

2022

Methods of non-regulated pollutants

Methods to measure new contaminants that are not regulated, together with datasets & guidelines



These pollutants include UFP-PNSD, BC, NH₃, VOCs, etc.

- [D1 \(Sept 2022\)](#)
- [M1 \(Oct 2022\)](#)

Tools for NRT-source apportionment & -PNSD

These tools provide information on pollution sources & the amount they contribute to air pollution levels



The focus is on micro-carbonaceous particles, namely BC & OA

- [M3 \(Feb 2022\)](#)
- [D4 \(Dec 2022\)](#)

Methods for horizontal & vertical profiling for AQ

Procedures to implement vertical profiling & other atmospheric products



They can efficiently complement 'standard' in situ AQ data

- [D6 \(Sept 2022\)](#)
- [M7 \(March 2023\)](#)

Best practices to evaluate health impacts of air pollution

Association between short-term exposure to air pollutants, including UFP, & health impact



Health outcomes are assessed through mortality & morbidity

- [D9 \(Sept 2022\)](#)
- [M8 \(Oct 2022\)](#)

Harmonisation methodology of the OP of PM

Evaluation of assays & analytical methods to link air pollution & oxidative stress in cells



Relationship between the OP of PM & health outcomes

- [D11 \(March 2023\)](#)

Methodology for mobile monitoring of pollutants

Guidelines to assess AQ exposure using mobile monitoring systems (i.e. cars, bikes, etc)



The method may require the participation of citizens

- [D13 \(Sept 2022\)](#)
- [M10 \(Nov 2022\)](#)

First inventory of UFP-PNSD & non-exhaust vehicle emissions in Europe

It includes the main air pollutants (CH₄, CO, NH₃, NMVOC, NO₃, SO₂, PM10 & PM2.5) & UFP



PM emissions from road traffic, including non-exhaust vehicle emissions

- [M13 \(Sept 2022\)](#)

2023

Measurement kick-off in pilot cities

The RI-URBANS pilot cities: Athens, Barcelona, Birmingham, Bucharest, Helsinki, Milan-Bologna, Paris, Rotterdam-Amsterdam, & Zurich



The documents include tools recommendations

- [M16 \(May 2023\)](#)
- [M20 \(May 2023\)](#)
- [M22 \(May 2022\)](#)
- [M27 \(Feb 2023\)](#)

RI-URBANS recommendations for the new EU AQ Directive

The document was sent to the DG ENV (European Commission) for the measurement of advanced AQ parameters



2 documents with recommendations were sent to DG ENV to this end:

- [07/02/2023](#)
- [06/03/2023](#)

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2023

Stakeholders meeting with AQUILA & EMEP to discuss STs

A meeting was organized in collaboration with AQUILA & EMEP

Guidance to measure the advanced air quality parameters of the new directive as discussed

- [M42 \(June 2023\)](#)

Recommendations for source apportionment

Recommendations to implement source apportionment analysis

These include PM, UFP, BC, UFP-PNSD

- [D3 \(Sept 2023\)](#)
- [Amato et al., 2024](#)

First directions to access open data

List of datasets & pollutants available until September 2023

Links to the open data supplied

- [D36 \(September 2023\)](#)

Emission inventory UFP, & PM components finished

Emission inventories for UFP-PNSD, non-exhaust vehicle PM

as well as other PM components & pollutants

- [D18 \(April 2024\)](#)

High resolution urban mapping of air pollutants

High resolution mapping UFP-PNSD, BC, OP

Different tools are demonstrated

- [D19 \(March 2024\)](#)

Air pollution variability in pilot studies

First & preliminary results from the pilot cities

Mapping of UFP at urban scale & 3D measurements

- [D27 \(March 2024\)](#)
- [D32 \(March 2024\)](#)

Phenomenology of UFP-PNSD, BC & NH₃ in urban Europe

Compiled data for these pollutants are interpreted & spatial-temporal variability shown

The added value of measuring these is shown

- [Garcia-Marlès et al., 2024](#)
- [Trechera et al., 2023](#)
- [Savadkoohi et al., 2023](#)
- [Liu et al., 2024](#)

Source apportionment of Oxidative potential

RI-URBANS method for determining OP of PM is used & source apportionment applied

Different protocols are compared

- [Camman et al., 2024](#)
- [Dominutti et al., 2023](#)

Recommendations for reporting (eBC) mass concentrations for AQ

Once the absorption coefficient is measured, this should be

converted to mass concentration of eBC, recommendations are given

- [Savadkoohi et al, 2024](#)

Modelling of nucleation of nanoparticles in Greece

Demonstration of the tool to model UFP

In addition to emissions of primary UFP, new particle formation is also modeled

- [Aktypis et al, 2024](#)

2024