

FINAL REPORT

DELIVERABLE D3.1:

Minutes of the Open forum

Coordinated by:



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LIFE11 /ENV/ES/584

AIRUSE

Testing and development of air quality mitigation measures in Southern Europe

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On the 18th of September 2013 the seminar “Energy and urban air quality” was organised in the framework of AIRUSE project. The seminar took place in Madrid at the [MAGRAMA](#). An Open-Forum was created where energy and urban air quality were discussed by AIRUSE members, several national authorities, and representatives of both research institutes and private companies. Below you can find the agenda, the list of speakers, the mailing list of participants, and the minutes of the Open-forum.

1. AGENDA

9.00 Welcome

Guillermina Yanguas – Director of the Quality and Environmental Evaluation, MAGRAMA

9.15 Introduction

Maj Britt Larka – Subdirector of Air Quality and Industrial environment, MAGRAMA

Xavier Querol – IDÆA Institute of Environmental Assessment and Water Research– CSIC

9.30 Critical parameters in urban air quality in cities in South Europe (AIRUSE, LIFE+)

Xavier Querol – IDÆA Institute of Environmental Assessment and Water Research – CSIC

9.50 Levels and residential biomass burning (AIRUSE, LIFE+)

Celia Alves – CESAM Centre for Environmental and Marine Studies, University of Aveiro

10.10 Biomass stoves and fuels for urban use

Juan Carrasco –Biomass Department CIEMAT

10.30 The “Renove” plan of stoves in the Madrid Community and its impact in urban air quality

Carlos López Jimeno – Director of Industry, Energy and Mines, Madrid Community

10.50 Public transport and urban air quality

Juan Ángel Terrón – Transport company of the Madrid City Hall

11.10 – 11.40 Coffee break

11.40 Biomass burning and air quality in Paris

Olivier Favez – Unité Chimie, Métrologie, Essais INERIS – France

12.00 Impact of the residential use of biomass in the urban air quality: European experiences (AIRUSE, LIFE+ y Fundación Gas Natural)

Mar Viana – IDÆA Institute of Environmental Assessment and Water Research– CSIC

12.20 Round Table – The experience of Madrid – Ángeles Cristóbal López,

Atmospheric Protection, Madrid City Council

Valencia – José V. Miró Bayarri, Protection and Control of Pollution, Generalitat Valenciana

Metropolitan Area of Barcelona – Assumpta Farran i Poca, Director of the Environmental Quality, Secretary of the Environment and Sustainability, Generalitat de Catalunya

13.30 Developed actions from IDAE for the use of biomass for heating

General aspects – Julio Artigas, Department of Biomass and Residuals, IDAE

Technical aspects: Regulations and standards – Luis García Benedicto, Department Of Biomass and Residuals, IDAE

13.50 Plan Aire

Alberto Orio – MAGRAMA

14.10-14.30 Summary and Conclusions

Alberto Orio – Dirección General de Calidad y Evaluación Ambiental y Medio Natural,
MAGRAMA

Xavier Querol – IDÆA Institute of Environmental Assessment and Water Research– CSIC

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Mar Viana

MAGRAMA

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Carlos López Jimeno

Empresa Municipal de Transporte de Madrid

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Unité Chimie, Métrologie, Essais INERIS – France

Olivier Favez

Ayuntamiento de Madrid

Ángeles Cristóbal López

Generalitat Valenciana

José V. Miró Bayarri

Generalitat de Catalunya

Assumpta Farran i Poca

Departamento de Biomasa y Residuos del IDAE

Julio Artigas

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4. MINUTES

The seminar started with an introduction given by Guillermina Yanguas, Director of the Quality and Environmental Evaluacion, MAGRAMA, and Maj Britt Larka the subdirector of the Calidad del Aire y Medio Ambiente Industrial, MAGRAMA and the Coordinator of the project AIRUSE Dr. Xavier Querol.

The first presentation was given by Dr Xavier Querol that focused on air quality problems in South Europe and the objectives of AIRUSE project. Across Europe, cities are struggling with meeting EU air quality standards. The parameters whose limit values are most frequently exceeded are NO₂, PM and O₃, as reported by the European Environment Agency. In Southern Europe, in addition to these critical parameters, mineral dust is an additional source of concern due to re-suspension by vehicular traffic and by natural causes. Mitigation strategies are reported as being tested, such as street cleaning and addition of dust binders to reduce re-suspension. In addition, a potential emerging pollution source is presented, as the use of biomass as a residential fuel in Southern European cities slowly increases due to climate-oriented policies. In the concluding slides the relevance of vehicular traffic as the prominent pollution source in Southern European cities is highlighted, and measures are proposed to reduce its impact on air quality.

Dr. Celia Alves from beneficiary UAVR presented the use of biomass as a fuel for domestic heating in southern European countries. She showed the type of appliances and biomass fuels used in South Europe (type of wood, pellets, olive ppits, among shells) and their emissions and how these affect the urban air quality. The highest contamination was attributed to traditional appliances that are not regulated and have no labelling.

Juan Carrasco from CIEMAT said that biomass is a renewable energy source with a large potential in the South of Europe. EU energy policies are fostering its use for residential purposes across Europe, with a special impact in Southern European cities. From a technological perspective, appropriate stoves are already available on the market to ensure the combustion of biomass avoiding health hazardous health effects (increased air pollution). Regarding fuels, the industry is also ready to provide homogeneous and standardized fuels. Thus, the use of biomass as a residential fuel could, in theory, already be a reality. However, its implementation in Southern European cities is at present scarce. The main limitation is the

proper maintenance of the stoves, as poorly maintained stoves rapidly become major sources of air pollution.

Carlos López Jimeno (Dirección General de Industria, Energía y Minas, Comunidad de Madrid) pointed out that the use of biomass as a residential fuel is being strongly incentivized in Madrid (Spain). His presentation described a number of financial plans offered by the Madrid Government to promote the renovation of old stoves and their exchange for state-of-the-art biomass stoves.

Juan Ángel Terrón from Empresa Municipal de Transporte de Madrid showed that the Madrid Transport Authorities have promoted in the past years the implementation of a more sustainable public transport. This has been done mainly by substituting or retrofitting the older vehicles in the bus fleet by hybrid buses and/or buses driven by gas, and has resulted in Madrid being among the European cities with a higher percentage of non-fossil fuel driven bus fleet. The impact on air quality is detectable, mainly in the air quality stations located in the city centre.

Dr. Olivier Favez (Unité Chimie, Métrologie, Essais INERIS – France) showed that Biomass burning is a major source of airborne pollutants in the city of Paris during winter time. An in-depth scientific study on this issue is presented. The main tools used were black carbon (BC) monitors (aethalometers), which measure the blackness of the aerosol by light absorption. Data from one urban and one regional background site are presented, showing the differences between both locations. Biomass burning contributions were identified by means of the aethalometer model. In Paris, biomass burning may account for 20% of PM₁₀ and PM_{2.5}, major contributions which on specific days were larger than those from vehicular traffic. The main reason behind these major contributions is the use of old stoves which lack the technological improvements to eliminate air pollutants from their emissions. As a result, the city of Paris has proposed a total ban on the use of biomass for residential purposes starting in 2015.

Dr. Mar Viana from AIRUSE project (IDAEA-CSIC) presented a survey of residential energy sources among air quality experts from 11 major European cities. Natural gas was identified as the major energy source in European homes. Biomass was described as a marginal source on all occasions, but as an increasing one. Most cities burn wood or pellets, whereas a minority (e.g., Madrid) use innovative fuels such as olive kernel or almond shell. Air

pollution derived from biomass burning is reported to account for 5-30% of PM₁₀ and 3-28% of PM_{2.5} in European cities, although data are not always comparable as some studies present annual means and others winter mean values. It is concluded that air quality may be strongly impacted by biomass burning practices if corrective measures are not implemented.

Angeles Cristobal from the Madrid City Hall, presented the Air Quality Plan employed in Madrid Metropolitan area and the mitigation measures being currently applied. The Madrid City Hall showed interest on the use of new clean energies and innovative mitigation measures.

Assumpta Ferran from the Air Quality Department of Generalitat de Catalunya presented an overview of the Air Quality Plan of Barcelona Metropolitan Area, the main pollutants in the area, and the principal mitigation measures concerning transport, energy consumption, domestic heating, port emissions. She also discussed the use of bioamass burning for domestic heating and the efforts of the Regional Government of Catalonia to control its emissions.

Julio Artigas and Luis Garcia Benedicto presented the methods developed and tested by IDEA for the better use of biomass burning for domestic heating.

The last presentation was given by Alberto Orio from MAGRAMA where the Spanish air quality plan, the mitigation measures used, the implemented controls and the future actions concerning energy and air quality were presented.

The Open-Forum closed with the round table and the main conclusions summarised by the Coordinator Dr. Xavier Querol.



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