

WP5: Strategic guidance for upscaling RI-URBANS STs

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UNIVERSITY OF HELSINKI



CSIC

CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS



RI-URBANS (101036245) final meeting, 8th & 9th September 2025



WP5: Objective

To develop strategies and solutions for the consolidation of a sustainable RI-URBANS (and in some cases RI-URBANS/ACTRIS) STs with with AQMNs

Duration M1-M48

WP leaders: Tuukka Petäjä, UHEL & Xavier Querol, CSIC

Participants: CSIC, UHEL, FMI, UU, VITO, UOB, NOA, INERIS, CNRS, UW

Suggested to ACTRIS



WP5 timeline

T5.1. Implementing **data** management framework (NILU, CNRS)

T5.2. Establishment of the **measurement quality** framework (TROPOS, INOE)

T5.3. Establishing the **modelling** framework (FORTH, INERIS)

T5.4. Demonstration of **replicability and uptake** pathways of services (NOA, UW)

T5.5. **Strategic guidance** for European up-scaling RI-URBANS STs (UHEL, CSIC)



8 out of 11 deliverables !!!
1 out of 8 milestones

	M1-6	M7-12	M12-18	M19-24	M25-30	M31-36	M37-42	M43-48
T5.1								
T5.2								
T5.3								
T5.4								
T5.5								

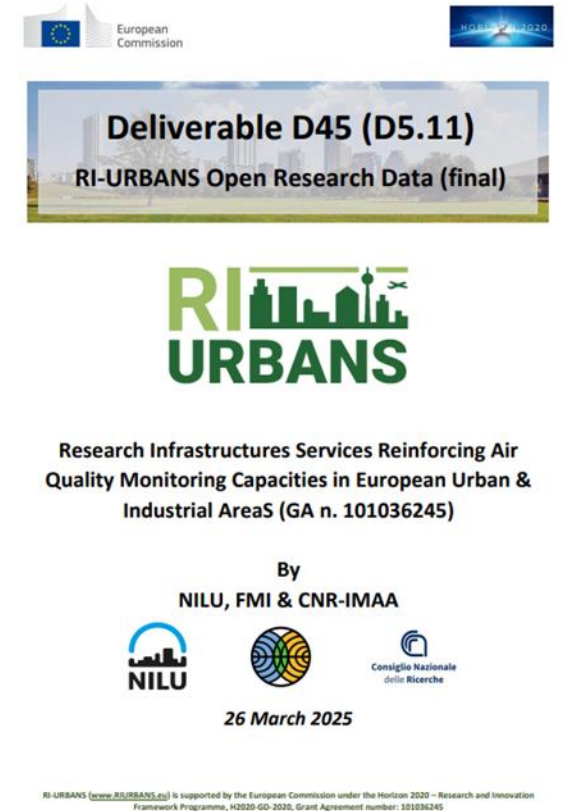
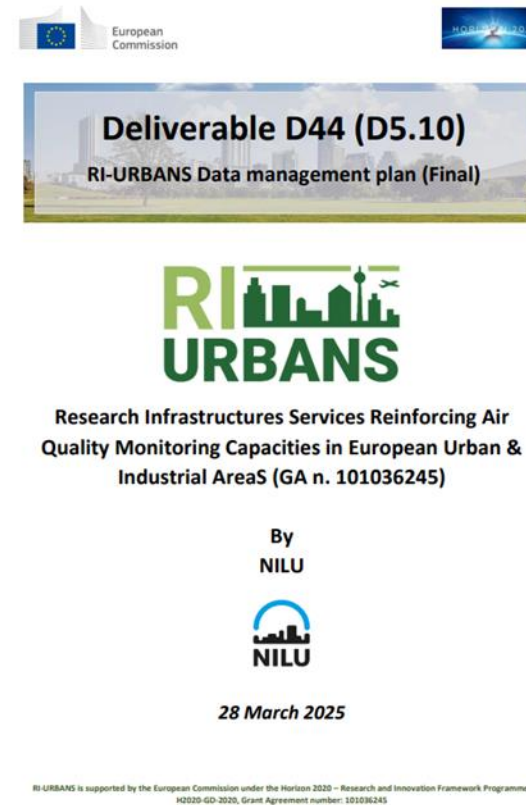
WP5: Deliverables and Milestones

- **D35 (D5.1):** RI-URBANS Data management plan preliminary (NILU, R/PU in M06).
- **D36 (D5.2):** Open Research Data (preliminary) (NILU, ORDP/PU in M24).
- **D37 (D5.3):** Service catalogue on ACTRIS and IAGOS services for urban sites (NILU, DEC/PU in M46).
- **D38 (D5.4):** Guidelines and training on AQ tools (SA, mobile measurements, low-cost sensors, citizen science) (TROPOS, R/PU in M46).
- **D39 (D5.5):** STs for modelling novel urban air diagnostics and evaluation of regional AQ models over urban areas (INERIS, R/PU in M48).
- **D40 (D5.6):** Roadmap for replicating AQ monitoring solutions: Warsaw and applicability to other cities (NOA, R/PU in M40).
- **D41 (D5.7):** Road map for upscaling sustainable access to RI-URBANS STs and solutions (UHEL, R/PU in M48).
- **D42 (D5.8):** RI-URBANS services to ACTRIS and IAGOS portfolios (FMI, R/PU in M48).
- **D43 (D5.9):** RI-URBANS Data management plan updated (NILU, R/PU in M18).
- **D44 (D5.10):** RI-URBANS Data management plan final (NILU, R/PU in M42).
- **D45 (D5.11):** Open Research Data (final) (NILU, ORDP/PU M42).
- **M29 (M5.1):** Overview of measurement data and pilots, recommendations for data curation (NILU in M14).
- **M30 (M5.2):** Overview of measurements and products on conditions and pollution above surface (CNRS in M35).
- **M31 (M5.3):** QA/QC measures in the pilot activities defined (TROPOS in M10).
- **M32 (M5.4):** First workshop with AQMNs and/or AQUILA network (CSIC in M42, *moved to M32 because the AQ Directive discussion was in RP2*).
- **M33 (M5.5):** Toolbox for AQ models over urban areas (KNMI in M24).
- **M34 (M5.6):** Upgrading SA tool (FORTH in M36).
- **M35 (M5.7):** Meeting with stakeholders regarding status and needs (UW in M18).
- **M36 (M5.8):** Guidance for co-design with stakeholders (CSIC in M30; *moved to M32 because the AQ Directive discussion took place in RP2*).

WP5: T5.1. Implementing data management framework supporting RI-URBANS services

Data management & Open data

- RI-URBANS data have been made publicly available, following the reporting guidelines outlined in the RI-URBANS **final DMP (D44/D5.10)**
 - Data curation should follow the ACTRIS guidelines and be published in compliance with FAIR principles, using the EBAS infrastructure (<https://ebas.nilu.no/>)
- **Final Open Data (D45/D5.11)** Links to the available data EBAS & ZENODO on the RI-URBANS website <https://riurbans.eu/results/#open-data>



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WP5: T5.1. Implementing data management framework supporting RI-URBANS services

RP3

D44 (D5.10) Final DMP

The DMP describes the repositories, and their data management routines.

D45 (D5.11) Final Open data

<https://riurbans.eu/results/#open-data>

Table 1 – quality-controlled data sets

The total number of sites given in parentheses includes those relevant sites that have been reported to other frameworks and those sites expected to be in EBAS soon. It does not include NRT data.

Note that the number of sites and datasets is continuously changing, current information is representative for end of August 2025.

IMPORTANT

The first time you follow the link to the EBAS page, a general disclaimer will appear. Please accept it and follow the link again to visit the pollutant info.

Variable	Instruments	#NRT sites	#sites	# data sets (level 2)	Link to dataset (level 2)
Aerosol absorption coefficient (also used for estimating eBC)	Filter absorption photometers (MAAP, AE33, AE31)	10.0	47.0	288.0	EBAS
particle number size distribution (PNSD)	DMPS, SMPS, CPC, APS	8.0	17.0	2082.0	EBAS
VOC data (111 number of different gas components)	Adsorption, tube, PTR-MS, online-GC, steel canister	-	23.0	1078.0	EBAS
NH ₃	Online absorption, CRDS, online IC, chemiluminescence, passive sampler	-	60.0	65.0	EBAS
Aerosol chemical composition (NH ₄ , SO ₄ , NO ₃ , organic mass)	Aerosol mass spectrometer (ACSM)	2.0	4.0	53.0	EBAS
NO, NO ₂	CAPS, chemiluminescence	-	1.0	8.0	EBAS
SO ₂	UV- fluorescence	-	1.0	4.0	EBAS
Elemental and organic carbon (EC/OC)	High volume sampler	-	1.0	18.0	EBAS
eBC	-	53.0	53.0	-	ZENODO
Non-refractory PM speciation	ACSM	22.0	22.0	-	ZENODO

EBAS (PNSD, PM offline speciation, NH₃, VOCs)

ZENODO (ACSM online PM speciation).

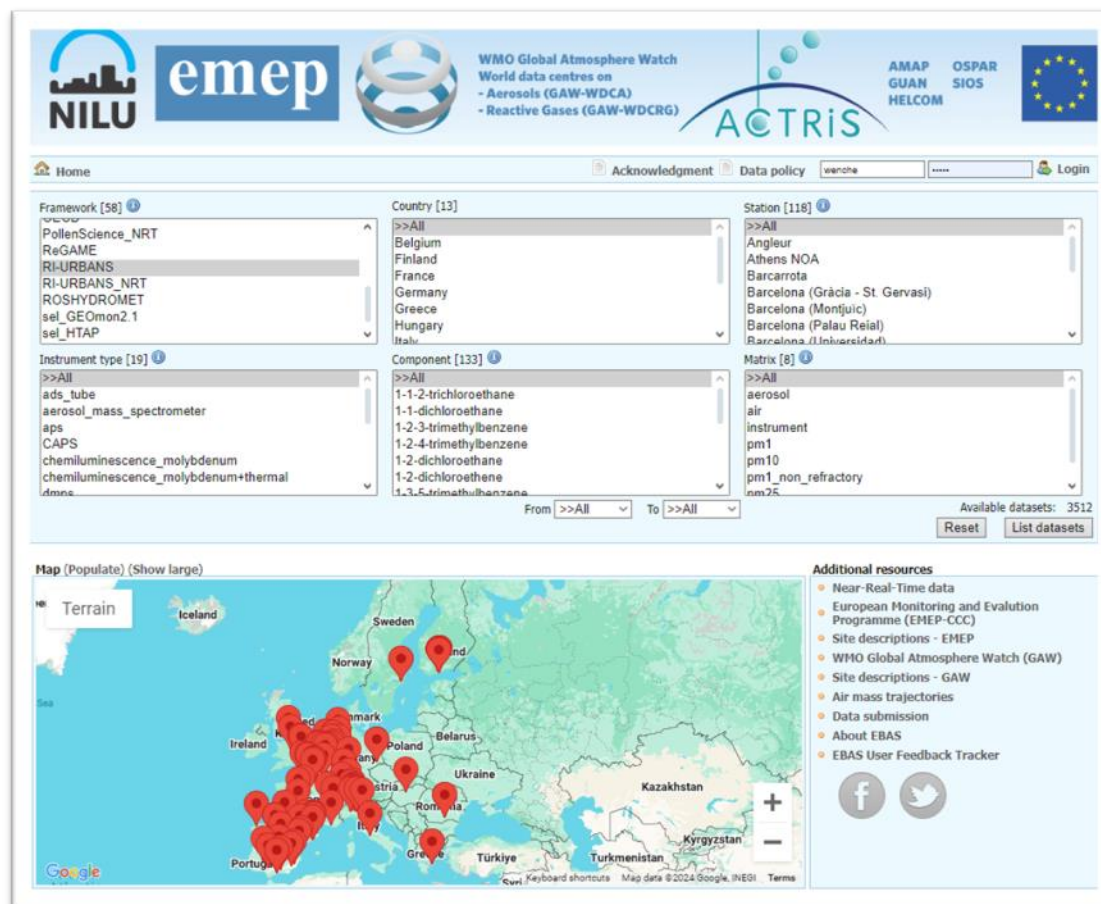
BC: <https://zenodo.org/records/7982201>,

ACSM: <https://zenodo.org/records/6672710>

Currently (September 2025), 5000 datasets, 13 countries, 123 stations, 22 different types of instruments, 142 different components

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D36 Open Research Data



- 123 sites
- 13 countries
- 142 compounds
- 22 instrument types

5000 datasets

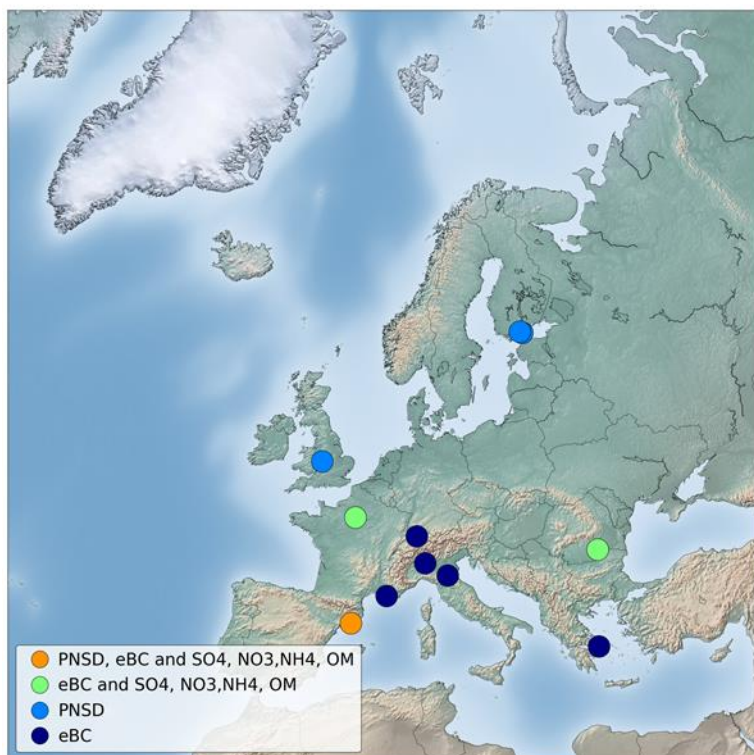
Additional relevant datasets reported to ACTRIS and other networks, but not tagged with RI-URBANS

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Status NRT (9 cities -12 sites)

Fulfilled the obligations of 1 year pilot NRT from 9 pilot cities

Continue the service



Pilots	Code	Site	Instrument	Start	Stop
Zürich	CH0010U	Zürich-Kaserne	AE33	Jan-23	ongoing
	CH0010U		CPC	Jun-24	ongoing
Barcelona	ES0019U	Barcelona (Palau Reial)	AE33	Mar-23	ongoing
	ES0019U		ACSM	Mar-23	Nov-23
	ES0019U		SMPS	Nov-23	ongoing
Helsinki	FI0038U	Kumpula (SMEAR III)	DMPS	Aug-23	ongoing
	FI0039U	Mäkeläncatu	DMPS	Aug-23	ongoing
	FI0040R	Luukki	DMPS	Aug-23	ongoing
Paris	FR0020R	SIRTA	AE33	Feb-23	Jul-24
	FR0020R		ACSM	Feb-23	ongoing
Marseille	FR0035U	Marseille Longchamp	AE33	Mar-23	ongoing
Birmingham	GB0101U	Air Quality Site (BAQS)	DMPS	Nov-23	ongoing
Athens	GR0100B	DEM_Athens	AE33	Nov-23	ongoing
Po Valley	IT0022C	ISAC Bologna II	AE33	Dec-22	ongoing
	IT0025U	Milano Pascal	AE33	Jan-23	Mar-23
Bucharest	RO0010R	RADO-Bucharest II	ACSM	Mar-23	ongoing
	RO0010R		AE33	Jan-23	ongoing

WP4:

Pilot – Task	European City	ATH	BCN	BIRM	BUC	HEL	MIL	PAR	ROT	ZUR
P1 - T4.1 - NRT aerosols		x				x	x	x		x
P2 - T4.2 - NRT nanoparticles			x	x		x				

T5.2 Establishment of the measurement quality framework

RP1

M31 QA/QC measures provided to the pilots and implemented

Instruments from 3 pilot cities were calibrated at TROPOS

RP2

TROPOS provided support for the NRT data submission for MPSS and AE33 measurements. NRT- data is available in EBAS

RP3

TROPOS continued support to pilots and NRT measurements

D38 (D5.4): Guidelines and training on AQ tools (SA, mobile measurements, low-cost sensors, citizen science) (TROPOS, R/PU in M46).

T5.2 Establishment of the measurement quality framework



European
Environment
Agency



Schedule:

Training #1: 23 th January 2025	09:30 – 11:30 CET	Aerosol particle number concentration
Training #2: 27 th January 2025	09:30 – 11:30 CET	Aerosol particle number size distribution
Training #3: 11 th February 2025	09:30 – 11:30 CET	Equivalent Black Carbon
Training #4: 19 th September 2025	09:00 – 11:30 CET	Urban mapping of pollutants and citizen science
Training #5: 29 th September 2025	09:00 – 11:30 CET	Source apportionment

T5.3 Establishing the modelling framework

RP1

Coordinating INERIS and FORTH WP3 to streamline the comparison between tagged sources in the CAMS models and the ACTRIS measurement for eBC and design the systematic NRT ST.

RP2

INERIS and FORTH with data provided by W1-2 modelling framework for health and policy relevant indicators, which could be taken up in the future in operational services such as modellers of national or local AQMN, or a European Service such as CAMS. WP3 started tasks for the transfer of modelling tools to CAMS.

For eBC (mature), OA (31 with ACSM, model evaluation stage), UFP-PNSD (model evaluation, including source apportionment), OP (model evaluation, but results point to more research needed). At both the regional and local modelling scales, with the exception of OA which is primarily a focus for regional scale models.

RP3

D39 (D5.5): STs for modelling novel urban air diagnostics and evaluation of regional AQ models over urban areas (INERIS, R/PU in M48).

T5.3 Establishing the modelling framework

Black carbon

Models: The Copernicus Atmosphere Monitoring Service (CAMS) (Peuch et al., 2022; Colette et., 2025) produces on an operational basis forecast and analysis model results for EC, including the source apportionment of residential emissions (ECres), and total EC (ECtot) which includes all other sources including but not limited to traffic.

Data: Evaluations are done with EC measurements or eBC measurements that are derived from aethalometer measurements. (D1.3). In the framework of RI-Urbans, 11 pilot sites have monitored continuously BC. Historical dataset of ambient eBC and EC measurements covering the 2006-2022 are in zenodo. eBC data from 25 ACTRIS National Facilities are delivered to Copernicus in NRT (CAMS2_21 service)

Define function(s)

#used later in the 3rd diagnostic (FAIRMODE summary diagram)

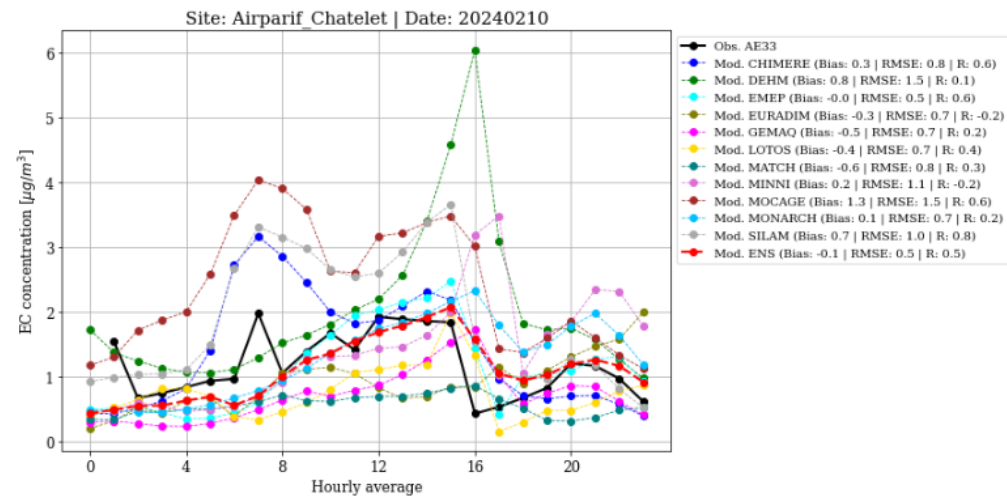
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Evaluation divided into 3 diagnostics

#1 - Time series and scores

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for site: Airparif_Chatelet
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The open source interactive EvaNRT-BC online jupyter notebook allows user to compare operational CAMS modelled EC to eBC NRT data using well established quality control procedures

T5.3 Establishing the modelling framework

Organic Aerosol

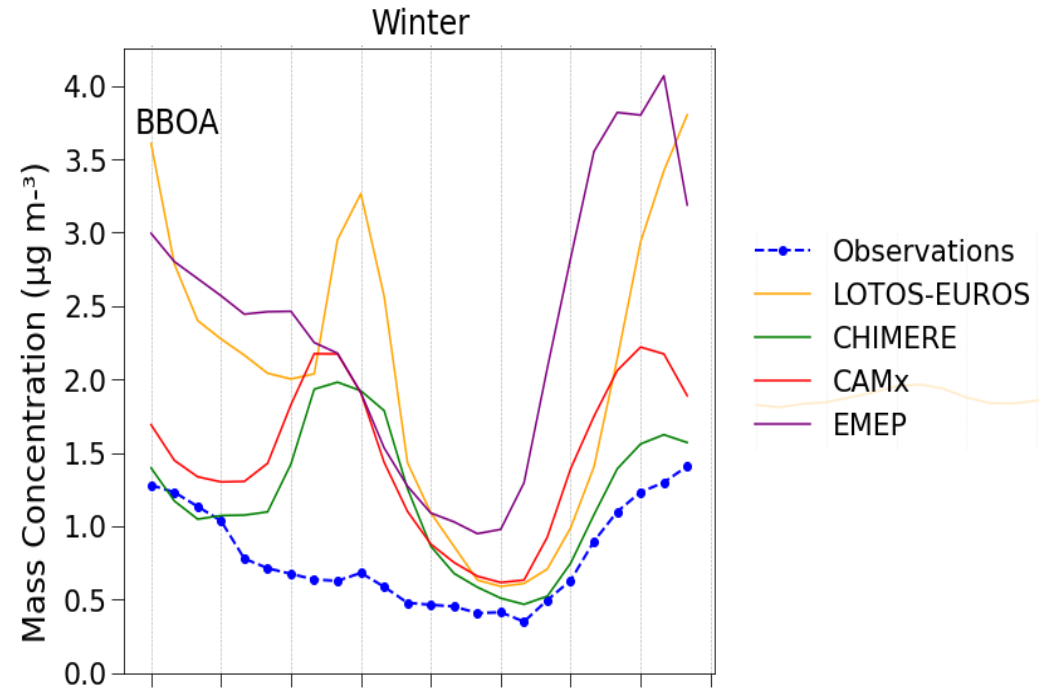
- Model intercomparison has shown **differences**

Models:

- Indicate the need for high or moderate OA complexity models (in particular to consider the semi-volatile properties of POA).
- BBOA can behave differently than Levoglucosan (commonly used to represent BBOA)
- Issues in matching between observed HOA, BBOA and OOA and the species simulated by the models

Data:

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- As part of the RI-Urbans framework, NRT OA SA has been maintained for 13 sites during the pilot phase



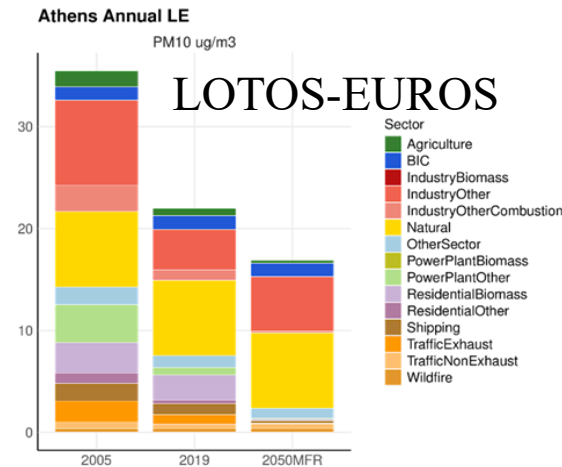
Winter diurnal cycle of BBOA estimated by the PMF and simulated by the four air quality models (LOTOS-EUROS, CHIMERE, CAMx and EMEP) (D19)

T5.3 Establishing the modelling framework

Sector Apportionment of PM mass

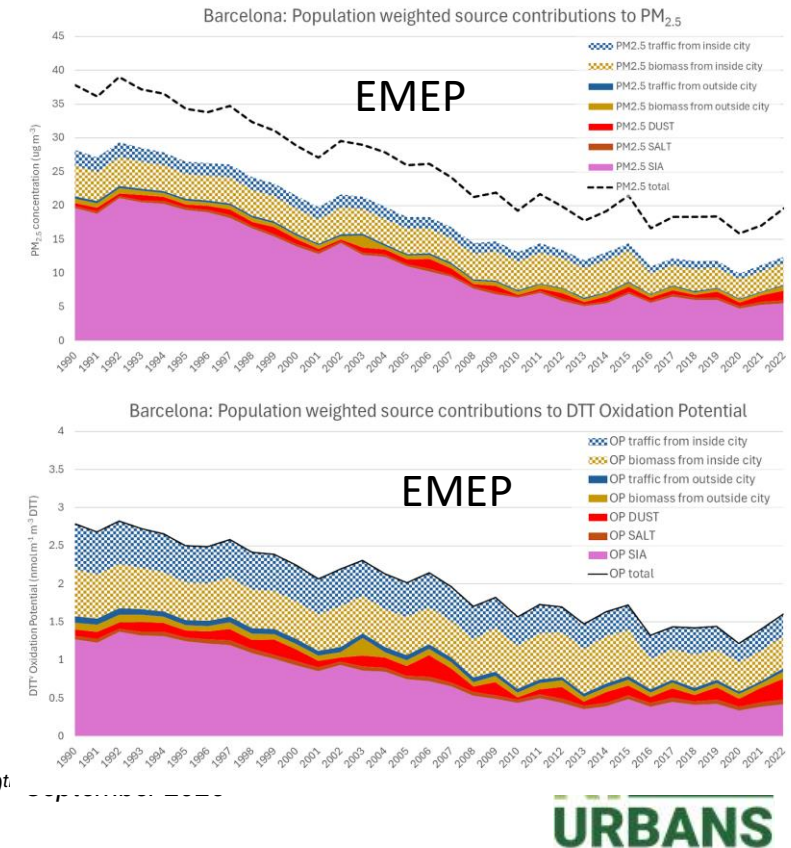
Methods:

- **Tagging based methods** - keep track of the origin of air pollutants throughout a model simulation. *In case of strong non-linearities influencing the relationship between emissions and concentrations, the contributions cannot directly be translated to a potential emission reduction impact.*
- **Sensitivity/brute-force (BF)** based methods.



- The newly developed SA&OP metrics are tested in **EMEP** at local (city) level since it is critical for decision making, as well as long term trends to assess policy effectiveness
- **The in-city source contribution for OP is considerably higher than for PM_{2.5}.**
- Thus, OP exposure can be significantly reduced via emission reduction measures inside the cities themselves

PM₁₀ source contributions for Athens for the years 2005, 2019 and 2050 CLE/MFR from LOTOS-EUROS model



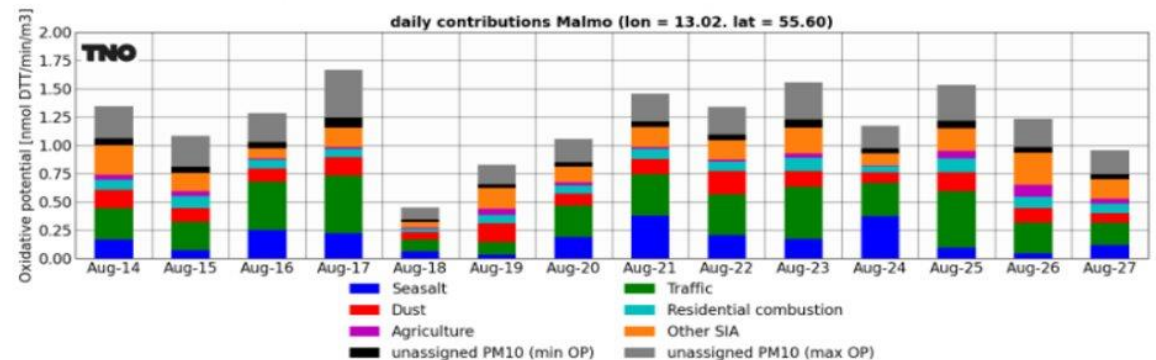
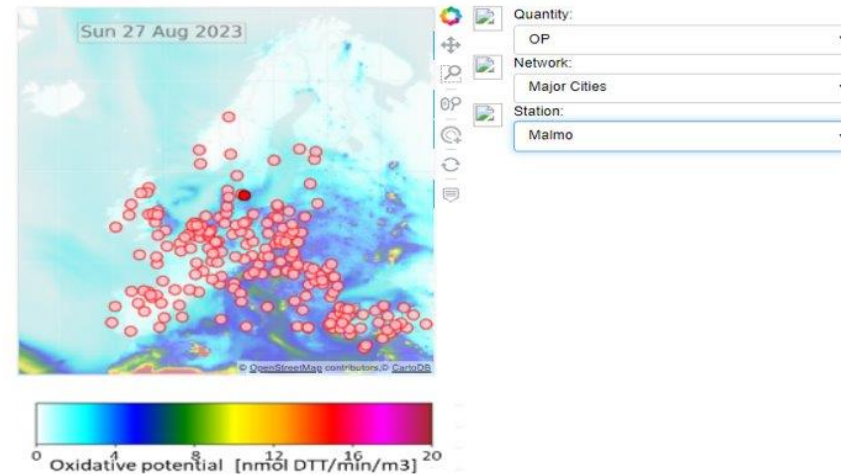
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Oxidative Potential

- OP modelling is **still at a research stage**, while first attempts and prototypes were made a.o. as part of the RI-URBANS project.
- Modelled source contributions are multiplied by the source specific OP values which are derived from observations

future required developments :

- Better source specific OP values across Europe representative of different environments
- Source specific OP values for more source sectors (e.g. agriculture)
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- Taking into account aging of seasalt (currently OP from aged seasalt is used)



Prototype of source apportionment of OP tool (not available online yet)– based on current TOPAS (<https://airqualitymodeling.tno.nl/topas/topas-eu/>).

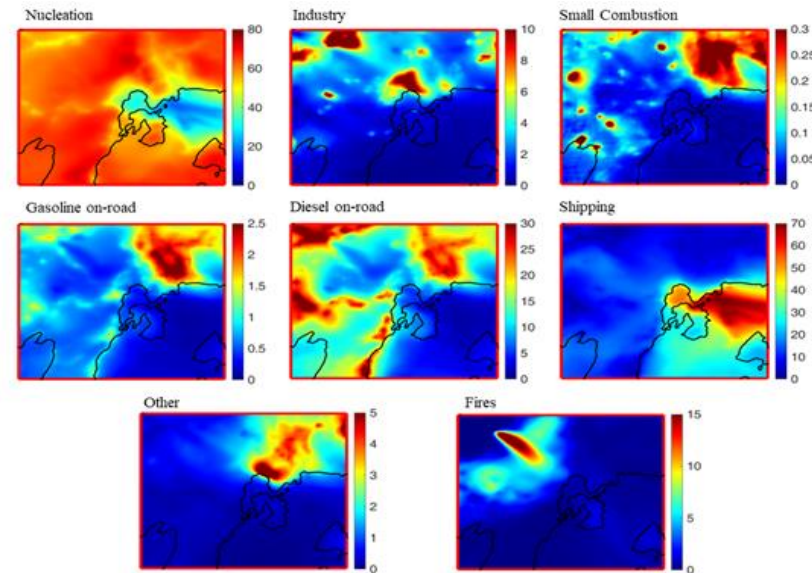
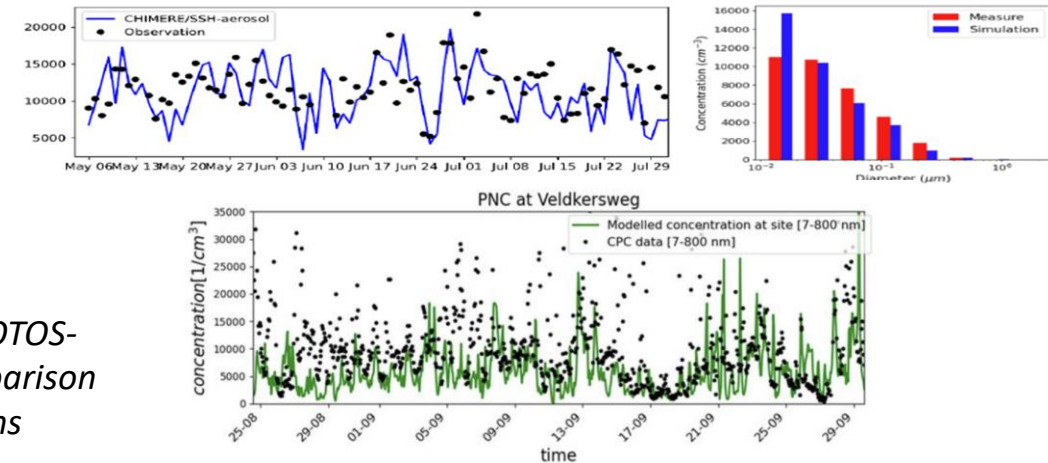
T5.3 Establishing the modelling framework

UFP

Methods:

- Primary emissions have been developed and downscaled ST15
- Multi-scale simulations set-up down to the street-scale
- Methodology for hourly road-network emissions developed ST12
- A source apportionment method has been developed specific to UFPs
- Protocol for UFP modeling has been provided ST16

CHIMERE and LOTOS-EURO PNC comparison with observations

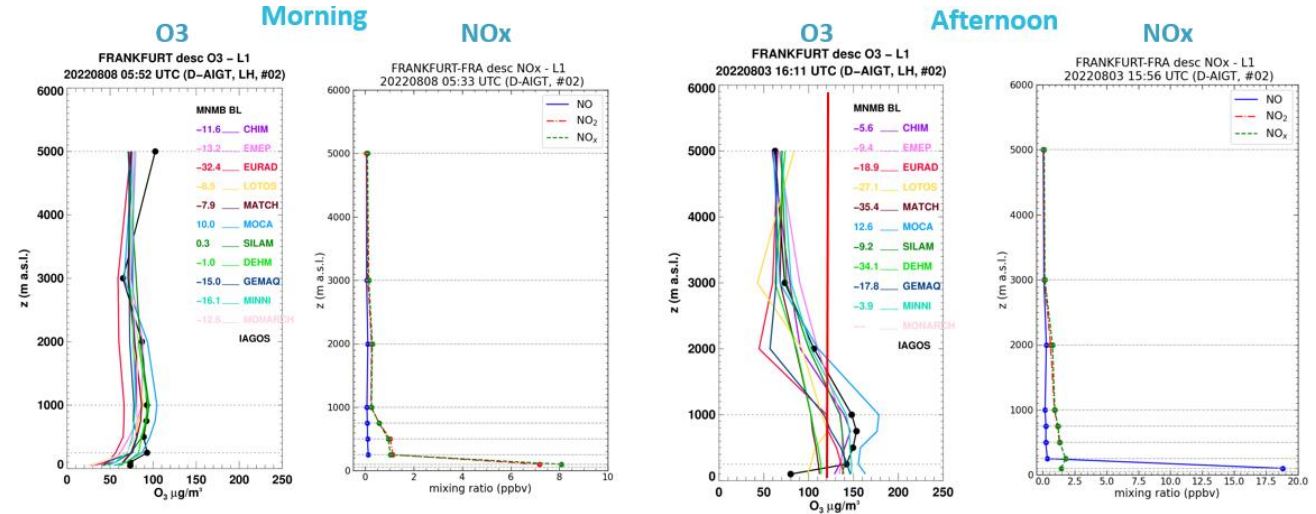


*Predicted source contributions as **percentage of the total N₁₀** over Athens (1x1 km²) for the summer of 2019 using PMCAMx-UF with three nested domains*

T5.3 Establishing the modelling framework

Vertical distribution

- The validation of the vertical structure of regional models in urban areas is not as advanced.
- The CAMS Evaluation and Quality Control Service includes several indicators about tropospheric atmospheric composition, but it is essentially based on O_3 and CO vertical profiles (sounding or commercial aircraft through the IAGOS programme)



Comparison of vertical profiles between CAMS regional models and IAGOS ozone and NO_x measurement.

Courtesy: CNRS, CAMS 2024 General Assembly

T5.4 Replicability: Polish Stakeholder Meeting

RP1

M35 Polish Stakeholder Meeting

23 institutions present, 25 attendees

RP2

Document on upscaling guidance

Network of 4 urban supersites (Warsaw, Wrocław, Kraków, and Zabrze)

Details on how the upgrading of proposed supersites into the ones that include the required advanced AQ parameters (UFP, PNSD, BC, PM speciation, NH₃, VOCs, OP).

Document presented to Polish, Romanian & Serbian stakeholders

RP2

[D40 \(D5.6\)](#): Roadmap for replicating AQ monitoring solutions: Warsaw and applicability to other cities (NOA, R/PU in M40)



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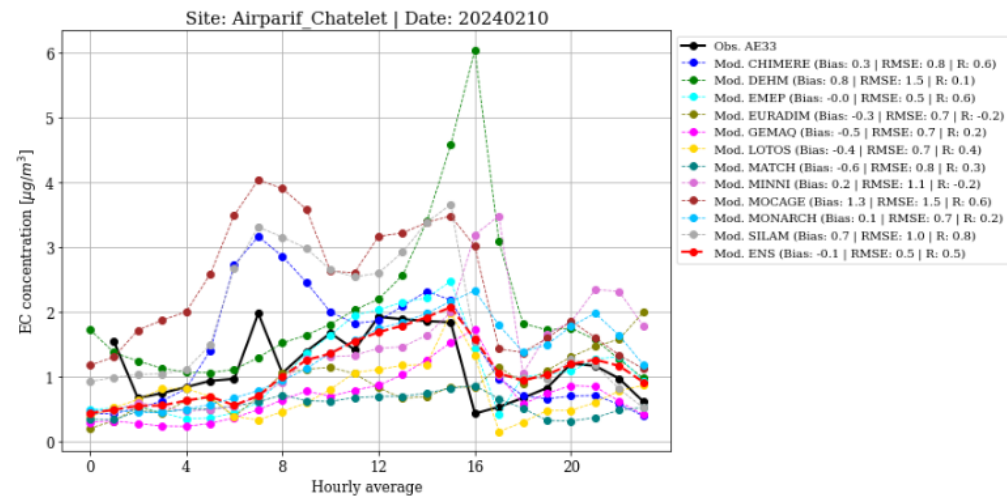
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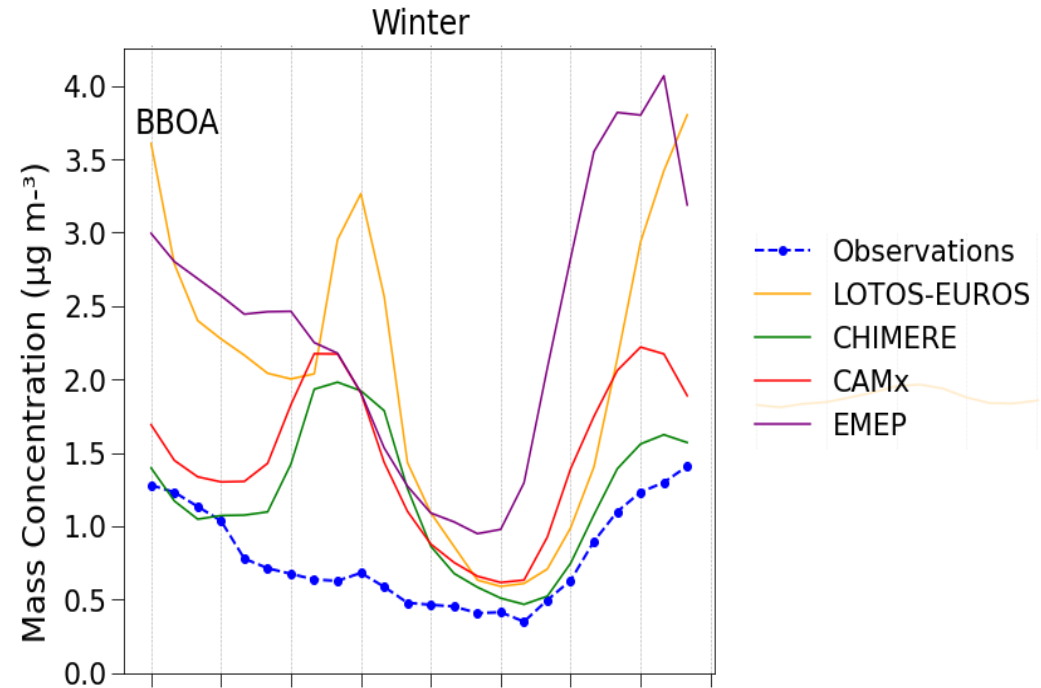
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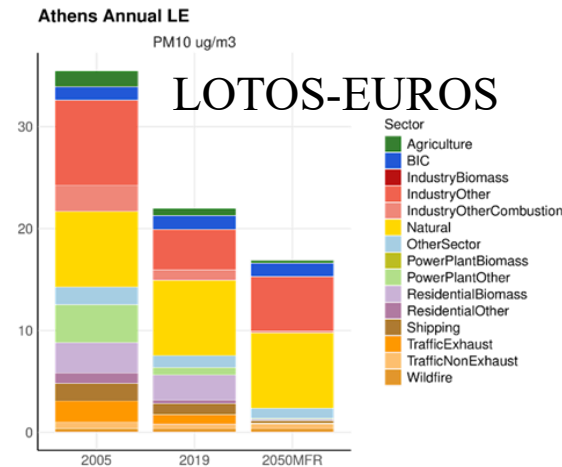
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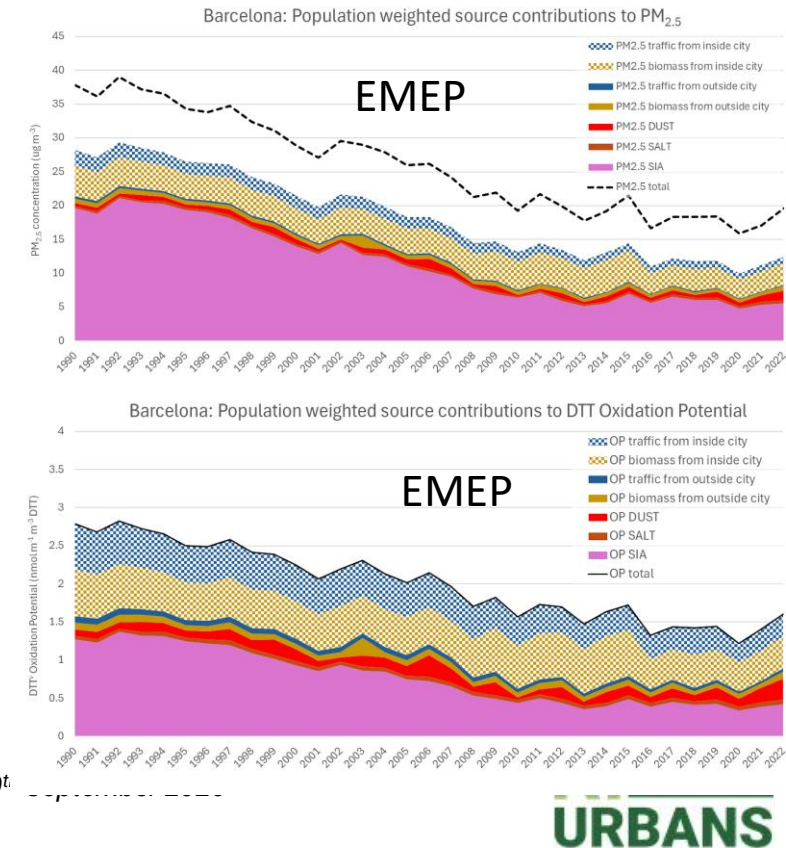
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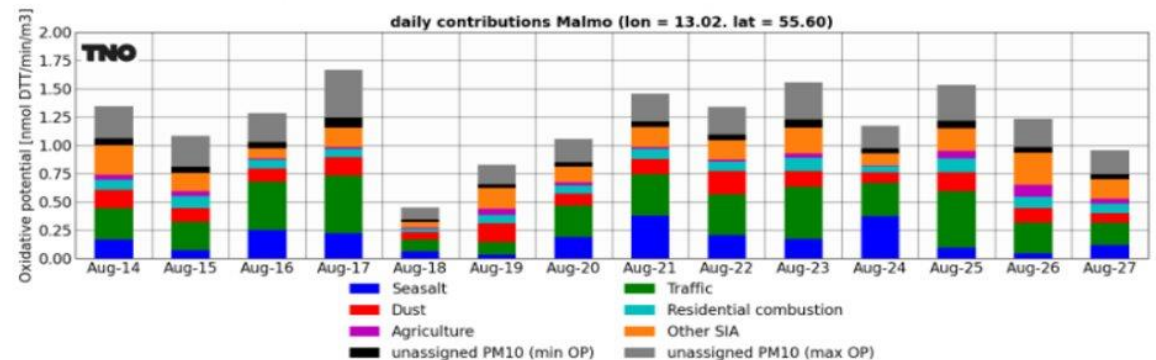
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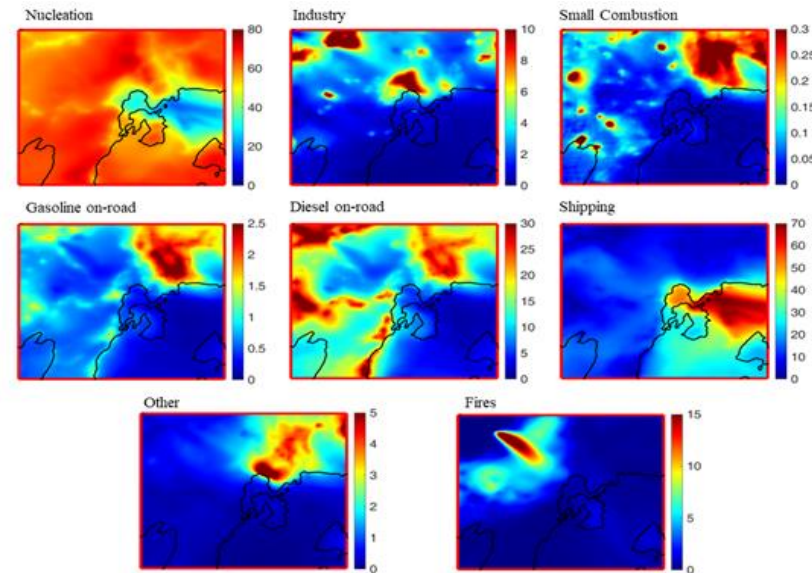
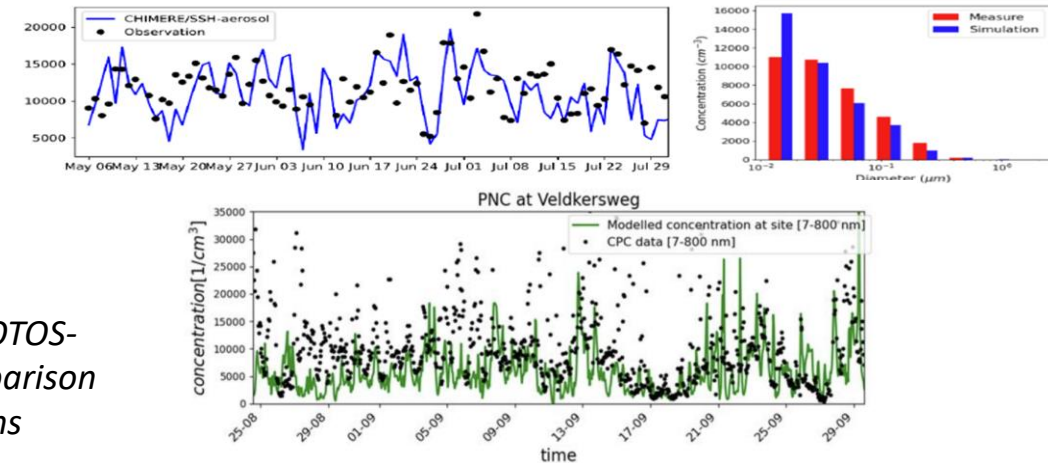
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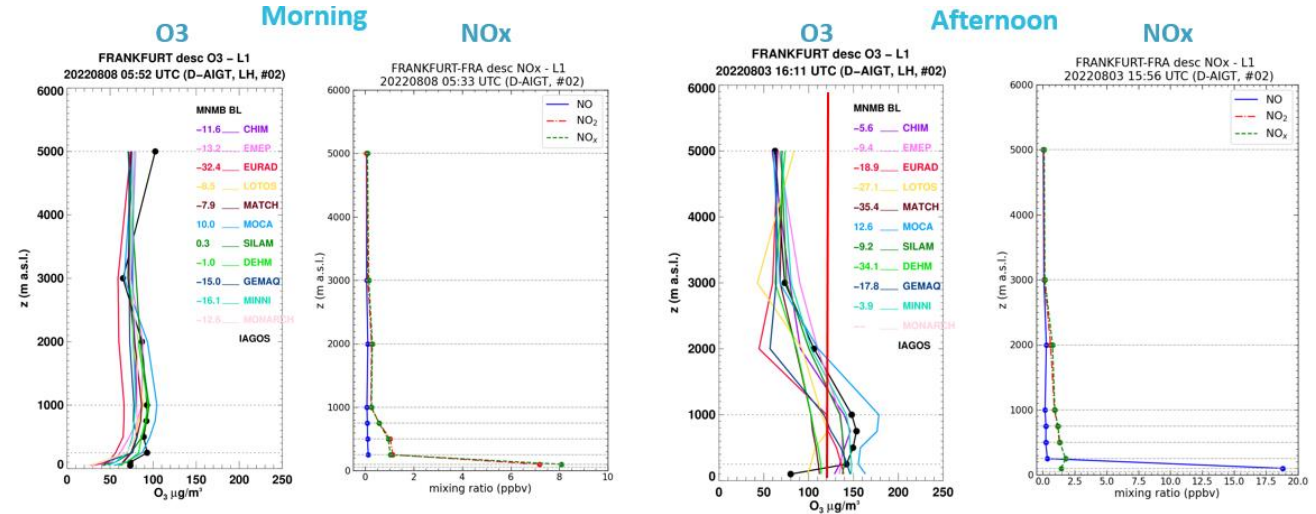


Predicted source contributions as percentage of the total N_{10} over Athens ($1 \times 1 \text{ km}^2$) for the summer of 2019 using PMCAMx-UF with three nested domains

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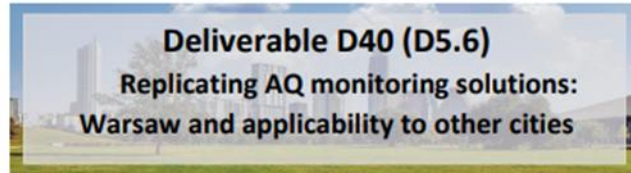
Comparison of vertical profiles between CAMS regional models and IAGOS ozone and NO_x measurement.

Courtesy: CNRS, CAMS 2024 General Assembly

Upscaling of RI-URBANS' service tools; Example Poland



RI-URBANS
WP5 Deliverable D40 (D5.6)



RI-URBANS
Research Infrastructures Services Reinforcing Air
Quality Monitoring Capacities in European Urban &
Industrial Areas (GA n. 101036245)

By
UW



31/01/2025

RI-URBANS (www.RIURBANS.eu) is supported by the European Commission under the Horizon 2020 – Research and Innovation Framework Programme, H2020-GO-2020, Grant Agreement number: 101036245

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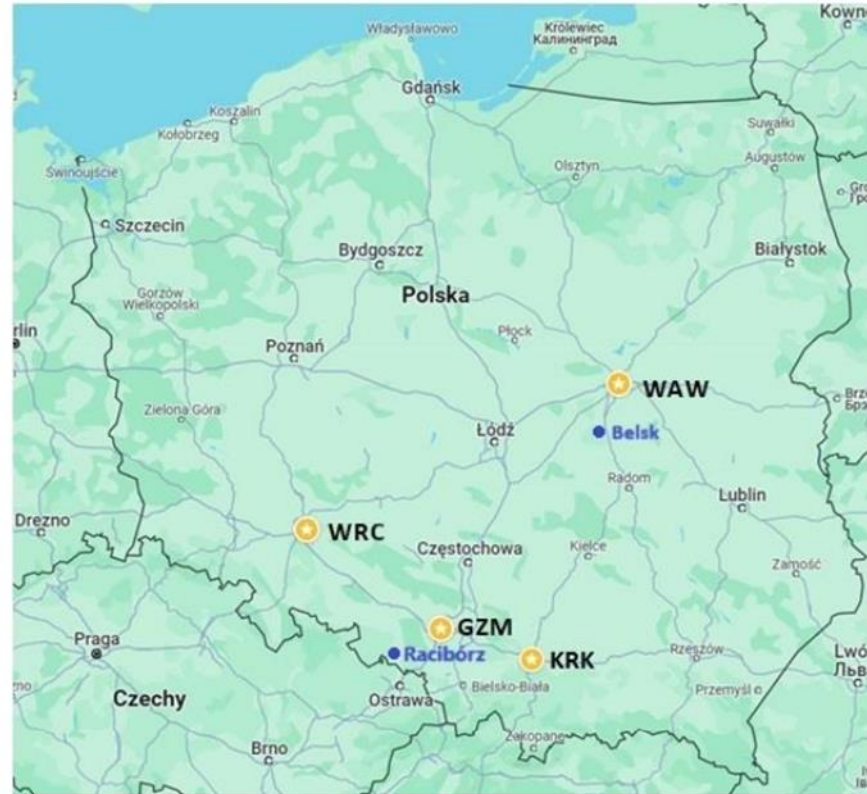
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Upscaling of RI-URBANS' service tools; Example Poland

4 supersites with partial coverage of measurements of Art 10

- Analysis & selection of the closest AQMNs
- Analysis of missing measurements

RI-URBANS
WP5 Deliverable D40 (D5.6)



- Warsaw
- Wrocław
- Kraków
- Górnośląsko-Zagłębiowska

Figure 1. Location of Warsaw (WAW), Wrocław (WRC), Górnośląsko-Zagłębiowska Matropolia (GZM), Kraków (KRK) in Poland, where the four proposed urban/suburban supersites are located. Remaining ACTRIS-Poland in-situ sites are indicated in blue.

Upscaling of RI-URBANS' service tools; Example Poland

EX
Worclaw

Table 2. List of the measurements implemented at WRO supersite, parameters and time coverage (in black text) and measurements that are not implemented and that should be according to the NAQD in urban supersites (in red text). Shadowed in grey are the measurements related with Art 10 and Annex VII of the NAQD.

Component	Purpose	Device	Variables	Additional information
In situ aerosols measurements		Scanning Mobility Particle Sizer (SMPS) 3938W50-CEN	PNSD from 10 to 800 nm	Since December 2022 (meets RI-URBANS/ACTRIS requirements)
		Aethalometer MAGEE AE43	BC concentration	Since December 2022 (meets RI-URBANS/ACTRIS requirements)
		TEOM 1400a analysers	PM ₁₀ (at height of 15 m a.g.l.), PM _{2.5} concentration (at height of 15 m a.g.l. and 4 m.a.g.l.)- continuous measurement with 1-minute resolution	Since 2013
	Reply NAQD's requests	COMDE-DERENDA Low Volume / Medium Volume Sampler LVS / MVS (TSP, PM ₁₀ , PM _{2.5} , PM ₁ inlets)	PM _x levels and off-line chemical analysis (metals, anhdrosugars, ions (anions and cations)/ CRDS Picarro G2201-I (CM - combustion module, AutomateFX, SSIM - small sample isotope module). Recommended to add OC and EC ToT analyses for PM speciation and for in situ conversion of BC into eBC Recommend adding PAHs, including BaP Recommended to ad Oxidative Potential analyses Recommended organic PM speciation	Since 2022 (only during measuring campaigns) Chemical analysis is carried out on a request by Institute of Environmental Engineering - Polish Academy of Sciences (Supporting Lab in ACTRIS-Poland) Need to be fix or discontinuous
		Oxidative Potential	Using DTT and AA assays	Need to be fix or discontinuous Using fractions filters from DIGITEL
	Available for supporting interpretations	Aerodynamic Particle Sizer APS 3321 (TSI)	PNC and PM 0.5 to 20µm (aerodynamic sizing)	Since December 2022 (meets RI-URBANS/ACTRIS requirements)
		Polar nephelometer AURORA 4000	PM, Real-time light scattering in a sample of ambient air at three wavelengths: 450, 525, and 635 nm (blue, green, and red)	

Upscaling of RI-URBANS' service tools; Example Poland

EX
Worclaw

		DustTrak™ II Aerosol Monitor 8532/ DustTrak™ DRX Aerosol Monitor 8533EP	Optical analysers for PM _x concentration measurements. Used for mobile measurements	The equipment used for mobile measurement to assess the spatial distribution of PM across the city
		UAV equipped with measuring head	Horizontal and vertical temperature, humidity, PM _{2.5} concentration/ 3D measurements	Vertical and horizontal distribution of PM concentration above canopy layer up to 350 m a.g.l.
		SwisensPoleno Jupiter	Allergic pollen measurements in real time	Since September 2023
		Burkard Volumetric Spore Trap	Allergic pollen measurements by means of microscopic analysis	Since 2018/ UWr has a second bioaerosols measurement station that has been operating for over 15 years
Gas measurements	Reply NAQD's requests	O ₃ analyser (MLU 400 UV absorption)	Continuous O ₃ concentration measurements	Since 2018
		NO _x , NO ₂ analyser chemiluminescence	Not available but data from the closest CEIP monitoring station can be used	CEIP monitoring station
		SO ₂ analyser ultraviolet absorption	Not available but data from the closest CEIP monitoring station can be used	CEIP monitoring station
		CO analyser spectroscopy	Not available but data from the closest CEIP monitoring station can be used	CEIP monitoring station
		NH ₃ measurements, passive samplers	Recommended	Implement measurements with weekly or 10 days resolution
		VOCs with GC-MS	Recommended	Implement measurements

Upscaling of RI-URBANS' service tools; Example Poland

Important: Expert groups leading and harmonising measurements, data quality, data formats, reporting, interpretations

- **UFP-PNSD:** **Anetta Drzeniecka-Osiadacz**, Uniwersity of Wroclaw
- **BC and eBC:** **Iwona Stachlewska**, University of Warsaw; **Lucyna Samek**, AGH University of Krakow
- **PM2.5 speciation for OC, EC, metals, ions:** **Katarzyna Jaworek**, Institute of Environmental Engineering of the Polish Academy of Sciences; **Katarzyna Styszko** (OC, EC, anions), AGH University of Krakow; **Lucyna Samek** (elements by XRF) AGH University of Krakow
- **PM2.5 speciation for organic compounds:** **Katarzyna Jaworek**, Institute of Environmental Engineering of the Polish Academy of Sciences (standard approach: biomass burning markers, WWA); **Katarzyna Styszko** (PAHs, derivatives of PAHs, sugars markers) AGH University of Krakow
- **VOCs:** **Monika Fabiańska**, University of Silesia in Katowice
- **Oxidative Potential:** **Katarzyna Styszko** AGH University
- **NH₃ passive samplers:** **Katarzyna Jaworek**, Institute of Environmental Engineering of the Polish Academy of Sciences
- **GHGs:** **Mirosław Zimnoch**, AGH University of Krakow

Upscaling of RI-URBANS' service tools; Example Poland

Location	Recommended analysis	Investment Cost (Euro)
Warsaw	SMPS 3938W50-CEN VOCs with GC-MS NH ₃ passive samplers	
Wroc?aw	EC ToT analyses for PM speciation VOCs with GC-MS NH ₃ passive samplers	
Zabrze	SMPS 3938W50-CEN VOCs with GC-MS Aethalometer AE43	
Krakow	SMPS 3938W50-CEN VOCs with GC-MS NH ₃ passive samplers Aethalometer AE43/44	
Total		

Table b) Costs associated with chemical analysis of PM conducted offline in a Chemical Laboratory.

Analysis	Cost per sample (Euro)
Anions (Cl, NO ₂ , NO ₃ , Br, PO ₄ ³⁻ , SO ₄ ²⁻)	
Cation (Li ⁺ , K ⁺ , Na ⁺ , NH ₄ ⁺ , Ca ²⁺ , Mg ²⁺)	
Metals (As, Cd, Co, Cr, Cu, Mn, Ni, Pb, Sb, Tl, V)	
Sugars and biomass burning markers	
OC/EC	

Pollutant	Type of measurement
PM ₁₀ , PM _{2.5} , UFP, BC	Fixed measurements
NO ₂ , O ₃	Fixed measurements
SO ₂ , CO	Fixed or indicative measurements
Size distribution of UFP	Fixed or indicative measurements
Benzo(a)pyrene, other polycyclic aromatic hydrocarbons (PAH) as relevant ⁽¹⁾	Fixed or indicative measurements
Total deposition ⁽²⁾ of benzo(a)pyrene, and other polycyclic aromatic hydrocarbons (PAH) as relevant	Fixed or indicative measurements
Arsenic, cadmium, lead, and nickel	Fixed or indicative measurements
Total deposition ⁽²⁾ of arsenic, cadmium, lead, nickel and mercury	Fixed or indicative measurements
Benzene	Fixed or indicative measurements
Chemical composition of PM _{2.5} in accordance with Section 1 of Annex VII	Fixed or indicative measurements

NH₃ (recommended, not requested for urban background)
Oxidative potential (recommended)
VOCs (48 VOCs species recommended)

Measurement of PM_{2.5} must include at least the total mass concentration and concentrations of appropriate compounds to characterise its chemical composition. At least the list of chemical species given below shall be included.

SO ₄ ²⁻	Na ⁺	NH ₄ ⁺	Ca ²⁺	elemental carbon (EC)
NO ₃ ⁻	K ⁺	Cl ⁻	Mg ²⁺	organic carbon (OC)

T5.5 Strategic guidance

RP1

WP6 & WP5 formulating a joint response of ACTRIS and RI-URBANS to the first draft of the NAQD, 2024/2881, discussions and associated documents. Recommendations sent to DG ENV,....

RP2

WP6 & WP5 co-design the STs was accelerated because of the timing of the revision of the NAQD, 2024/2881

M36 on guidance for co-design with stakeholders,

M32 first workshop with AQMNs and/or AQUILA network.

RP3

D40 (D5.6) in RP3 as guidance for upscaling, as an actual example, for other cities and countries.

D41 (D5.7): Road map for upscaling sustainable access to RI-URBANS STs (service portfolio, modelling tools, cost/benefit analysis) and solutions (UHEL, R/PU in M48). **Writing on-going!**

D42 (D5.8): RI-URBANS services to ACTRIS and IAGOS portfolios (FMI, R/PU in M48). **Writing on-going!**

Steps forward:

- Establish joint working groups to support Member States in the implement the new air quality directive:
- Include representation from AQUILA, EEA, ACTRIS, EURAMET
 - Measurements of UFP, eBC and other emerging pollutants and implementation of supersites
 - EU-level oversight is needed on the development
 - Data management and data harmonization
 - Critical step for utilizing UFP and eBC data for health studies!

What is needed in the future:

- 1) Training and education, dissemination and outreach
- 2) Coordination, collaboration and cohesion in Member States
 - via ACTRIS National Contact Persons + national consortia + AQ community + collaboration with AQUILA, EEA, EURAMET, EMEP
 - Will facilitate scientific advances
- 3) Technical expertise, capacity building in measurements and supersites:
 - support instrument selection (through national contact points and scientific communities within Member States)
 - instrument calibrations (capacity?)
 - Data management and data harmonization (guidance)
 - Development of integrated data products, such as annual reports regarding UFP and eBC concentrations

Thanks a lot for your attention!!