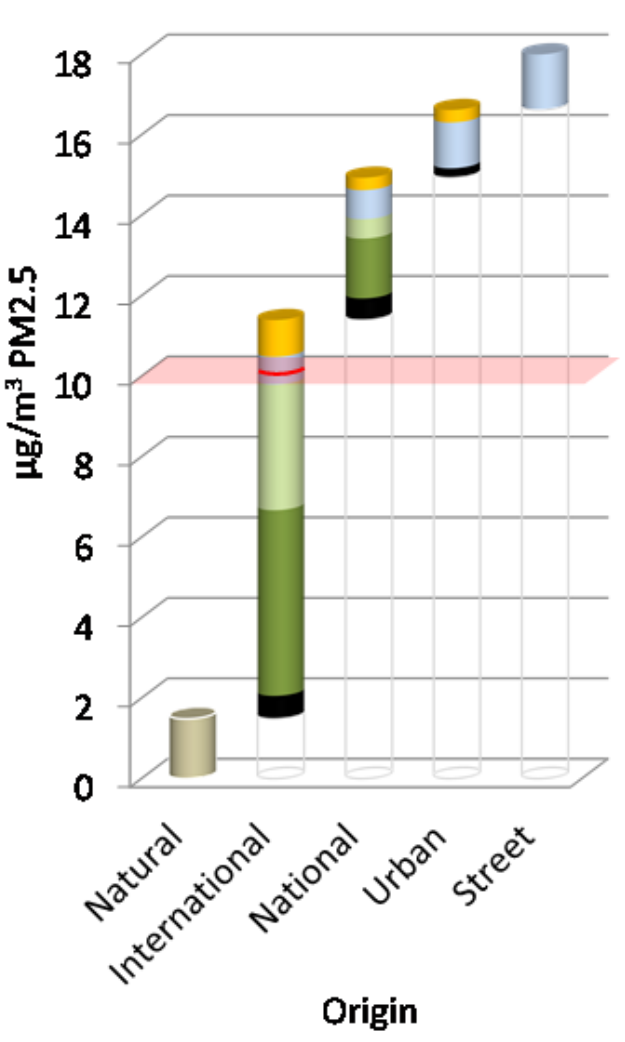
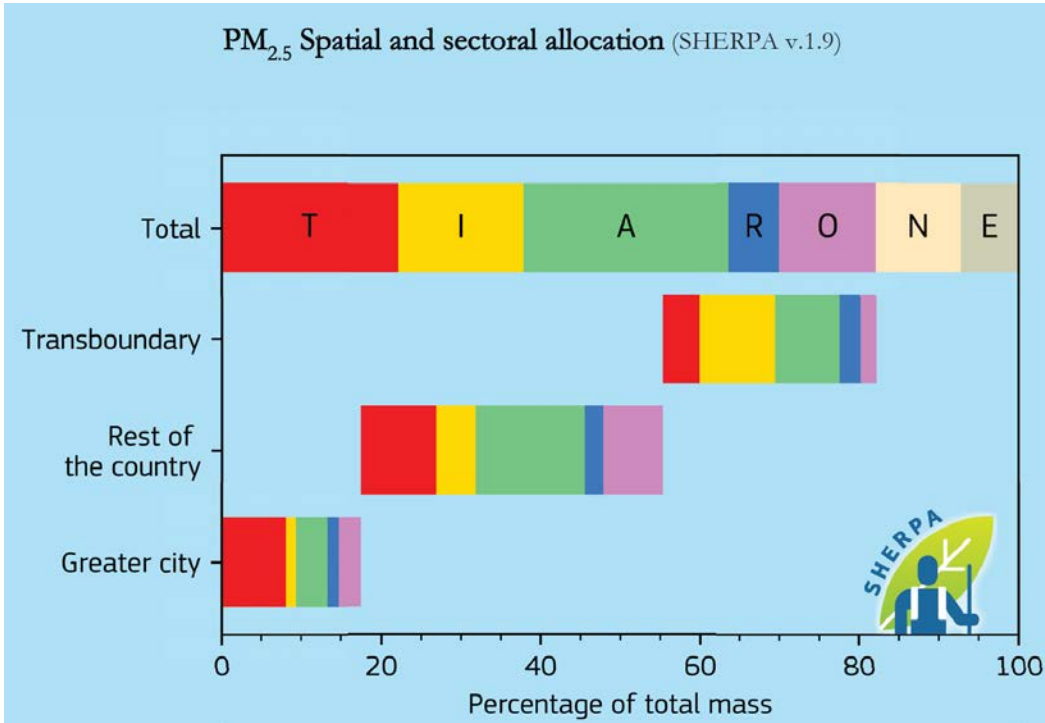
Expert Panel on Clean Air in Cities

Introduction, Rob Maas, 24 April 2019

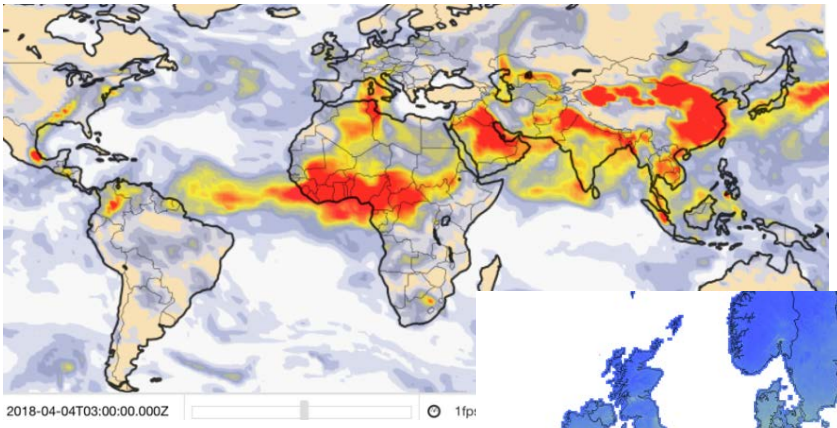
Expert Panel on Clean Air in Cities

Multi-scale co-operation is needed

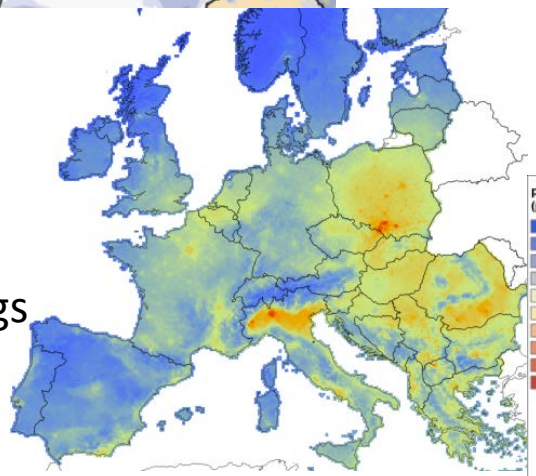




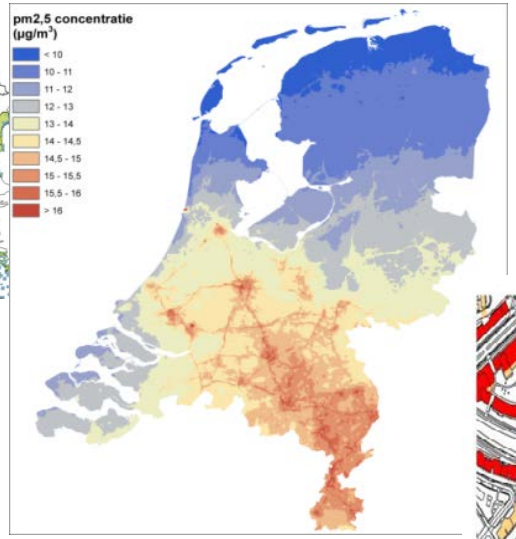
Cleaner air requires cooperation across spatial scales



90%



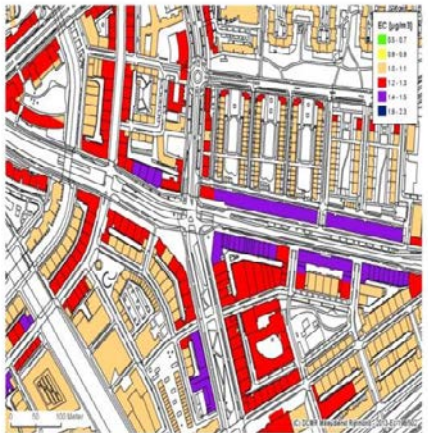
80%



50%

National emission ceilings
Emission standards

10-15%



taxes and subsidies

permits
low emission zones

PM2.5 concentrations 2015

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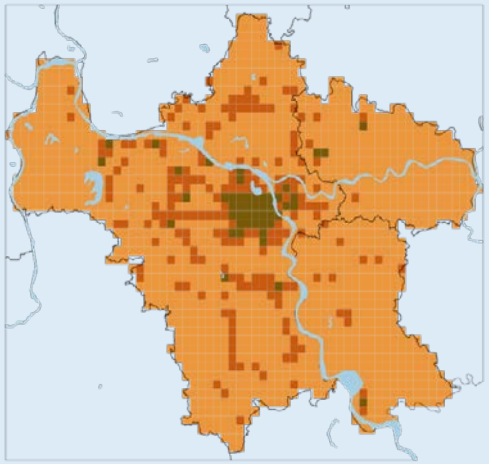
Key questions

- Which actions at which government level are most effective to reduce the loss of life years?
- 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, co-benefits, efficient measures, multi-scale multi objective policy design, …)

GAINS PMEH

Hanoi

Ambient PM2.5

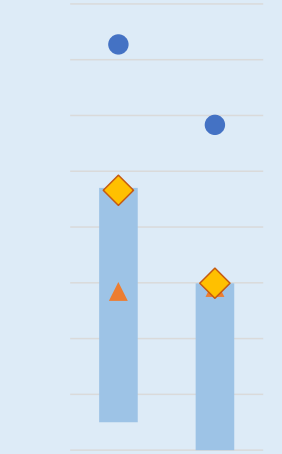


Annual mean concentrations, µg/m3

10 15 25 35 45 55

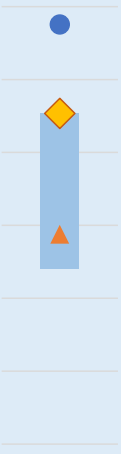
Premature deaths

Ambient air | Household



9316 cases | 5985 cases

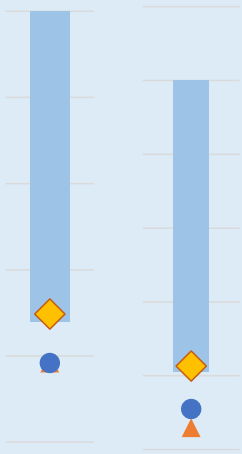
Greenhouse gases



23 Mt CO2eq

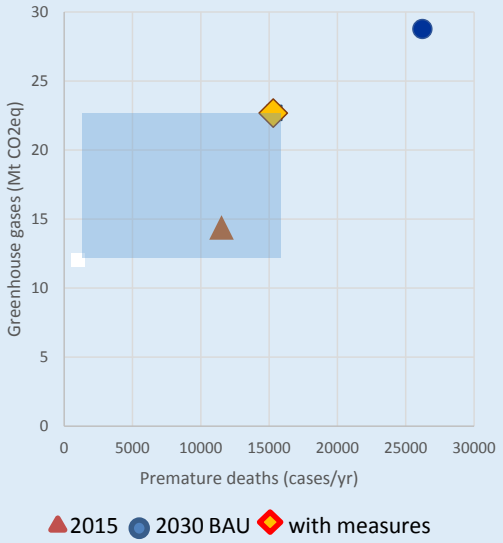
Costs

Annual costs | Investments

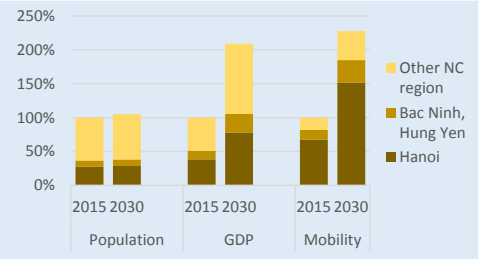


1.5% of GDP | 23 mio US-$

Co-benefits



DRIVERS (rel to 2015)	Hanoi	Bac Ninh - H.	North Vietnam
Socio-economic drivers			
Population change (%/yr)	0.2%	0.5%	0.4%
Income growth (%/yr)	4.7%	4.7%	4.7%
Mobility demand			
Share two-wheelers	80%	82%	51%
Share diesel	15%	9%	46%
Industrial structure			



COST-EFFECTIVENESS ANALYSIS

Determines the cheapest measures for the following targets:

Prem. deaths:

GHG emissions:

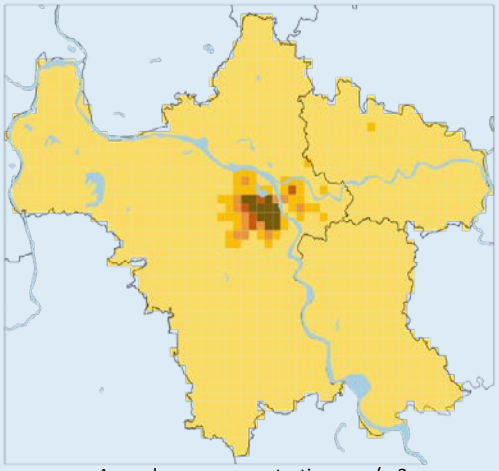
Start

MEASURES	Hanoi	Bac Ninh - H.	North Vietnam
Power plants			
NOx controls	100%	100%	0%
SO2 and PM controls	100%	100%	0%
Coal to gas	0%	0%	0%
Industry			
Boilers - NOx controls	100%	100%	0%
Boilers - SO2 controls	100%	100%	0%
Cement industry - BAT	100%	100%	0%
Chemical industry - BAT	100%	100%	0%
Steel industry - BAT	100%	100%	0%
Other industry - BAT	100%	100%	0%
Households			
Agriculture			
Road transport			
Non-road machinery			
Other sources			

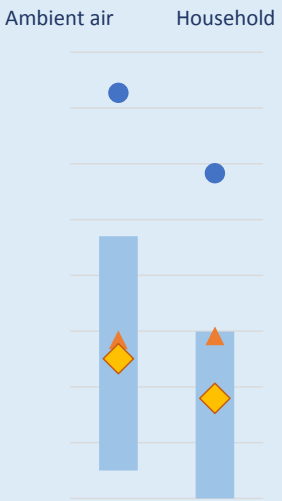
GAINS PMEH

Hanoi

Ambient PM2.5

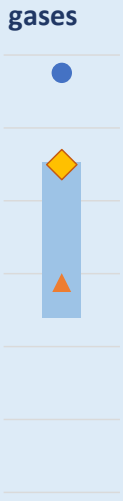


Premature deaths



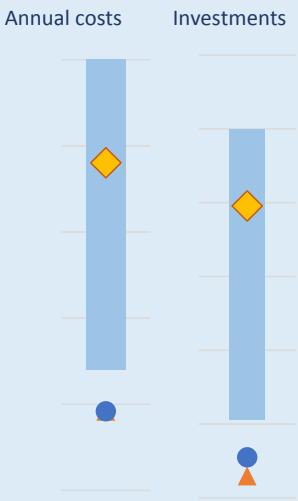
5013 cases | 3591 cases

Greenhouse gases



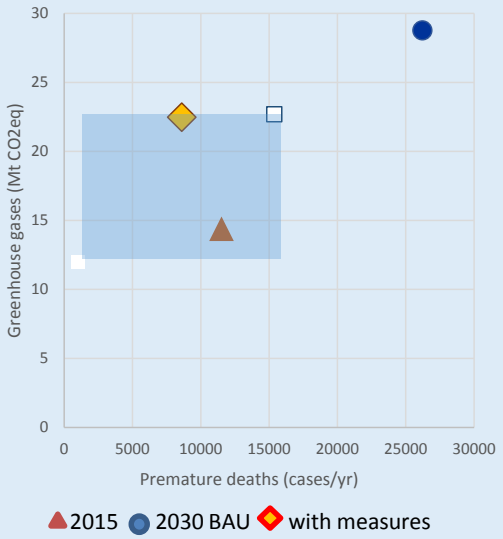
22 Mt CO2eq

Costs



3.8% of GDP | 79 mio US-$

Co-benefits



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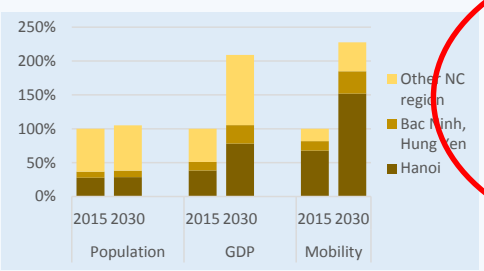

COST-EFFECTIVENESS ANALYSIS

Determines the cheapest measures for the following targets:

Prem. deaths: 4000 cases

GHG emissions: 15 Mt CO2eq

Start

MEASURES	Hanoi	Bac Ninh - H.	North Vietnam
Power plants			
Industry			
Households			
Agriculture			
Agriculture			
Manure management	0%	0%	0%
Urea application	0%	0%	0%
Ban of agr. waste burning	100%	100%	100%
Non-road machinery			
Other sources			

Expert Panel on Clean Air in Cities
Mission

- **EP-CAC will provide a science-policy arena for analysis of cost-effective multi-scale air quality strategies in the UNECE region.**
- **EP-CAC 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.**

- EP-CAC is **not** going review if local or national policies are cost-effective or sufficient, but will merely bring together people that are prepared to think and work on multi-scale linkages and exchange experiences.

Expert Panel on Clean Air in Cities
Mandate

1. **Advice the Working Group on Strategies and Review** on science-based cost-effective policy strategies aimed at clean air and better health in cities, that include the linkages between geographical scales and relevant other policy objectives
2. **Advice the joint EMEP-Steering Body and Working Group on Effects** on research priorities, the improvement of data and models and the use of health damage indicators
3. **Build upon** the knowledge in existing Task Forces and external networks, such as FAIRMODE, EEA, Eurocities, HEAL, GAW and the Covenant of Mayors

Expert Panel on Clean Air in Cities
Deliverables

1. Prepare a **position paper** to raise awareness among national and local policy makers of the multi-scale interactions. To be followed by other relevant guidance documents
2. Organize **annual workshops** together with relevant networks
3. Ensure a **database** is maintained of available technical and non-technical measures with an indication of their effectiveness and costs
4. Develop illustrative optimized **scenarios** for health improvement through clean air in cities
5. Actively disseminate knowledge to parties and international organizations via **presentations, documents and advice**