
CONSPIRO - Breathing Together for Cleaner Air

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Air pollution caused by particulate matter (PM) remains a major environmental and public health challenge in Europe, contributing to over 430,000 premature deaths annually due to elevated PM_{2.5} levels. Previous measurements by Charles University have revealed significant wintertime concentrations in small and medium-sized settlements, largely linked to local heating emissions. The CONSPIRO project builds on these findings, bringing together experts from Charles University, the University of Copenhagen, and Heidelberg University to combine advanced monitoring techniques with modelling approaches in order to address this pressing issue.

The project will integrate existing PM datasets collected through stationary, mobile, and aerial (airship/drone) measurements with local-scale air pollution models to predict exposure patterns in European settlements. Pilot data evaluations will be carried out in collaboration with world-leading specialists from the University of Copenhagen, with active involvement of students from both universities. Alongside the research component, the project places a strong emphasis on education and public awareness, working with Heidelberg University to apply GIS and Earth Observation methods for the interpretation of air quality data and hotspot identification.

Through a combination of high-tech environmental science, interdisciplinary cooperation, and community engagement, CONSPIRO aims to develop comprehensive strategies for mitigating PM pollution. Planned outputs include the submission of joint proposals to the Erasmus+ and LIFE programmes, with the former focusing on educating municipal and regional officials in the use of air quality data for public dialogue, and the latter on nationwide awareness campaigns highlighting the health impacts of air pollution. By uniting aerosol science, meteorology, modelling, geography, and epidemiology, the project will not only advance scientific understanding but also empower students, researchers, and local communities to take action for cleaner air.