PRESS RELEASE

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MItigating TRansport-related Air Pollution in Europe: the MI-TRAP EU-funded initiative commences its 4 year journey

ATHENS, GREECE - 15 FEBRUARY 2024 The new Horizon Europe initiative, MI-TRAP, unites 26 partners from 10 European countries and South Korea, aiming to develop innovative solutions for urban air quality challenges, aligned with the EU Green Deal Zero Pollution Action Plan.

MI-TRAP (Mitigating Traceability of Pollutants from Transport Emissions) is funded under the European Commission's Horizon Innovation Action - Climate, Energy, and Mobility. The 4-year program showcases a comprehensive budget of 5.5 million euros and is coordinated by Kostas Eleftheriades of the National Center for Scientific Research "Demokritos". Bringing together 26 international partners, MI-TRAP project seeks to enhance understanding of and provide targeted solutions to mitigating the effects of transport-related pollutants.

Despite notable progress, urban air quality remains a complex concern with significant public interest. The project addresses critical issues arising from transport emissions, particularly in high-impact zones.

While adhering to stringent emission standards, the term "real-world" emissions signifies a measure of success in emission control measures. Recognizing the emerging significance of new sources like non-exhaust emissions and microplastics, MI-TRAP addresses the evaluation and mitigation of these sources, especially the physicochemical transformation of internal combustion engine emissions, posing substantial challenges. The project also emphasizes the importance of monitoring emerging air quality parameters, such as ultrafine particles (UFP) and Black Carbon (BC), for gaining a better understanding of air pollution. The existing metrics and parameterization in environmental monitoring systems often inadequately represent the initial material emitted by certified engines, complicating the link between health and environmental effects and specific transport modes.

MI-TRAP adopts a multidimensional approach to bridge these gaps, introducing innovative solutions. The project's initiatives include advanced monitoring capabilities, analytical tools, and strategically positioned monitoring stations near emission hotspots.

The outcomes will be integrated with epidemiological studies across Europe aiming to extract the specific impact of transport emissions on health.

Aligned with the EU Green Deal Zero Pollution Action Plan, MI-TRAP sets out to achieve five main objectives:

1. **Bridging Gaps**: Addressing disparities between transport emission standards and ambient air quality limit values.

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2. **Real-time Monitoring:** Enabling dynamic traffic/port/air/rail management through real-time air quality monitoring.
3. **Supporting Reduction Plans**: Backing emissions and noise reduction plans.
4. **Ready-to-Use Technologies**: Establishing innovative tools and solutions.
5. **Citizen Engagement:** Enforcing the zero pollution strategy by engaging citizens through a citizen science methodology as part of open science practices.

The project will be implemented in ten cities across Europe, aiming to characterize the footprint of transport emission sources and assess their impact on air quality and human health. A network of monitoring stations strategically placed near emission hotspots aims to trace pollutants, evaluate legislation efficacy, and assess health impacts. Nature-based solutions (NBS) and citizen science practices are integral components, ensuring community engagement and open-science initiatives.

Results will help assess and mitigate transport emissions' impact on air quality and health and communicate the findings to policymakers and authorities. Supporting and complementing the regular observation networks could underpin the efforts of governments and civil society to comply with the sought SDGs for sustainable cities and communities.

The scale of the impact of MI-TRAP is wide at the European level, since the consortium includes partners from Greece, Italy, Slovenia, Czech Republic, Switzerland, Germany, Denmark, France, Portugal and The Netherlands, while it has drawn resources from South Korea.

MI-TRAP commenced its mission in January 2024, while the consortium officially inaugurated the project's activities during a two-day hybrid meeting in Athens, Greece, on February 6th and 7th, 2024. This assembly, hosted by the National Center for Scientific Research "Demokritos," project coordinator, brought together 50+ partner representatives and established the foundation for a collaborative effort spanning 4 years.

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Notes to the Editor

PROJECT SUMMARY

MI-TRAP (Mitigating Traceability of Pollutants from Transport Emissions) is a Horizon Europe initiative funded by the European Commission. Coordinated by Prof. Kostas Eleftheriades of the National Center for Scientific Research "Demokritos," Greece, the project unites 26 international partners to address and innovate solutions for urban air quality challenges. The MI-TRAP project aims to improve the currently available Tools and services for air pollution mitigation from transport sources through a multi-dimensional approach. The project will develop and provide a suite of beyond the state of the art innovative monitoring Instrumentation package, data analysis tools to track emitted pollutants, enable systematic traffic management and evaluate the effectiveness of legislation and control measures. Past and present data will be used for enabling health impact assessment. Additionally, MI-TRAP recognizes the importance of Nature-based Solutions (NBS) and implements pilot NBS in selected sites, in order to facilitate mitigation of air and noise pollution. The project will also incorporate citizen science practices, disseminating findings through open-science and citizen- science approaches with the support of key stakeholders and citizens.

GENERAL INFORMATION

Duration: 48 months | Starting from 1 January 2024

EU funding: € 5 541 423,21 | **Grand Agreement no:** 101138449

Coordinator: National Center for Scientific Research "Demokritos"

Website: mitrap-project.eu **Twitter:** @MITRAP_eu **LinkedIn:** @MI-TRAP **Facebook:** @MITRAP2024.eu

MI-TRAP CONSORTIUM

National Center For Scientific Research "Demokritos" (NCSR-D), University Of Nova Gorica (UNG), Haze Instruments, Razvoj In Proizvodnja Merilnih Instrumentov Doo (HAZE), Università Degli Studi Di Milano (UMIL), Institute Of Chemical Process Fundamentals Of The CAS (ICPF), National and Kapodistrian University of Athens (NKUA), Technische Universitaet Muenchen (TUM), Technical University Of Crete (TUC), Istituto Nazionale Di Fisica Nucleare (INFN), Amaranthus Social Cooperative Enterprise (AMRN), Wageningen University, Department Of Environmental Sciences (WU-DES), Institut Mines-Telecom (IMT), Danish Technological Institute (DTI), Aarhus Universitet (AU), Ist-id Associacao Do Instituto Superior Tecnico Para A Investigacao E O Desenvolvimento (IST-ID), Physikalisch-technische Bundesanstalt (PTB), Catalytic Instruments (CI), Politecnico Di Milano (POLIMI), Freie Universitaet Berlin (FUB), Ivu Umwelt Gmbh (IVU), Nanodust Gmbh I.G. (NDST), Fincon Consulting Italia Srl (FINCON), Eidgenossisches Institut Fur Metrologie (METAS), Paul Scherrer Institut (PSI), Incheon National University (INU), and Bruker Nano Gmbh (BRN).

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