

Publication

Multi-sensor data collection for personal exposure monitoring: ICARUS experience

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As part of the ICARUS (Integrated Climate forcing and Air pollution Reduction in Urban Systems) H2020 EU project, sampling campaigns took place in seven European cities (Athens, Basel, Brno, Ljubljana, Madrid, Milan, Thessaloniki), aiming to characterize urban population exposure to air pollutants, altogether with over 600 participants from over 250 households. By combining spatio-temporal information on air pollution and activity data of individuals, we were able to identify individual exposure profiles and to aggregate information according to specific micro-environments and activity. Personal exposure reports were then prepared and distributed to all participants. In this paper the overall experience gained conducting sampling campaigns in all seven cities is summarised, focusing on the following aspects: sensors selection and evaluation, development of the overall study design, data harmonisation and building of supporting ICT infrastructure, as well as overall feasibility evaluation including user experience as reported by both participants and field workers.

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