Towards Clean Air in Cities

Rob Maas, Brussels, 21-22 January 2020

Expert Panel on Clean Air in Cities

- **Analysis of cost-effective multi-scale air quality strategies**

  Learn from local and national experiences

- **Analyses interactions between geographical scales**

  two-way relationships between local-national-regional scale

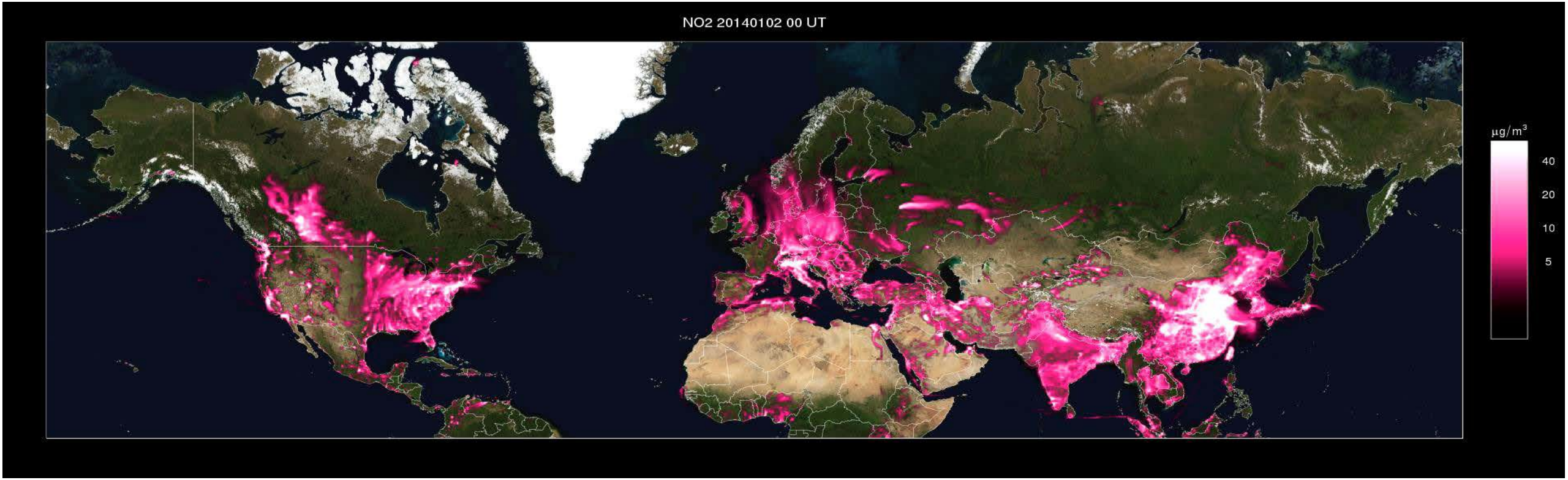
- **Cooperation with other networks, e.g. Eurocities, C40, Covenant of Mayors (Sustainable Energy Action Plans)**

LRTAP Long-range Transboundary Air Pollution

Clean Air 40 YEARS

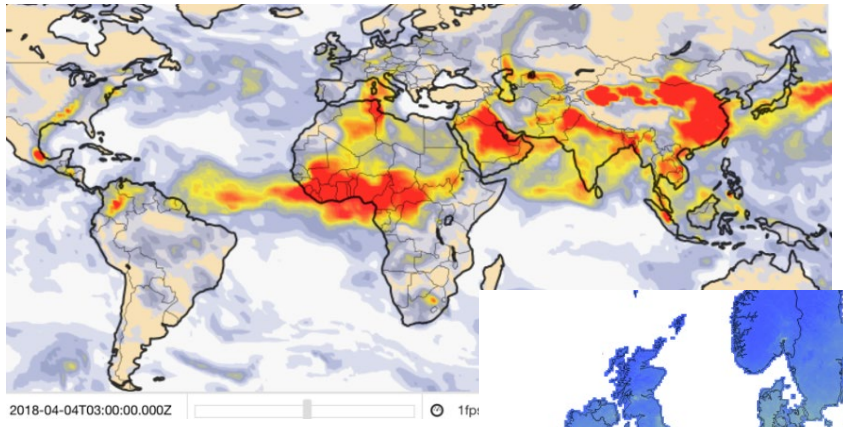
URBAN AGENDA FOR THE EU WORKING TOGETHER FOR BETTER CITIES AIR QUALITY

Cities are net exporters of air pollution

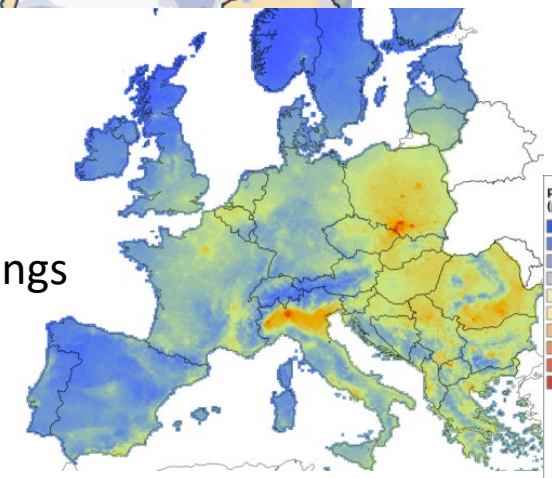


Source: NO_x screenshot INERIS

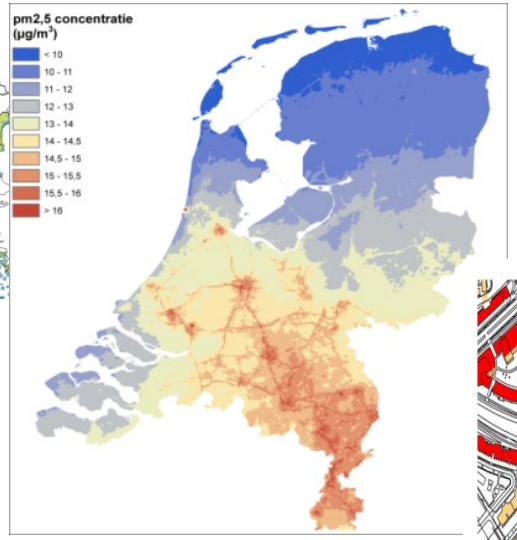
Cleaner air requires cooperation across spatial scales



emission standards
National emission ceilings



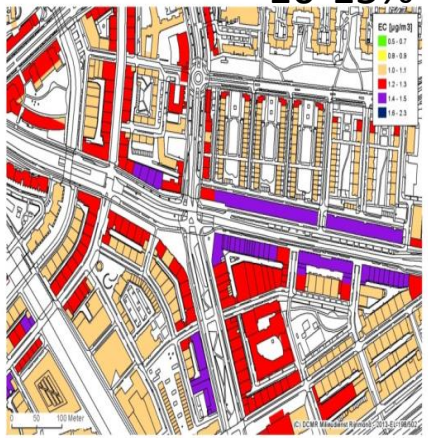
90%



50%

taxes and subsidies

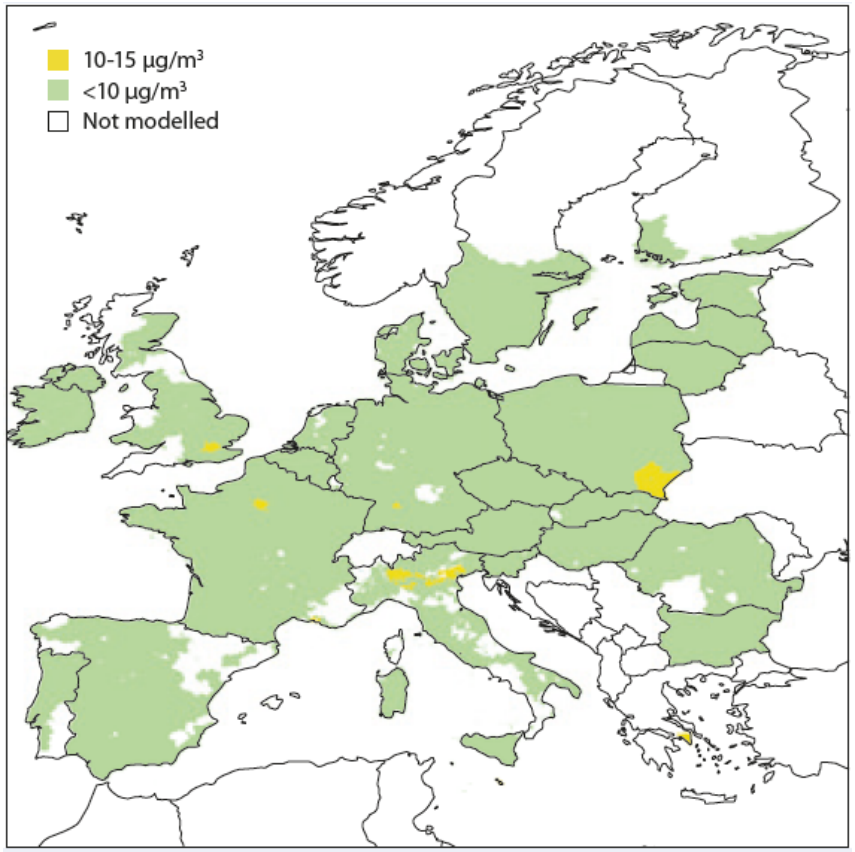
10-15%



permits, planning
low emission zones

PM2.5 concentrations 2015

Required actions to meet WHO PM2.5 guideline levels



2050:
With climate & energy policy + additional air measures, WHO PM2.5-guidelines can be met almost everywhere

Continental

1. Ensure Euro-6 standards work in reality
2. Implement climate & energy targets
3. Set emission-standards for e.g. wood burning large cattle farms, ships, …

National

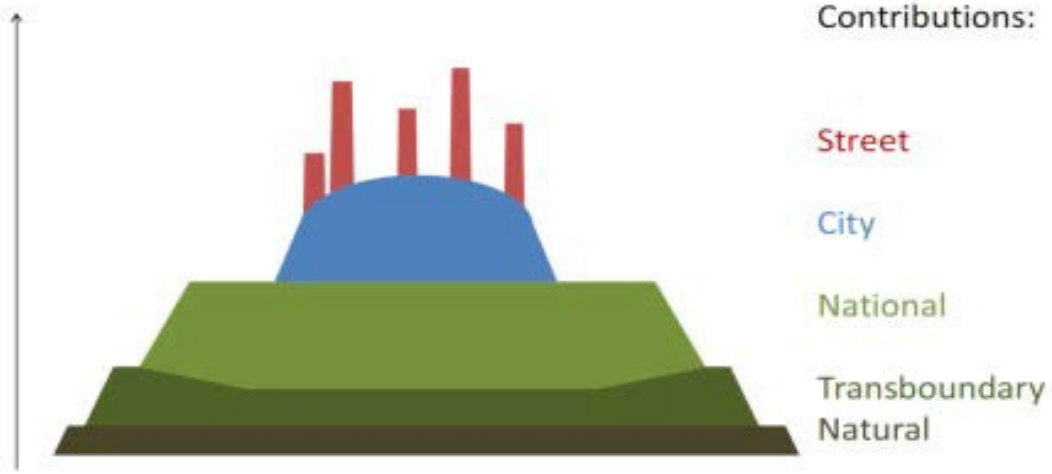
1. Ratify and enforce LRTAP Protocols
2. Implement climate and energy policies
3. Control on maintenance of Euro-6 vehicles
4. Scrapping schemes for old vehicles

Cities

1. Low emission zones
2. Stimulate electric vehicles
3. Set speed limits
4. Healthy city design
5. Inform and involve the people

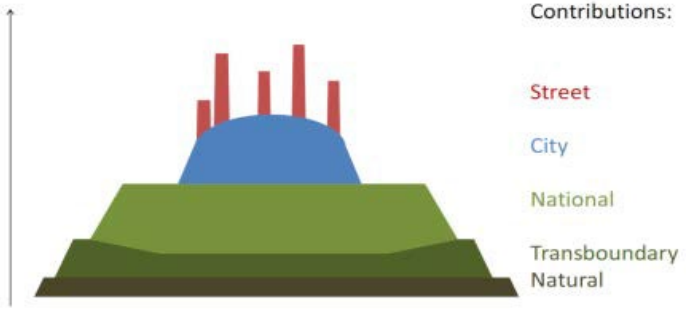
Lessons

1. There is a tension between tackling local exceedances and improving health in a city
2. Secondary particles play a significant role in PM2.5-exposure
3. Tackling secondary particles and ozone requires international coordination
4. Can we reach WHO-guidelines with technology only or do we need structural changes in transport, urban planning and agriculture?



Focus on health impacts

- Fitness check: AQLVs were a legal driving force behind improving air quality
- But: total health impacts in cities are related to the average exposure (rather than the number of cases with exceedances)
- Measures that reduce emissions entail higher health benefits than measures that shift emissions across a city (also outside the city!)
- How to proceed?
  “stricter AQLVs” and “new AEI ambitions”



Reducing average exposure requires an integrated approach

Including air quality & health impact assessments in developing:

- Energy and climate policy
- Transport policy and spatial planning
- Food and agricultural policy

This could:

- Offer cost-effective ways to improve air quality
- Create other health benefits e.g. via healthy mobility & healthy diets
- Prevent unintended health damage (e.g. by burning more biomass)

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The impact on air quality of energy saving measures in the major cities signatories of the Covenant of Mayors initiative

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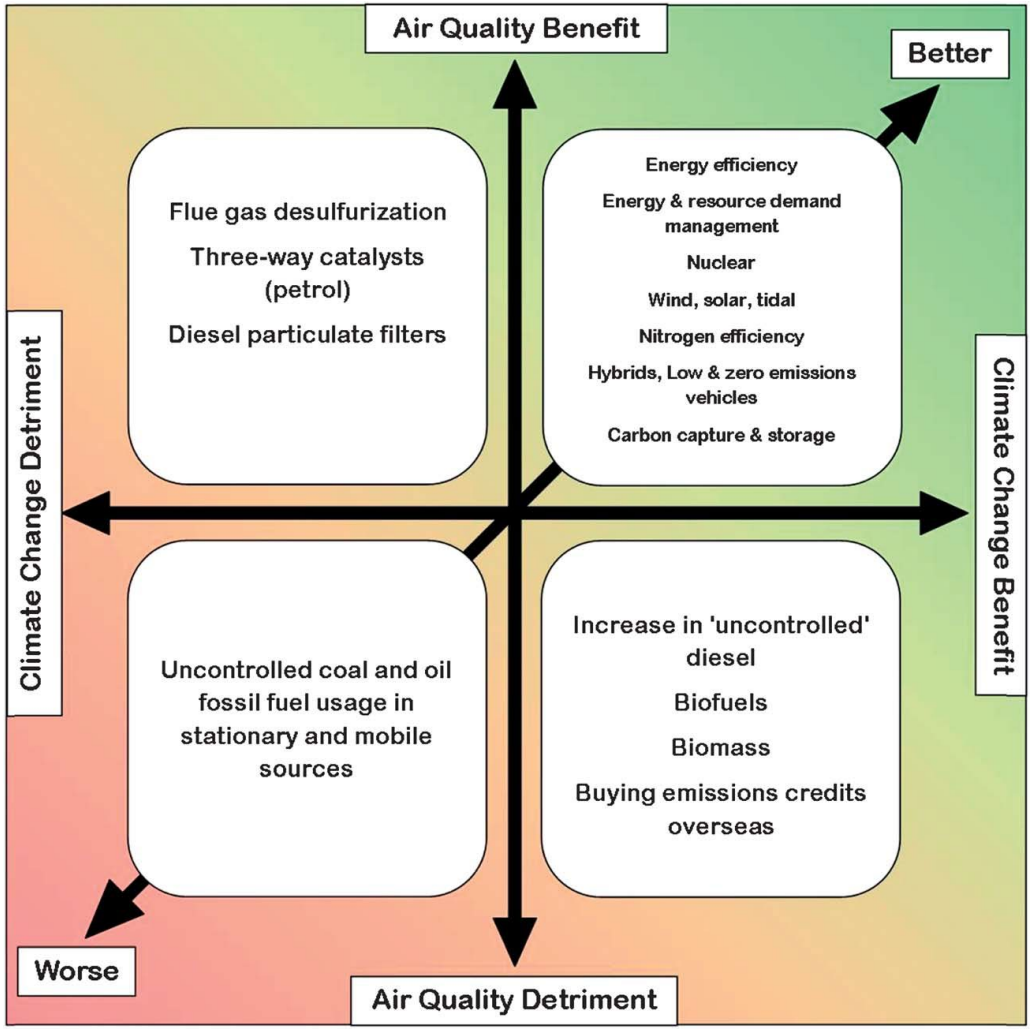
ABSTRACT

This study is a first attempt to evaluate how the major efforts made by several European cities in the frame of the Covenant of Mayors (CoM) initiative can impact the air pollution levels in the participating cities. CoM is by no mean one of the major cities initiatives aimed at mitigating climate change, supporting local authorities in the implementation of their climate action plans. Energy savings measures reported in the CoM cities' action plans have been analysed from the air quality perspective in order to find quantitative relations in the way local authorities deal with mitigation and how these practices are expected to have consequences on the air quality at urban level and finally positively impacting the citizens' health.

Synergies & trade-offs between climate policy and health impacts

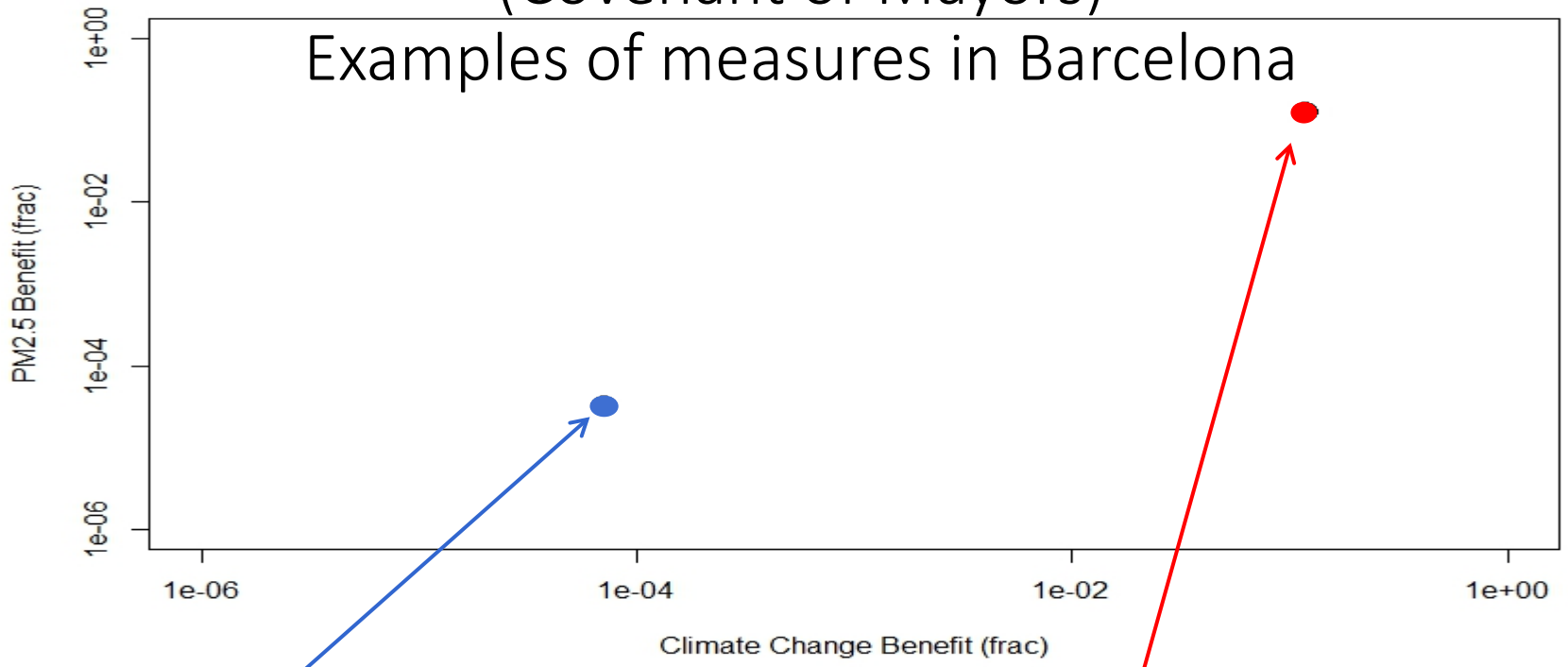


(von Schneidemesser and Monks ,2013)

Analysis of **Sustainable Energy Action Plans**

(Covenant of Mayors)

Examples of measures in Barcelona



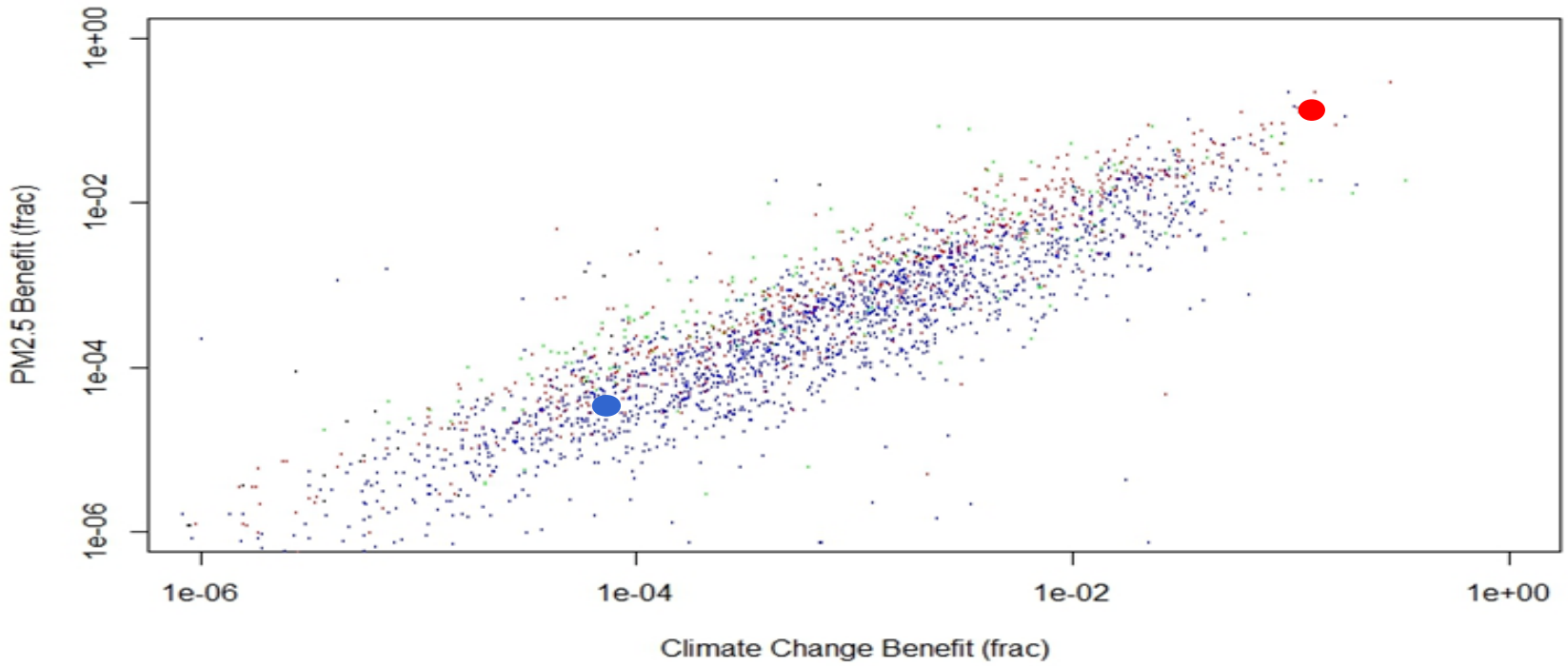
Promote the installation of solar thermal systems in sports centres

Implementation of Barcelona Urban Mobility Plan

Source: Monforti et al, European Commission-JRC, 2018)

Air quality co benefits of climate measures

3000 measures aimed at energy saving, wind and solar



Source: Monforti et al, European Commission-JRC, 2018)