Euro-CASE workshop "Air Quality and the European citizen"

Vienna, 26-27 April 2001

Report from the Euro-CASE workshop in London on 16.10.1998 (23 participants):

"Does the public have the right information?"

REPORTER: Mr Michael Monaghan (UK)

Programme

1 Collection, validation and processing of data

Effects on changing air pollution regimes on terrestial ecosystems and human health in North Eastern Germany
- Prof.Dr.R Huttl, Technische Universität Cottbus
European air quality data colllection and processing by EEA and DG XI
- Mr S Larssen, NILU/European topic Centre on Air Quality of EEA
Making Air Quality Data and Air Quality Forecasts available to the Public
- Dr. R Derwent, Meteorological Office UK

2 Air Quality Indicators; how are they collected and why -

Introduction - Prof. C Borrego
Discussion

3 Air Quality modelling

The evolution of the air Pollutant Emissions in this Century
- Prof. J M Baldasano, Universitat Politecnic de Catalunya

4 Exposure Estimates

Introduction - Prof. C Borrego
Discussion

5 Conclusion

1 Collection, validation and processing of data

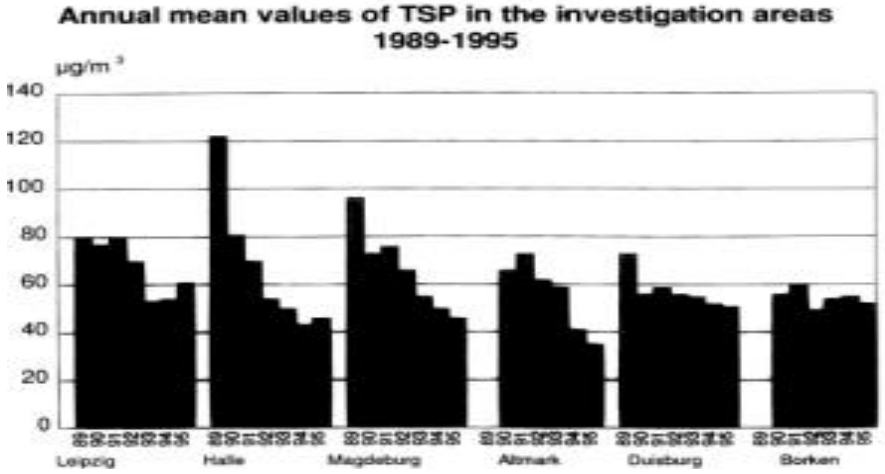
Long time constants

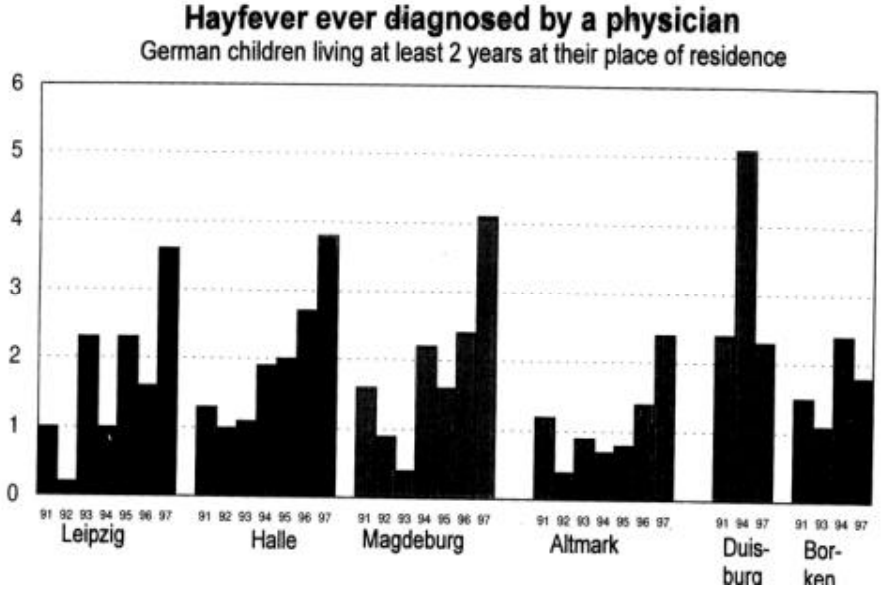
Complex interactions

With human health simplistic ‘myths’ not necessarily valid

Relevance of Indoor and Automobile Pollution

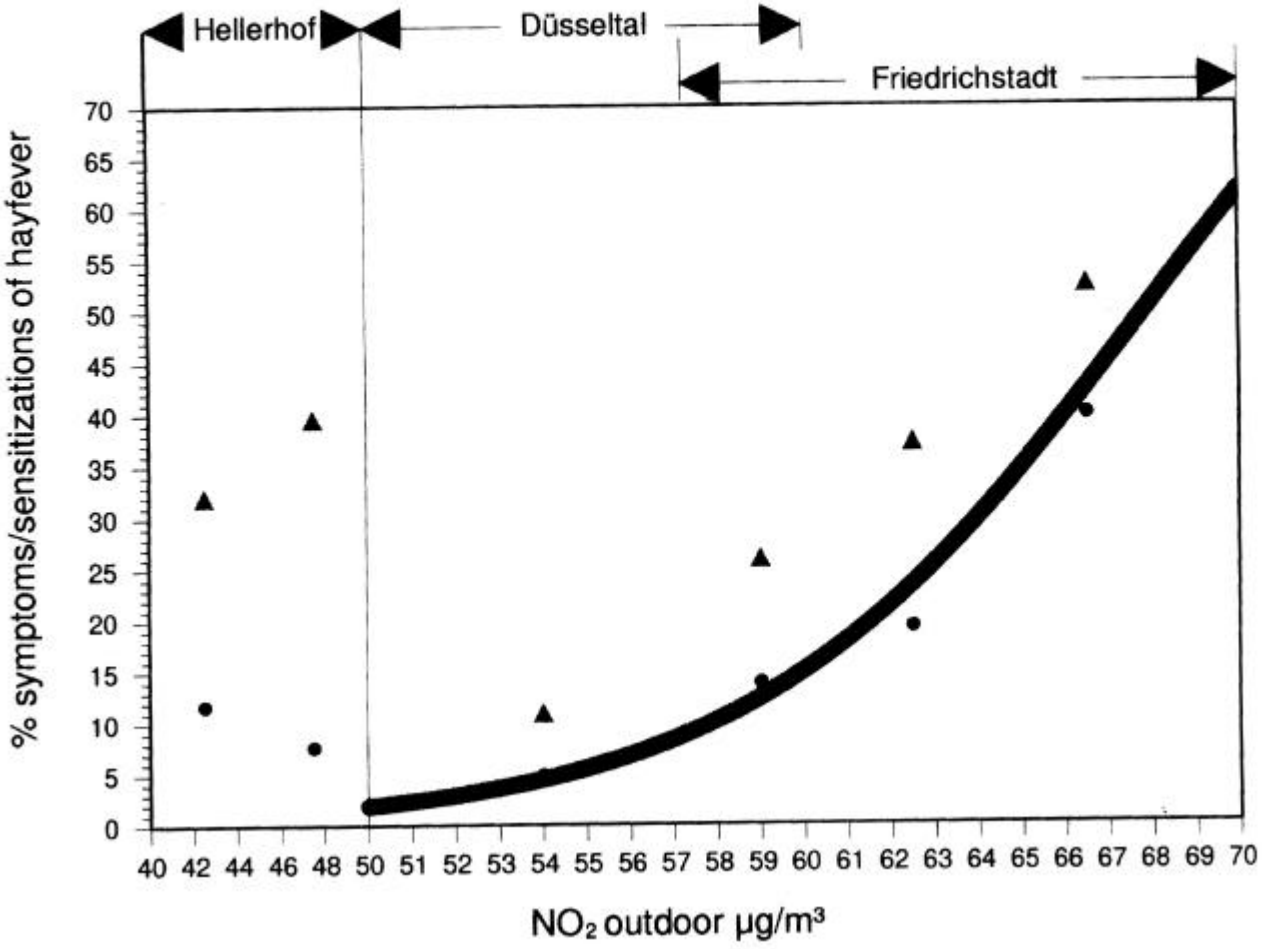
Myths exposed





New Uncertainties

Association between exposure to traffic-related outdoor NO_2 levels and atopic sensitization against pollen allergens (yellow) and symptoms of hayfever (red)



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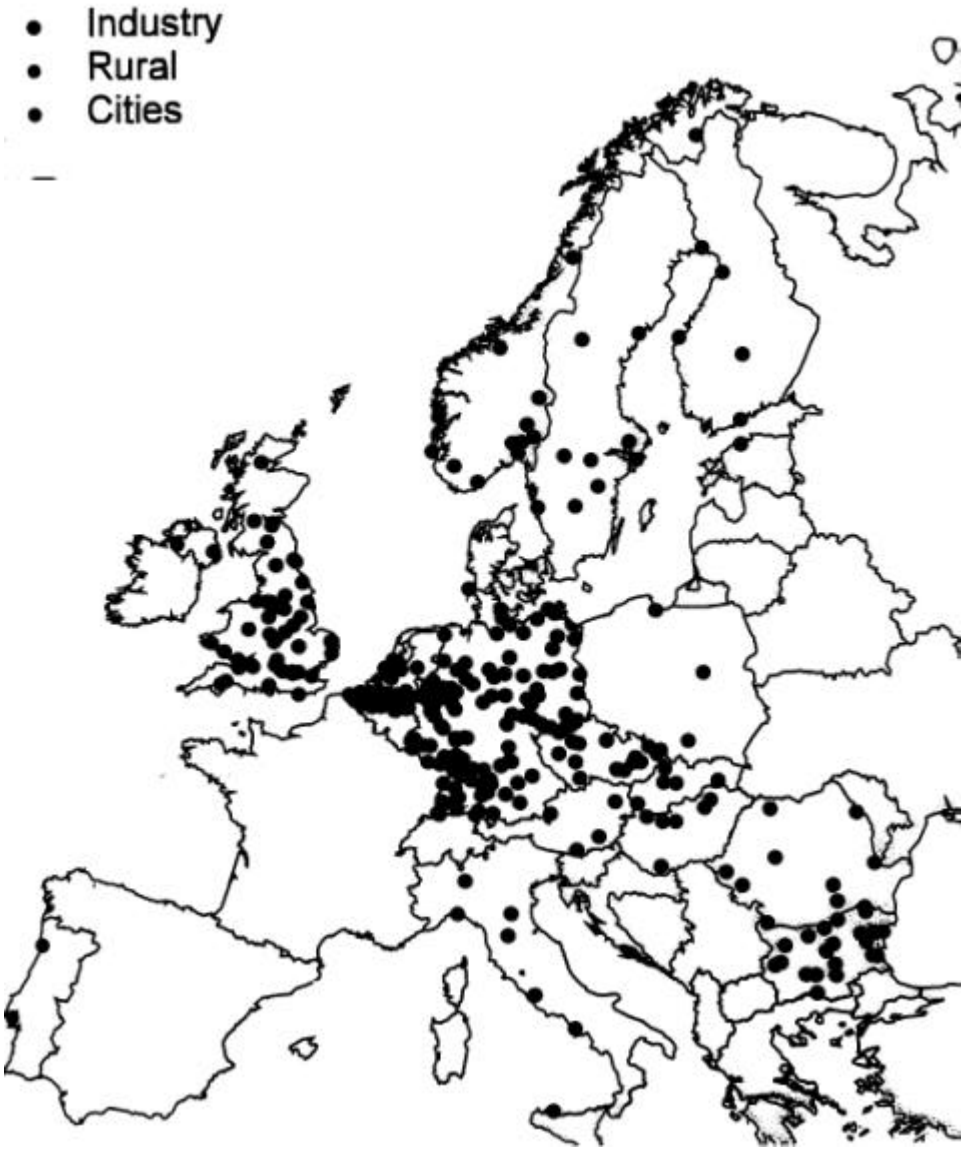
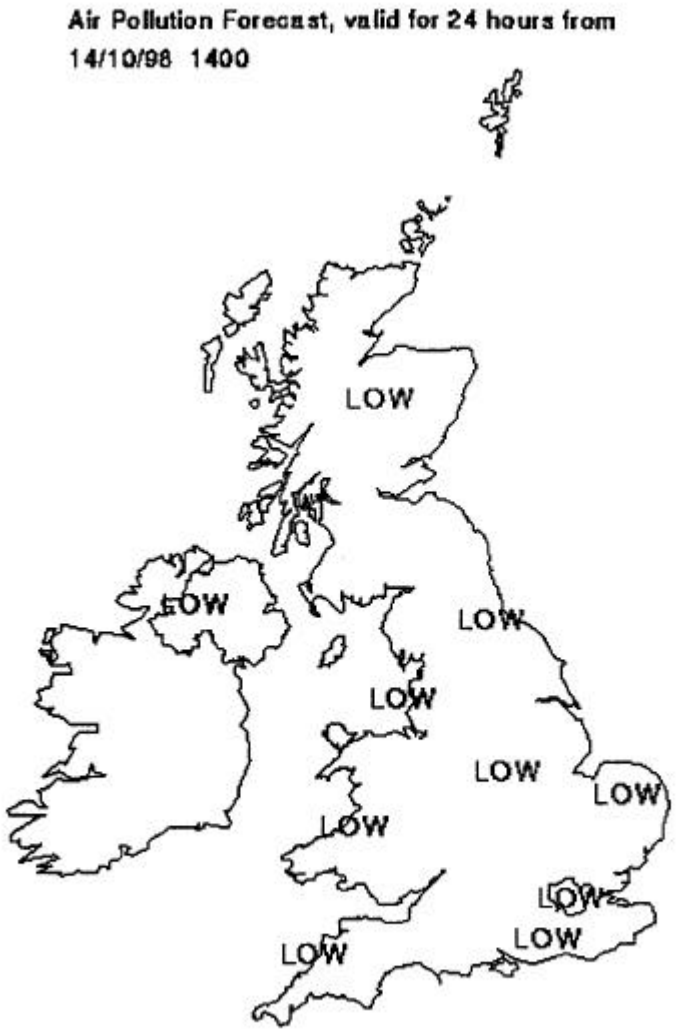
EUROAIRNET



UK Air Pollution Bulletin



3 Air Quality modelling

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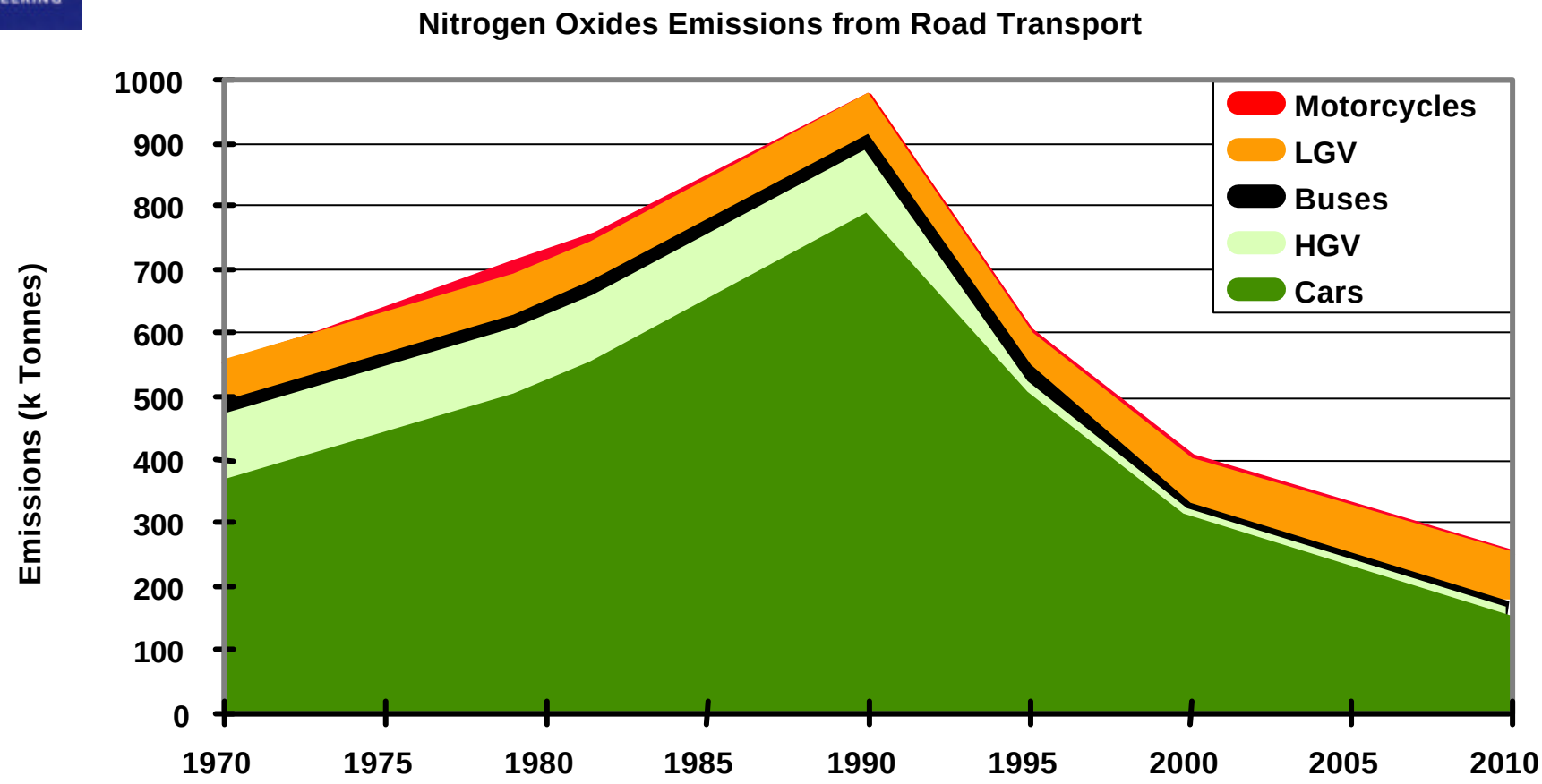
Air Quality Modelling

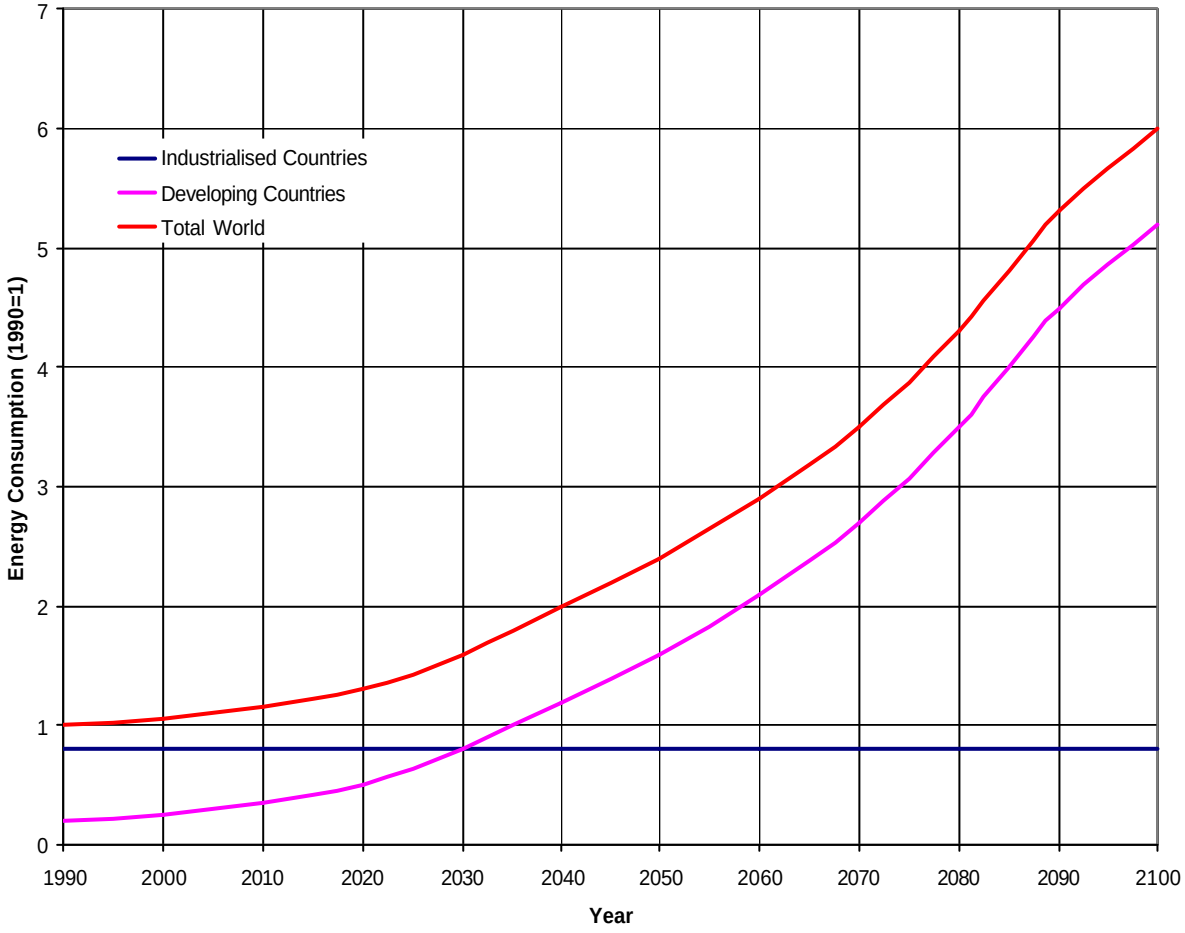
Starts with Emissions Inventories
(US since mid 1970's EU since 1980)
Global - needs more 'sensor' points
Urban - needs more detailed urban description

Impact of Legislation

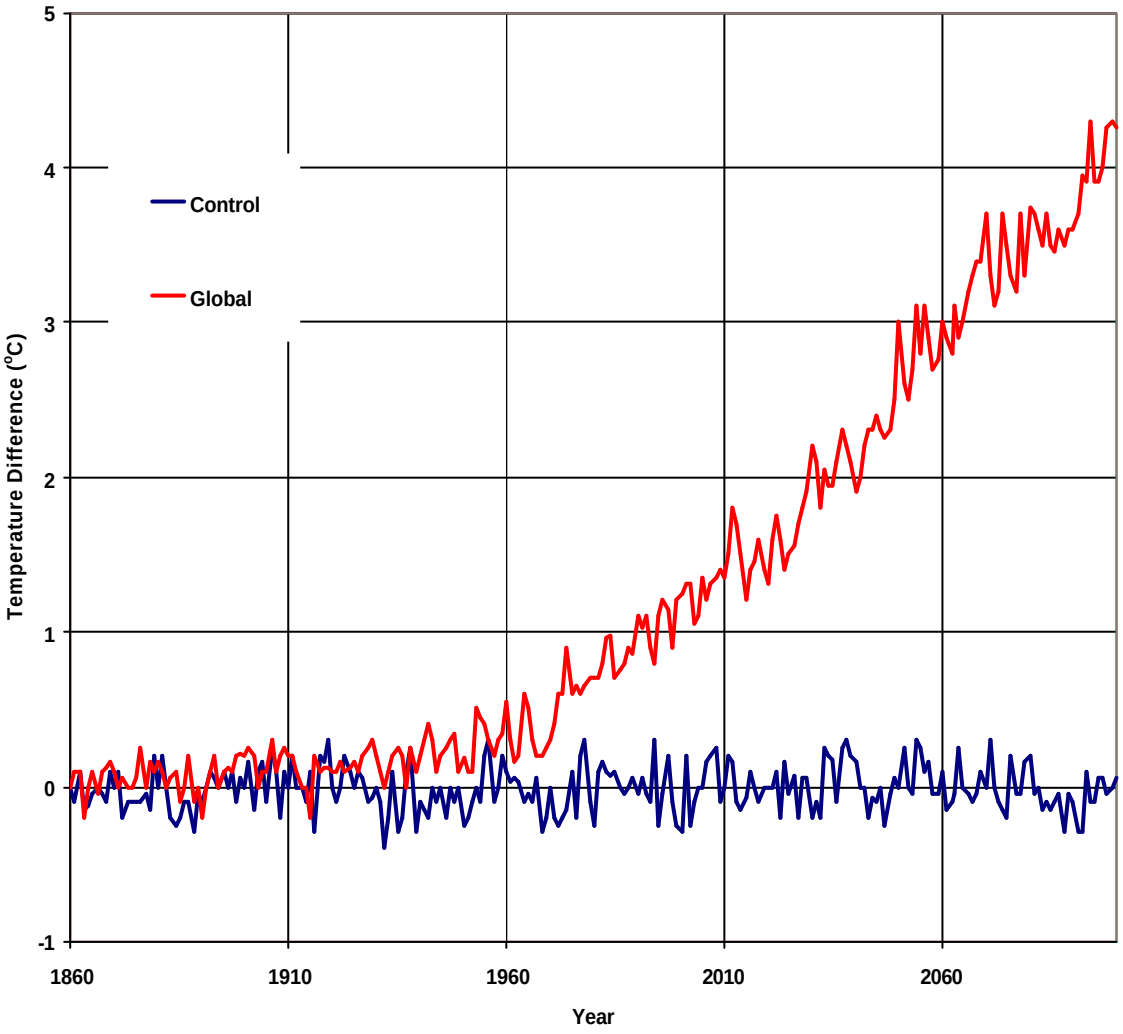


Source: AEA Technology

Global Energy Demand



The Hadley Model for Global Mean Temperature



4 Exposure Estimates

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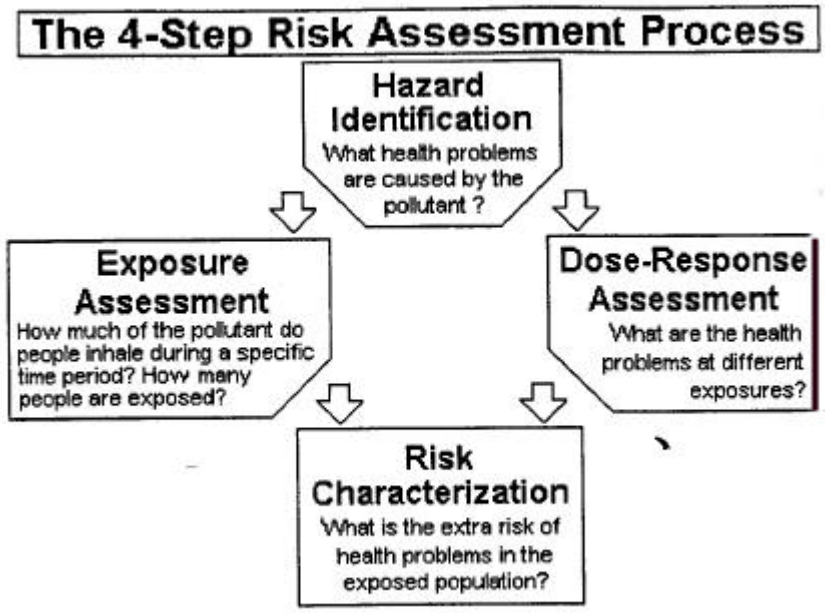
US EPA - The Pollutant Standards Index

5 Major pollutants - PM, SO_2, CO, NO_2, O_3
General health effects

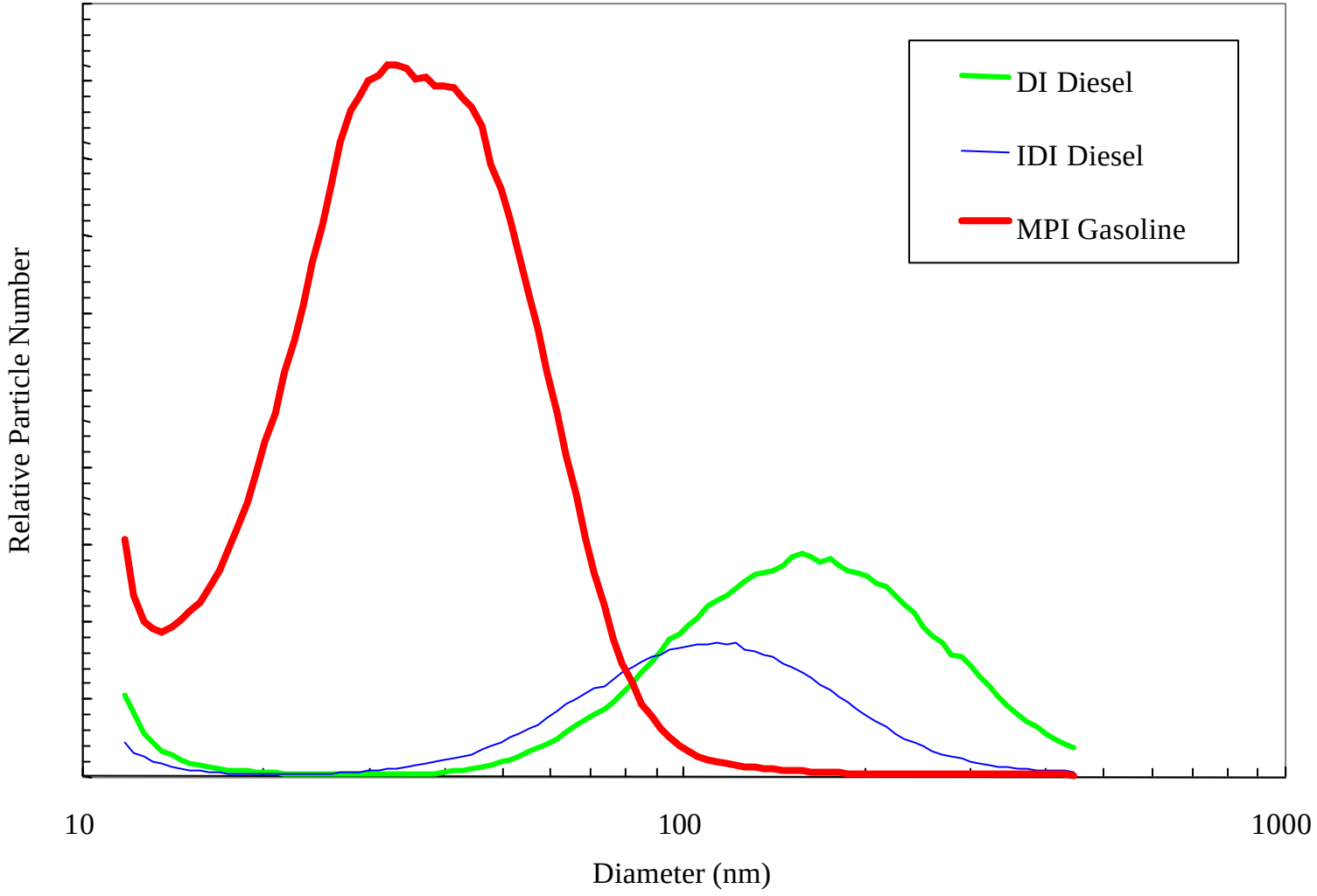
<50	**Good**
50-100	**Moderate**
100-200	**Unhealthful**
200-300	**Very unhealthful**
>300	**Hazardous**

PSI = max(I(1),I(2)….I(n))


The 4-Step Risk Assessment Process
Hazard Identification
What health problems are caused by the pollutant ?
Exposure Assessment
How much of the pollutant do people inhale during a specific time period? How many people are exposed?
Dose-Response Assessment
What are the health problems at different exposures?
Risk Characterization
What is the extra risk of health problems in the exposed population?

Particle Sizes from Passenger Car Engines

Submicron Particles
3 Vehicle Engine Types at Medium Speed and Load.
Typical Particle Size and Number Distributions in CVS Diluted Exhaust.



IRENIE -
Improved Reporting of Environmental Information using the EIONET

Data

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Expert Þ Municipality Sectors, Local,National….

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Authority Þ Decision makers, planners, Local,National….

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Public Þ Public,Media,Politicians, Local,National….

Conclusions

Complex phenomena
Time, space, species, circumstance

Data provision improving in EU and nationally

Legislation improving air quality

Modelling becoming adequate for decision making

GLOBAL WARMING!

IRENIE good practice

Data IS available,
But public need help with interpretation