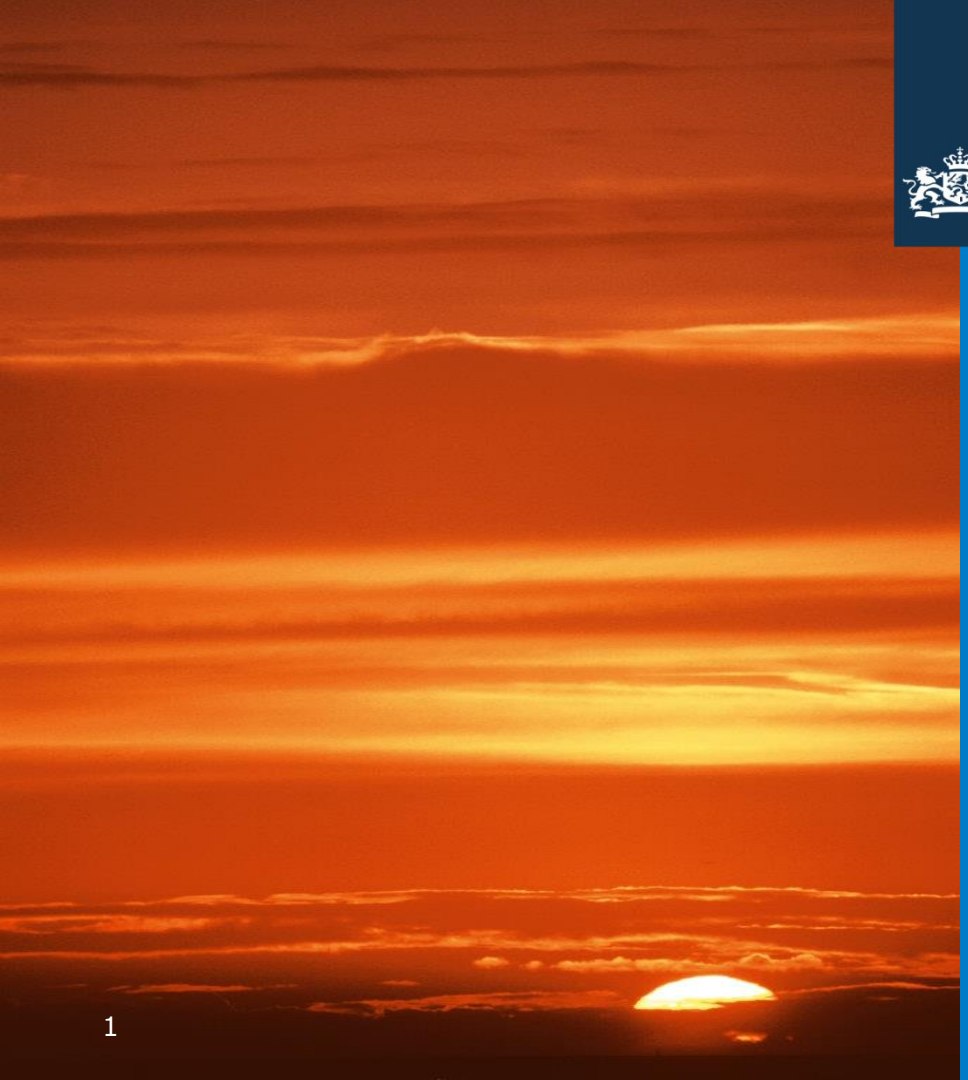


National Institute for Public Health and the Environment (RIVM)
Ministry of Health, Welfare and Sport
The Netherlands

EPCAC –

Expert Panel on Clean Air in Cities

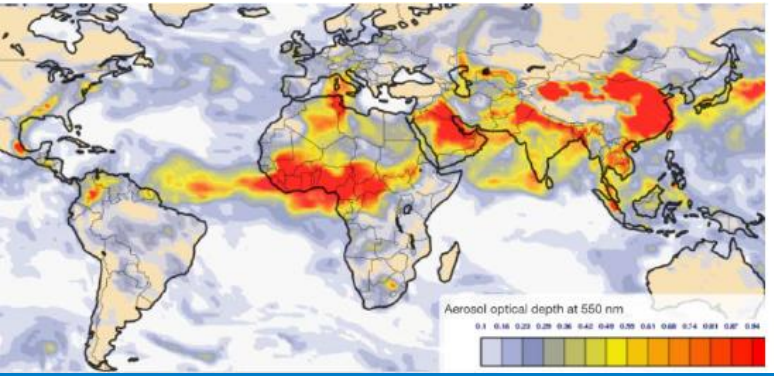
Co-chairs:
Guus Velders (Netherlands)
Roald Wolters (Netherlands)

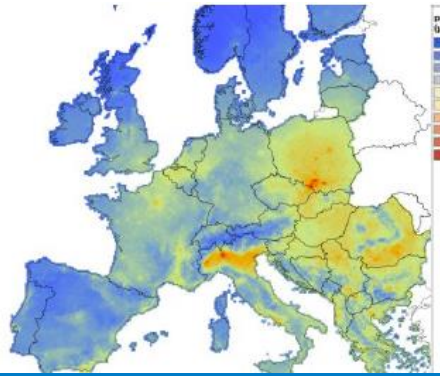
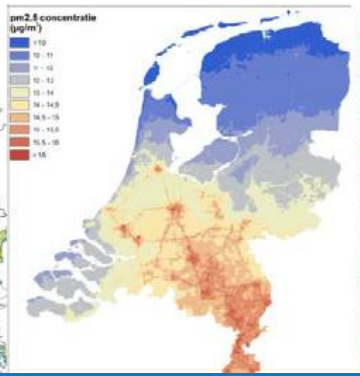
TFIAM51, online, 7 apr 2022

Expert Panel on Clean Air in Cities

- Adopted by the Executive Body of the UNECE Air Convention, Dec 14, 2018
- Under: Task Force Integrated Assessment Modelling
- Revised TFIAM mandate:

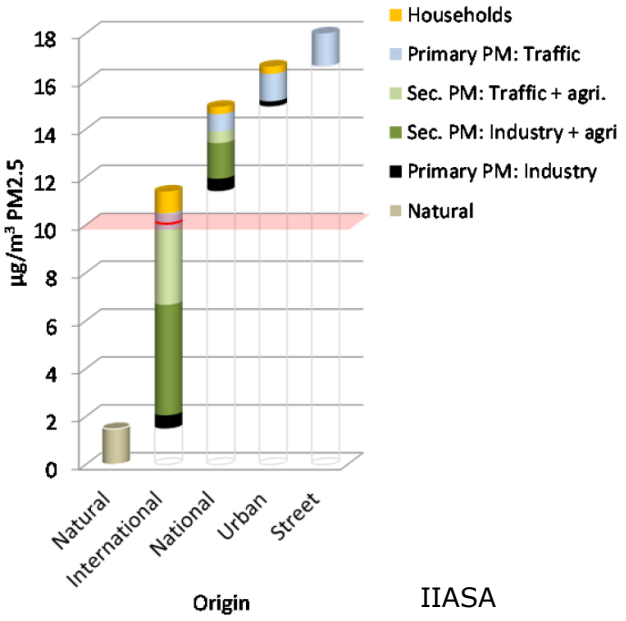
"Multi-scale multi-objective assessment modelling aimed at cost-effective policy strategies that combine international, national and local actions as well as the links between air quality policy and other policy processes (e.g. on SDGs, climate, biodiversity)."



Rationale

1. Most people exposed to air pollution live in urban areas
2. Air quality in cities is influenced by transboundary sources
3. Activities, emissions and measures in cities also influence air quality in other cities
4. Co-operative **actions at all government levels** will benefit cities (improve air quality at lower costs)
5. **Synergies with other policy objectives** would increase effectiveness (e.g. objectives for transport, energy, agriculture)
6. The expertise on *multi-scale multi-objective* assessment modelling and governance should be strengthened



Key questions

- **Which actions** at **which government level** are most effective to reduce health effects?

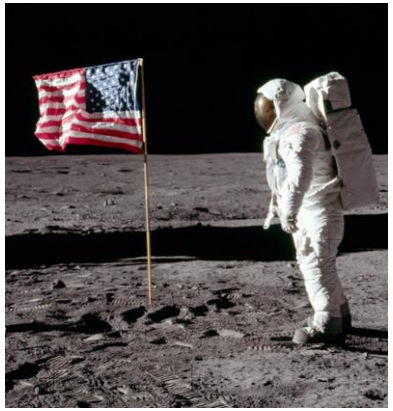
- Can we say more about the **cost-effectiveness** on measures at different government levels?

- What **knowledge** should be improved for robust policy advice?

  (e.g. on emissions, dispersion, health impacts, efficient measures, multi-scale multi objective policy design, …)

Mission and Task

- EPCAC will **provide a science-policy arena** for analysis of cost-effective multi-scale air quality strategies
- EPCAC will **highlight the interactions between geographical scales**, acknowledging that air quality on a local scale is affected by international policies whilst the impact of local policies is propagated to other cities, regions and countries



➔ **Involvement of cities is important**

Highlights third EPCAC meeting

- Online meeting in November 2021
  - 95 participants from national governments, cities, scientific community, NGO's, industry, WHO, EC

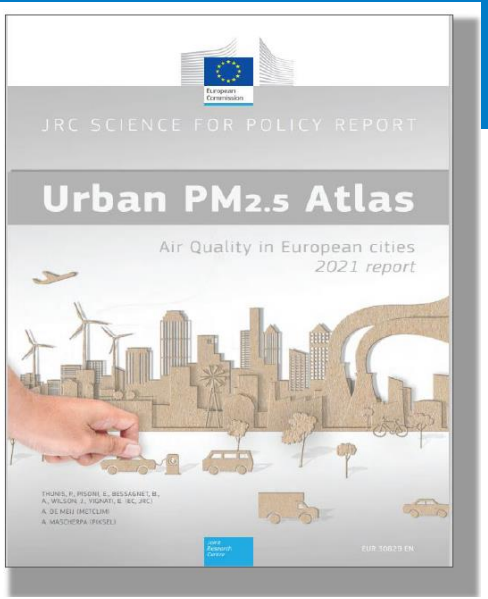
- 15 presentations on:
  1. Source apportionment and multi-scale air quality modelling
  2. Multi-level governance: cooperation between local and national level
  3. Modelling and monitoring requirements for policies
  4. Actions at the city level: experiences linking air and climate actions
  5. What lessons can be learned from emission reductions during corona lockdown?

Presentations will be uploaded to:
https://iiasa.ac.at/web/home/research/researchPrograms/air/policy/TFIAM.html

1. Source apportionment

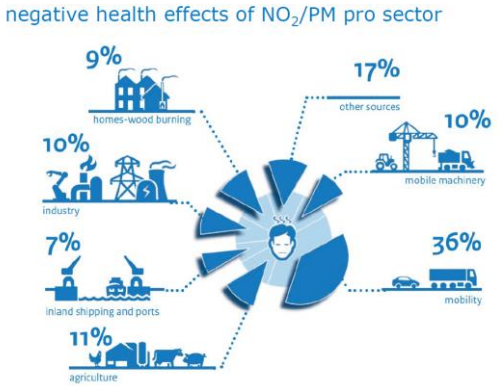
- Range of different source sectors contribute to air pollution
- Sectors contribute differently to air pollution in cities
- Local urban sources from traffic and residential heating contribute most to NO_2 peaks
- Sources outside the city contribute most to (background) PM_{10} and $PM_{2.5}$
- Models are used to quantify the contributions from the different sectors to the air pollution in a large number of cities.

➔ Necessary information for local and national authorities for decisions related to air quality in combination with spatial planning, energy, climate policies, …



2. Multi-scale governance: examples

- Netherlands: Clean air agreement for reducing health effects
  - Voluntary collaborative agreement between cities, regions, provinces and national government to improve air quality
  - Public and businesses are involved
  - Integrated policy road maps include climate/energy measures, biodiversity protection and healthy mobility
  - Involving citizens is a process of learning by doing



- Poland: Joint effectiveness of local and regional air quality plans
  - Actions planned are expected to significantly reduce PM, BaP
  - Changes in NO_2 expected to be small: reductions in traffic emissions, increases from residential sector

3. Modelling and monitoring requirements

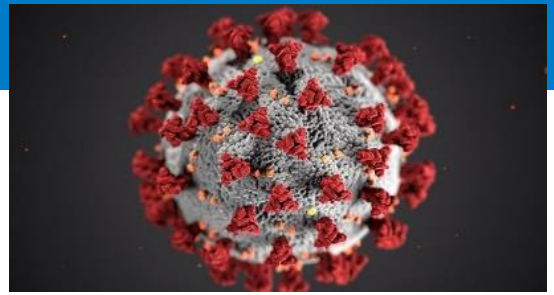
- Austria presented different methods to estimate exposure to NO_2
  - Importance of different assumptions, quality input data, simplifications
  - Modelling took the height of buildings in to account
  - Need for harmonized approaches for exposure estimates in Europe

- United Kingdom: study on the effects of electrification of road transport
  - Small (and uncertain) benefits for $PM_{2.5}$ and air quality
  - Reductions in exhaust emissions may be accompanied by small (but uncertain) increases in emissions from tyre, road wear
  - Reductions in traffic volume are required for more substantial improvements

4. Actions at city level

- Positive actions to improve the air quality demonstrated for several cities
- Examples for other cities and regions
- Important to pay attention for communication and raising awareness of local air quality
- Several initiatives in cities to engage citizens
- Citizen science:
  - citizens contribute to measuring local air quality
  - get more engaged in decisions related to their local environment

5. COVID19 lockdown



- Air quality in Europe has improved since the 1980s
- EU air quality limit values are met in many countries

But,

- Meeting new WHO guideline levels requires large additional reductions in emissions
- Lockdown proved that reduction in traffic has positive effect on NO_2 air quality
- Sustained reductions at least as large as during the lockdown needed to meet the WHO guideline levels for NO_2

Important for 2022

- Planning a meeting in fall 2022
- Involve more cities

Questions?

Dank u wel

Gracias

Danke

Merci

Diolch yn fawr

Спасибо

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