



European Commission

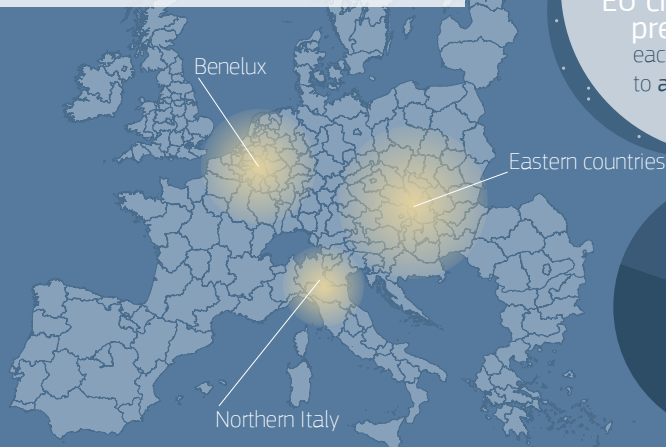


SHERPA

A tool to support the design of local air quality plans

Air quality in Europe is improving as the result of EU legislation but significant problems remain

Pollution is generally higher in **cities** and in certain specific **regions**, where the majority of people live



Most major **cities** report problems in fulfilling WHO guidelines on particulate matter and nitrogen oxides



More than **1000** EU citizens die prematurely each day due to exposure to **air pollution** in urban areas

in 2015 **24** member states did not fully comply with the **air quality directive**

Air pollution is an issue in **63%** of the ecosystem areas

Industry contributes to **84%**

Transport contributes to **43%**

SO₂ emissions

Agriculture contributes to **89%**

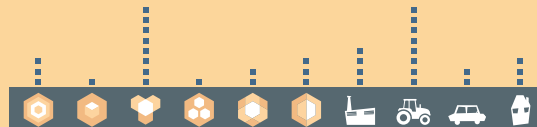
NH₃

Residential heating contributes to **36%**

PM

All human activities generate emissions that have an impact on air pollution

Policy makers have to design and implement air quality plans to improve the situation wherever necessary



What human activities and pollutant emissions should be tackled first?



Does air pollution in my city or region come from **local** or **external** sources?

Which countries or regions should we work with to ensure efficient results?

main questions

Joint Research Centre

Air quality models can be used to support air quality planning



Several computing hours/days may be required to get model response to a given policy question

Air quality models are not always available to local policy makers

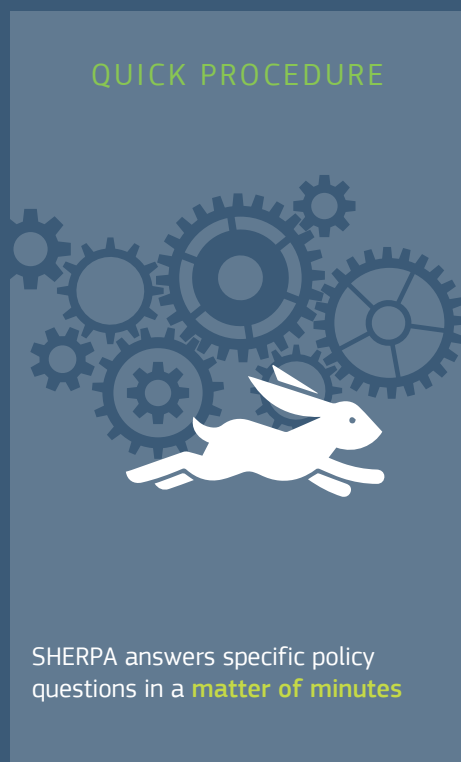
BUT

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The JRC has developed the SHERPA screening tool to support policy makers in designing their air quality plans

Screening tool for
High
Emission
Reduction
Potential on
Air quality

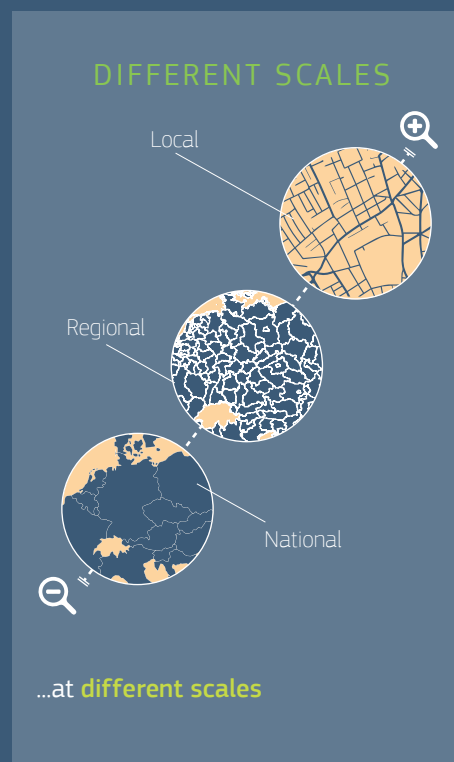
QUICK PROCEDURE



ALL EU COUNTRIES



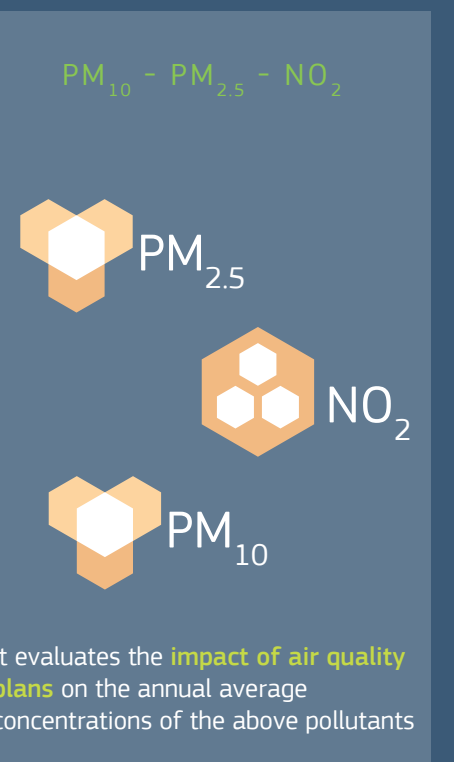
DIFFERENT SCALES



MAIN HUMAN ACTIVITIES



PM₁₀ - PM_{2.5} - NO₂



SHERPA has been applied to produce the Urban Air Quality Atlas for PM_{2.5}



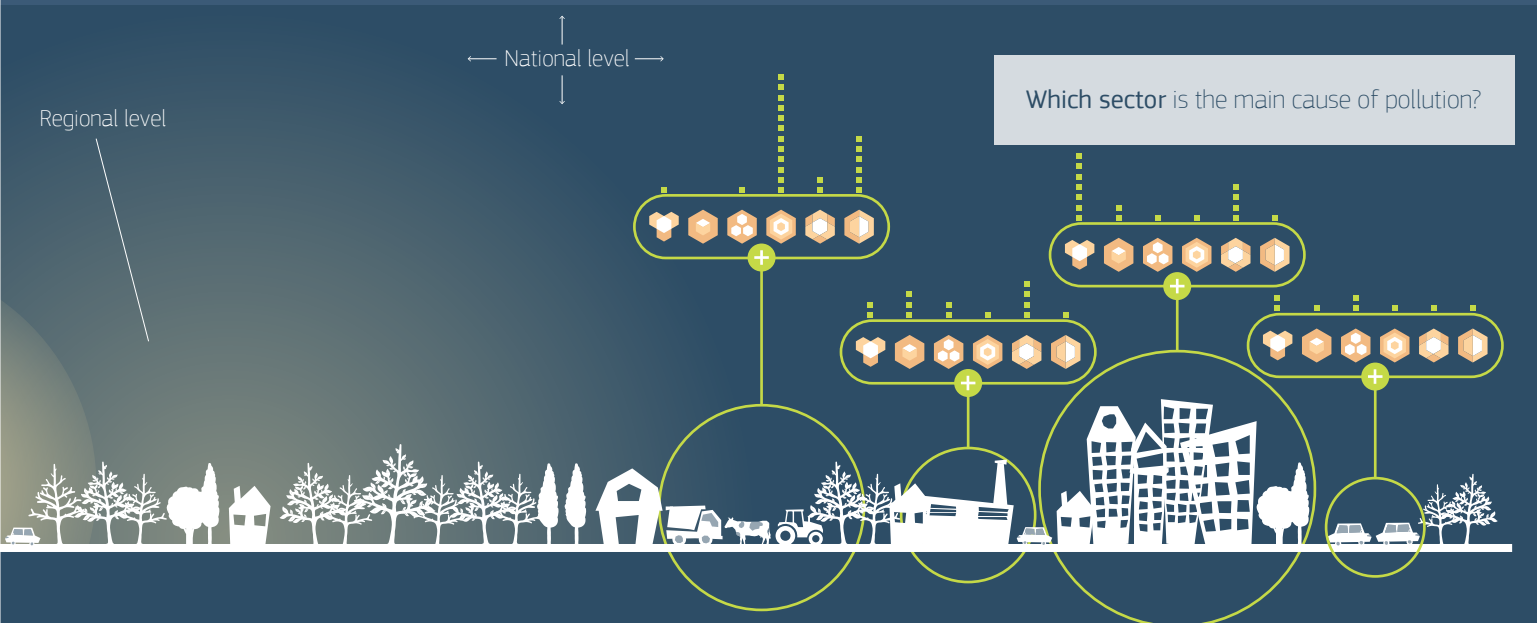
Where does pollution come from?

Local level

Regional level

National level

Which sector is the main cause of pollution?

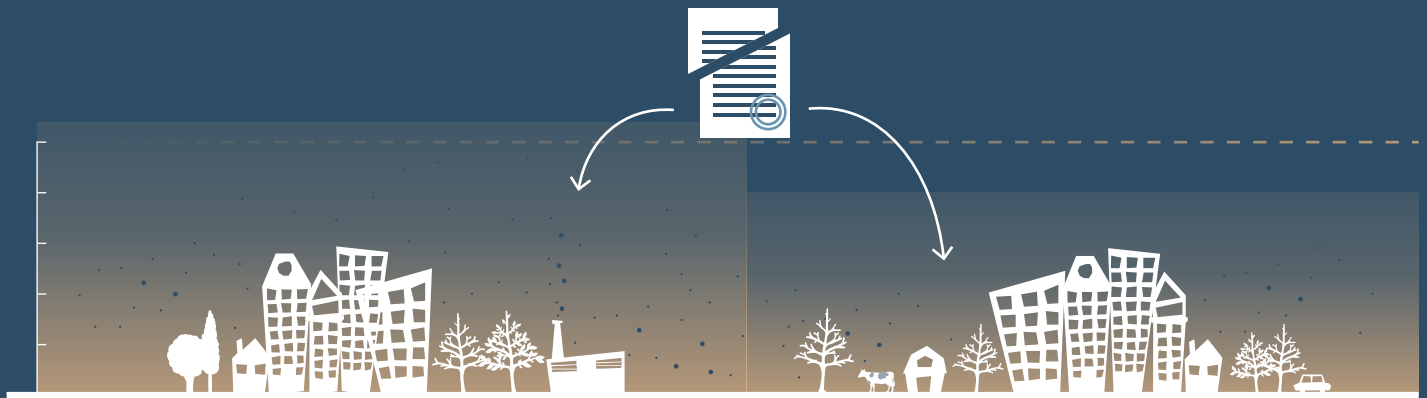


Main findings

Local action at city level can be effective in many cities



Cities differ in the way they respond to abatement measures, even when located in the same country



Sectoral measures on a country and EU scale can have clear benefit

