



## Living Labs and citizen science to activate change of individual habits in a context of Climate Change: the I-CHANGE Day

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Urban Living Labs are vital collaborative spaces where citizens, researchers, and stakeholders join forces to tackle local challenges, but of wide interest for different socio-economic and climatic context. By involving citizens, Living Labs ensure that solutions align closely with individuals needs and priorities, fostering community engagement and ownership. Additionally, these Labs serve as innovation hubs, bringing together diverse expertise to drive forward creative and effective strategies.

The I-CHANGE (Individual Change of HABits Needed for Green European transition, 2021-2025) H2020 project aims to foster active citizen participation in addressing climate change-related issues. Through engaging citizens and local stakeholders, the project promotes behavioral and consumption shifts towards sustainability, utilizing citizen science experiments and campaigns. This is facilitated through a network of Living Labs situated in various socio-economic and geographical contexts, including Barcelona (Spain), Bologna (Italy), Genoa (Italy) and Jerusalem (Israel) along the Mediterranean basin and the cities of Amsterdam (the Netherlands), Dublin (Ireland), Hasselt (Belgium) and Ouagadougou (Burkina Faso). The Living Labs involve citizens, civil society, industry and public administration, playing a crucial role in transitioning to more sustainable behaviors.

One of the project initiatives has been the cooperation of the eight Living Labs for the organization of the I-CHANGE Day in the framework of the European Green Week, a joint effort to work in common campaigns and citizen science activities using low-cost sensors for measuring meteorological and air pollution variables. During this day, all the Living Labs participating in the project have engaged citizens within common citizen science campaigns. The project has chosen a meaningful date for this occasion, June the 5<sup>th</sup> 2024, the World Environmental Day.

The first proposed joint campaign was related to air pollution measurement in the cities of the Living Labs. Low-cost air quality sensors have been installed in Barcelona, Bologna, Genoa, Dublin, and Ouagadougou cities and have collected data for a common period until the I-CHANGE Day. The main objective was to compare the level of air pollution in the different regions where the sensors are

installed and use these data for citizen engagement. This engagement increased citizens' sensitization to the impacts of air pollution and the importance of advocating for more sustainable behaviours in their communities. A detailed protocol has been developed to guide the campaign through its different phases.

The second common campaign was a citizen-science experiment where citizens from Amsterdam, Barcelona, Bologna, Dublin, Genoa, Hasselt, Jerusalem, and Ouagadougou collected high spatio-temporal resolution data of temperature, humidity, and pressure to investigate temperature perception in specific areas of each city, the role played by temperature and humidity, and reflect on the social use of those spaces. The comparison between the locations selected and their social usages have provided critical information on the relevance of spaces for the different communities. Evaluating temperature perception and comparing it with collected data can provide insights for developing novel solutions and assess the effectiveness of already implemented natural-based solutions in the urban areas.

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