PROGRESS IN EMEP ACTIVITIES IN 2018-2019 AND FUTURE WORK: MEASUREMENTS AND MODELLING

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Joint EMEP SB & WGE, Geneva Sept 13th, 2018
THEMATIC SESSION ON LONG-RANGE TRANSPORT AND URBAN AIR POLLUTION

- Overarching goal to assess the relative efficiency of local/national measures (TFIAM Urban Expert Group)
- Modelling
  - GAINS/SHERPA approaches to quantify urban/regional contributions
  - CTM (EMEP/Chimere) capability to capture urban gradients
  - CAMS City Allocations
  - uEMEP: LRT contribution to urban NO₂

- Observations:
  - 2018 Report: “Transboundary air pollution in Europe: added values of chemical speciation measurements at twin sites”, M. Pandolfi et al.
  - Lenschow decomposition + PMF
    - Methodological challenges on definition of “background” and use of consistent PMF methodologies
  - France, Germany, the Netherlands, Spain and Switzerland
  - Non-local contribution to air pollution ranged from 60 to 80%
Key Features:

• Traffic dominated by local influences, to a lesser extent in NL
• SIA dominated by regional, to a lesser extent for NSA in CH&FR&ES
• High local fraction for industry in ES
• Larger regional BB in CH

Pandolfi et al.
HM & POP CASES STUDIES

• Collaboration State Parties & MSC-East
  • Synthesised in MSC-East brochure, www.msceast.org

• Heavy Metals
  • Progress for Cd in Poland: including innovative use of inverse modelling to assess uncertainties in emissions, and urban increment
  • Plans for new case studies: UK for HM, Germany for Hg

• POP
  • Progress in BaP modelling for Spain and France, uncertainties in emission but also atmospheric processes affecting BaP
  • Plans for new case studies: Germany, Poland, Croatia
THEMATIC SESSION ON CARBONACEOUS AEROSOLS

- Condensable Action Plan
  - SVOC Modelling
  - TFEIP/TFMM

- Winter 2017/2018 field campaign
  - EMEP/ACTRIS/COLOSSAL
  - 22 contributing countries, 57 sites (including urban)
  - Possible next phase of Eurodelta
    - PM, BC, BaP modelling
    - Source allocation
THEMATIC SESSION ON LINKS BETWEEN EMEP AND THE WORKING GROUP ON EFFECTS

• S&N Deposition Modelling
  • Eurodelta-Trends
    • Evaluation of model capability in reproducing trends
  • Joint Eurodelta/AQMEII(HTAP) assessment
  • Issue of dry deposition evaluation

• Phytotoxic Ozone Dose modelling in CTM
  • Being applied to Eurodelta-Trends ensemble

Time series (wet deposition)
  e.g. Oxidised N

Can evaluate

Time series (dry deposition)
  e.g. Oxidised N

Not easy to evaluate

Vivanco, Theobald et al.
• NH$_3$ Assessment Report => TFIAM
• Monitoring Strategy => CCC
• Low Cost Sensors => WMO
20TH ANNUAL TFMM MEETING

KINDLY HOSTED BY SPAIN
SECOND WEEK OF MAY 2019