

EDIAQI

Launch of the New Horizon Europe Project EDIAQI 18 leading European organisations join forces to address and tackle the emerging threats of indoor air pollution and to promote living and working in healthy environments in Europe

The challenge

Indoor air pollution is an emerging threat to European society that is claiming millions of lives annually. Recently, the time spent indoors has increased dramatically due to the global pandemic, increasing the exposure to indoor air pollutants and the subsequent negative effects on both physical and mental health and well-being. Recent studies suggest that poor indoor air quality along with contamination by biological agents related to moisture and mould, increase the risk of respiratory diseases by 50 %. Furthermore, a systematic review and meta-analysis from 2020 noted that in 2017 household air pollution was associated with 1.8 million deaths and more than 60 million disability-adjusted life years globally. It should be highlighted that most of the burden associated with household air pollution is seen in low and middle-income countries.

However, when it comes to indoor air quality itself, serious knowledge gaps remain in areas such as, the complex nature of indoor-outdoor pollution relationships, pollution sources and exposure pathways, health effects of emerging pollutants and the ventilation of indoor spaces. This is mainly because air quality monitoring in the European Union (EU) is primarily focused on outdoor air quality, which paradoxically is a result of regulatory target compliances, which is lacking for indoor environments.

The solution

To address this issue and promote living and working in healthy environment, the EDIAQI project (Evidence Driven Indoor Air Quality Improvement) has been launched, funded under the Horizon Europe framework programme. EDIAQI presents an interdisciplinary, science-based, and data-driven approach to improve guidelines and awareness for advancing the Indoor Air Quality (IAQ) in Europe and beyond. Besides creating new evidence from planned cohorts, pilots and measurement campaigns, the scientific team in this project will leverage knowledge from past cohorts and data with a strong focus on sensitive groups of pre-school and school children with a high risk of asthma.

More specifically, the project will characterize sources and routes of exposure and dispersion of chemical, biological, and emerging

indoor air pollution in multiple cities in European Union (EU). EDIAQI will also aim to quantify the main properties of pollutants and processes through a dual approach in which the project team will 1) carry out state-of-the-art, small-scale, high-intensity scientific focus measurement campaigns; and 2) investigate the long-term, large-scale monitoring of target indoor air pollutants.

Through a unified strategy for indoor air pollution monitoring, EDIAQI aims to enable scientists to better understand indoor pollution levels and the associated health impacts, provide science-based information for legislative bodies to set guidelines and develop strategies for sustainable, science-based technological innovations to improve indoor air quality.

Getting started

The project, coordinated by the Lisbon Council, kicked off the activities on the 18th and 19th of January at a face-to-face meeting in Brussels. It was an inspiring event, where all partners took the floor to present their ambitious plans to make the project a great success. The 18 consortium partners bring to the project expertise in several fields (universities and research centres, businesses, technology leaders, public organisations) and are among the leaders in research and innovation in the field of indoor air quality measurement and improvement.

Among consortium partners, scientists from Mutagenesis Unit, Environmental Hygiene Unit and Molecular Toxicology Unit of the Institute for Medical Research and Occupational Health (Zagreb, Croatia) will be involved in several work packages and tasks to provide scientifically based data on how indoor air pollution can affect genomic instability and consequently our health by determining possible associations between indoor air pollutants and biomarkers of exposure and early biological effects. Moreover, Institute for Medical Research and Occupational Health will lead Work package (WP5 – TOX & HEALTH – Cohorts, health effects and toxicology) aimed at assessing both the short- and long-term effects of indoor air pollution on human health.

For any further information, please write to us at jon.switters@lisboncouncil.net (Dissemination Manager) or francesco.mureddu@lisboncouncil.net (Project Coordinator).

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