



CHALLENGES AND OPPORTUNITIES TO MEET EU'S CLIMATE AND AIR QUALITY OBJECTIVES

HOW CAN THE FUEL MANUFACTURING INDUSTRY CONTRIBUTE?

15TH CONCAWE SYMPOSIUM PROGRAMME

POSTPONED
DAY

January 10, 2024

10:00 - 10:05 Introduction

10:05 - 10:35

The role of the source apportionment to support air quality management

Enrico Pisoni, *JRC*
Philippe Thunis, *JRC*

10:35 - 10:55

Concawe source apportionment NO_x/NO₂ viewer

Stijn Janssen, *VITO*
Bart Degraeuwe, *VITO*

10:55 - 11:25

Contribution of shipping and aviation to air quality

Peter Coenen, *TNO*

11:25 - 11:45

The air control toolbox and other CAMS policy products for air quality

Augustin Colette, *INERIS*

11:45 - 12:25 Panel discussion with Thanasis Megaritis

12:25 - 12:35 Symposium conclusion

MODERATION

Alain Mathuren holds a law degree from the Université Catholique de Louvain (UCL). Alain is currently Communication Director at Concauwe, which he joined in 2009. Previously, he worked for Interel PR & PA as Associate Director for the International Public Relations practice. Alain has 30 years of experience in communication. He first launched a field marketing agency in 1987, which he managed for 17 years before selling it to a French company in 2003. He subsequently joined an advertising agency as Retail Communication Manager and Brand Communication Client Director.



ALAIN MATHUREN
COMMUNICATION
DIRECTOR CONCAWE

Thanasis Megaritis joined Concauwe in 2017. He is a Science Associate, leading the air quality technical program, which aims to better understand the impact of the fuel manufacturing industry through its operations and products on ambient air quality, as well as to identify and understand emerging air quality monitoring techniques and to develop best practices for better characterisation of source air emissions, and eventually to connect the dots between science and the development, monitoring, and implementation of air quality legislation. Thanasis has over 15 years of experience in research and industry, where he previously worked as an Air Quality Researcher for the Foundation of Research and Technology in Greece for 6 years and for a public entity of the Greek Ministry of Energy and Environment as an Environmental Compliance Coordinator for three years. He holds a degree in Chemical Engineering and a Ph.D. and Master's in Atmospheric Pollution and Climate Change.



THANASIS MEGARITIS
CONCAWE

SESSION 4: SOURCE APPORTIONMENT & MODELLING: THE RIGHT WAY TO ADDRESS THE AIR QUALITY ISSUE

Information on the origin of pollution is an essential element of air quality management and planning to identify effective mitigation measures, and over the years source apportionment has been a key research area for the air quality modelling community. The closing session of the Symposium will focus on source apportionment modelling and experts will provide insights on its role in supporting air quality assessment and assessing how air quality can be further improved. Experts from the Joint Research Centre, whose representatives chairs the Forum for Air Quality Modelling (FAIRMODE), will open the session with a presentation about the recent activities of FAIRMODE's Working Group on Source Apportionment, while scientists from some of the main research bodies working on this topic (JRC, VITO, INERIS, TNO and Concawe) will provide examples from source apportionment methodologies and recent application targeted to major air pollutants. A panel discussion will follow to discuss about each model solution, methodologies developed, and challenges faced with the modelling of some air pollutants.

The role of the source apportionment to support air quality management

Enrico Pisoni works as a scientific/technical project officer in the Air and Climate Unit, Joint Research Centre (JRC) of the European Commission. He graduated in Environmental Engineering from the Politecnico Milano in 2002 and obtained a Ph.D. in Information Engineering from the University of Brescia in 2007. His research interests include modelling and simulation of nonlinear systems, system identification, and optimisation techniques. He is mainly concerned with air quality applications, considering monitoring, forecasting, and planning. He is also one of the developers of the SHERPA simplified air quality model (a model to screen the impact of emission reduction scenarios on air); and part of the Steering Group of FAIRMODE (the network of air quality modellers in Europe, in support to the Air Quality Directive implementation).



ENRICO PISONI

JRC

Philippe Thunis obtained his Ph.D. in Physics from the University of Louvain-la-Neuve (Belgium) in 1995 and has been working since at the Joint Research Centre of the European Commission in Italy. His main experience is in meteorology, emissions, air quality, and integrated assessment modeling. He co-developed the SHERPA model to support local authorities in their air quality plans. Since 2014, he has been chairing the European Forum for air quality modeling (FAIRMODE) which aims at harmonising and improving modelling practices across Member States.



PHILIPPE THUNIS

JRC

Concawe source apportionment NO_x/NO₂ viewer

Stijn Janssen is currently appointed as Program Manager of VITO's Geo and Atmosphere modelling team. He obtained a degree in civil engineering and received a Ph.D. in physics in 2002. He joined VITO's Air Quality Modelling team in 2005 and built up experience in air quality and emission modelling. He and his team are using advanced air quality models to assess air quality from local to regional scale and to support the development of air pollution mitigation strategies. He is co-chair of FAIRMODE, the European Forum for Air Quality Modelling, and works in close collaboration with LiboVITO, VITO's local office in China, to bring air quality services to the Chinese market.



STIJN JANSSEN

VITO

Bart Degraeuwe is a researcher in VITO's Atmosphere modelling team. He obtained a Master's in electromechanical engineering at KULeuven, a Master's in internal combustion engines at IFP School in Paris, and a Ph.D. in combustion engines at the Polytechnic University of Valencia. He first joined VITO in 2008 as a researcher in the field of air quality and transport. In 2013 he joined the Air and Climate Unit of the Joint Research Centre of the European Commission in Ispra. In 2021 he returned to VITO. His expertise lies in local scale modelling with bi-gaussian dispersion models, regional scale modelling with source-receptor models, and source apportionment.



BART DEGRAEUWE

VITO

Contribution of shipping and aviation to air quality

Peter Coenen graduated in 1986 from the Wageningen Agricultural University in the Netherlands in the field of air pollution, toxicology, and industrial hygiene. Peter has a background in emission monitoring and technology consulting in the industry. In 1997 he joined TNO as researcher and project manager for the TNO part of the Dutch emission inventory. In this function, he has senior expertise in the field of monitoring air pollutants and GHGs, abatement technologies, emission inventories, and (inter)national emission reporting obligations and policies. In the past decade, his emission knowledge has been incorporated into the air quality modelling at TNO and many projects in this field were performed under his responsibility. His senior expertise is deployed in international studies on emission inventory improvements, monitoring, reporting, and verification of emission data, and air quality modelling. Since 2001 he has been the National Inventory Compiler and Deputy Editor of the National Inventory Report on GHG emissions in the Netherlands to the UNFCCC. Peter works in (inter)national projects for governmental agencies and the private sector.



PETER COENEN

TNO

The air control toolbox and other CAMS policy products for air quality

Augustin Colette is head of the Atmospheric Modelling and Environmental Mapping Unit (MOCA) of the French public Institute INERIS (Institut National de l'Environnement Industriel et des Risques). He holds a PhD in Atmospheric Sciences from Sorbonne University and worked in the past for UNESCO, Stanford University, Ecole Polytechnique, and the private sector for Meteorological Risk Assessment. He has co-authored 95 peer-reviewed articles in the field of atmospheric chemistry and physics. The MOCA Unit of INERIS focuses on short-term air quality forecast at national and European scale (Copernicus Atmosphere Monitoring Service), air quality management in support of policy decision-making, and local scale air quality modelling including for emergencies. The modelling expertise of the Unit serves the three missions of Ineris: research, consulting, and policy support (in particular through the French National Reference Laboratory for Air Quality, LCSQA).



AUGUSTIN COLETTE
INERIS

SYMPOSIUM CONCLUSIONS

Jean-Marc Sohier is the Concawe Director at the European Fuel Manufacturers Association. He graduated Master of Mechanical Engineering from Brussels University (U.L.B.) in 1987 and received a diploma in Management of Business Administration (V.U.B.) in 1989. He started his career at PETROFINA and has held numerous functions in the Refining and Petrochemical manufacturing of TotalEnergies among which, successively, General Manager of TOTAL Petrochemicals Feluy, a polyolefin plant, General Manager of TOTAL Antwerp Refinery, Vice President Research and Development for Refining & Marketing and Vice President Manufacturing Methods & Performance for Refining & Chemicals. In his last position, he was Vice President of Industry for Africa, Asia, and the Middle East's Refining & Chemicals. In his current position, Jean-Marc is responsible for the development and execution of the scientific program of Concawe.



JEAN-MARC SOHIER
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