pays de l'Aisne, pour l'UNCPIE; 9. Université de Rennes, EHESP, Inserm, IRSET - UMR\_S 1085; 10. ADEME; 11. Experte scientifique auprès de l'ANCCLI; 12. INRAE, UMR ITAP (INRAE/Institut Agro); 13. ALLISS; 14. INRAE, UMR ECOSYS, Pôle Ecotoxicologie; 15. INRAE, UMR 1331, TOXALIM, INRAE/ENVT/EI Purpan/UPS; 16. Ligue Nationale contre le cancer; 17. Inria Centre de Sophia Antipolis – Méditerranée /France Living Labs

## Context

The objectives of environmental health research are diverse (e.g.: identifying situations at potential risk, estimating exposures and effects, testing the effectiveness of preventive actions) and related methods are diverse as well. Opportunities for greater implication of the civil society and related challenges differ at each step of research activities. These aspects need to be better known and shared collectively.

## 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. Such community-based research projects are now being developed, in the Dunkerque area (France).

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

Contact : [olivier.laurent@irsrn.fr](mailto:olivier.laurent@irsrn.fr)

