

The challenges facing German cities in meeting EU air quality legislation



Maria Krautzberger

Permanent Secretary for Transport and Environment

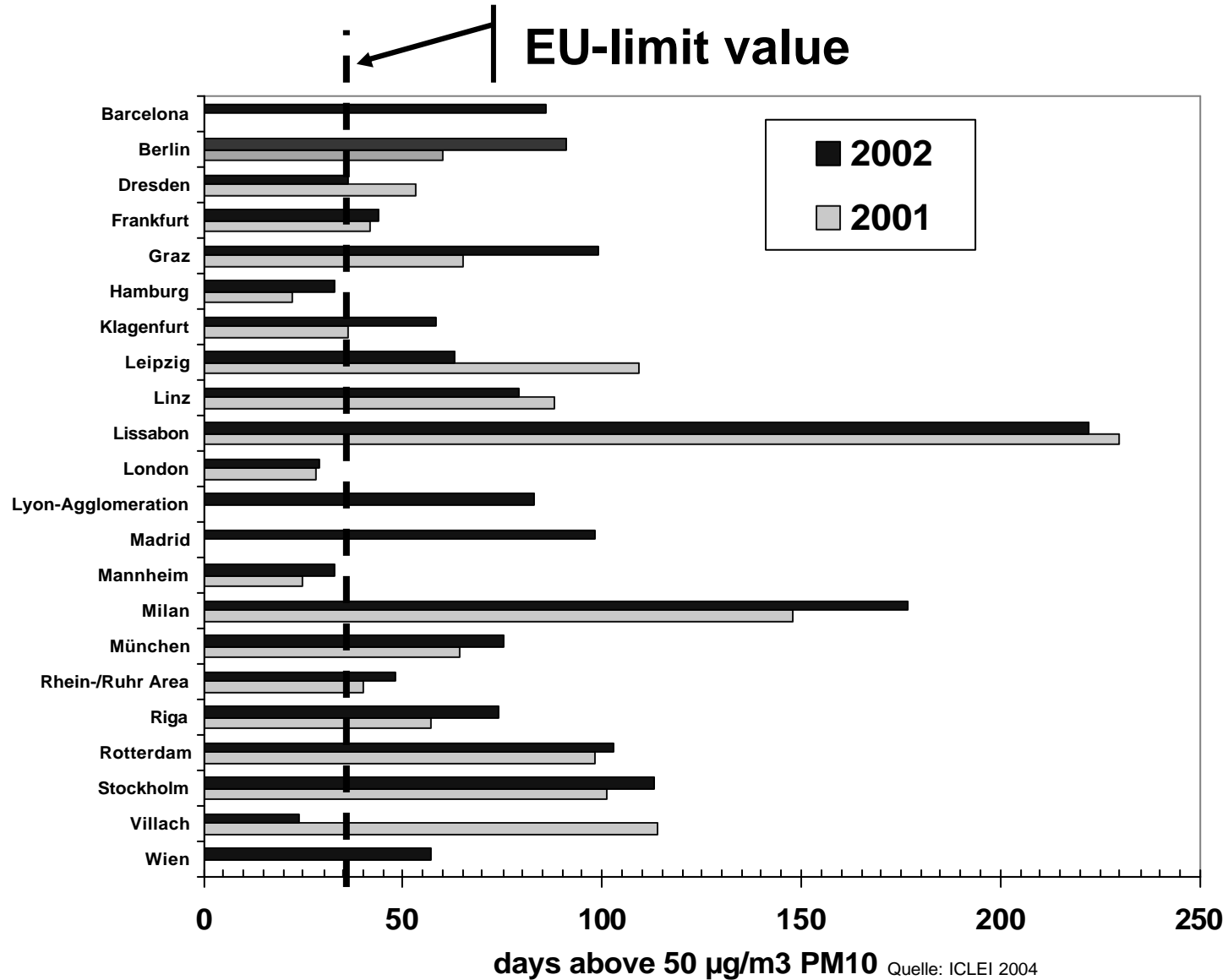
Senate Department for Urban Development Berlin, Germany

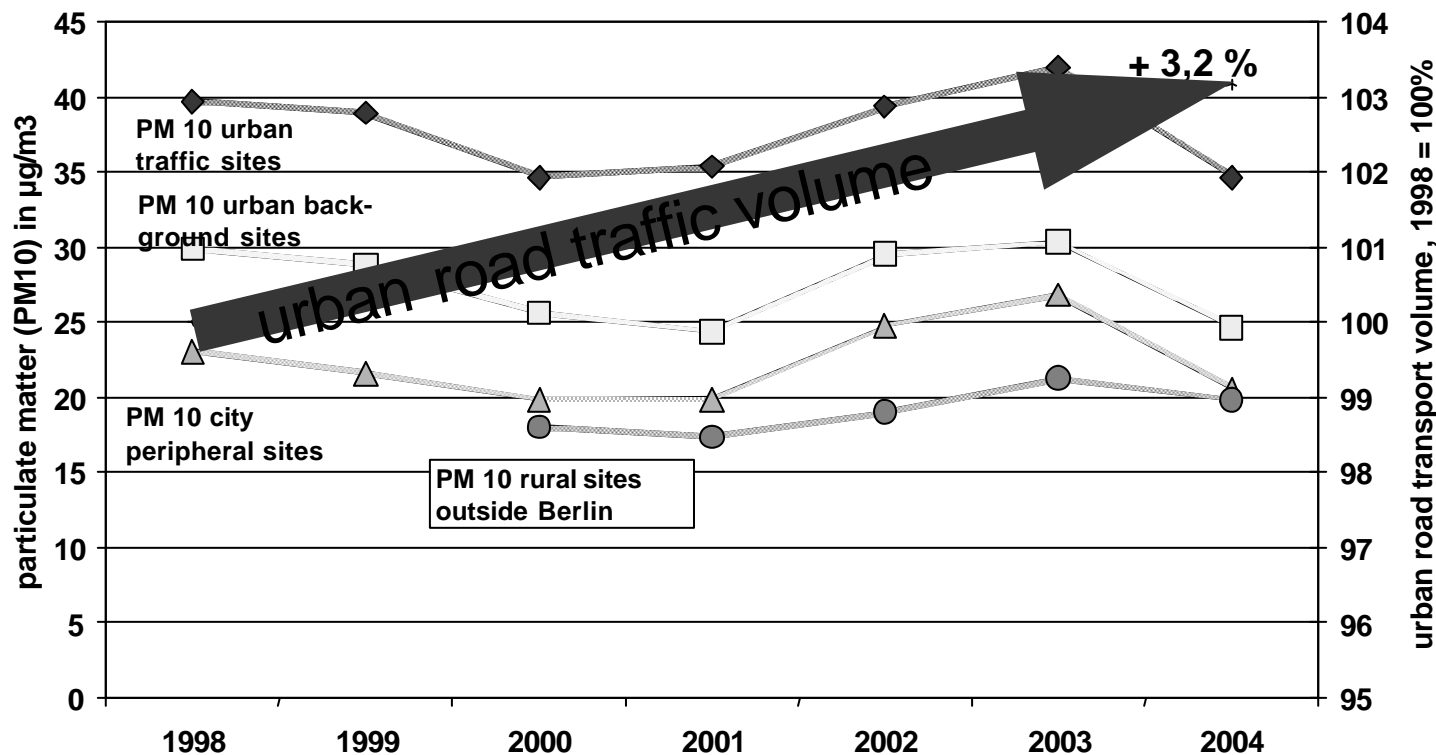
index

- I. actual challenges
 - trends in PM 10 concentrations
 - trends in NO₂ concentrations
 - trends in CO₂ emissions
 - introduction of clean fuels

- II. local measures
 - toolbox
 - Berlin measures

- III. result
 - rule-making & implementation

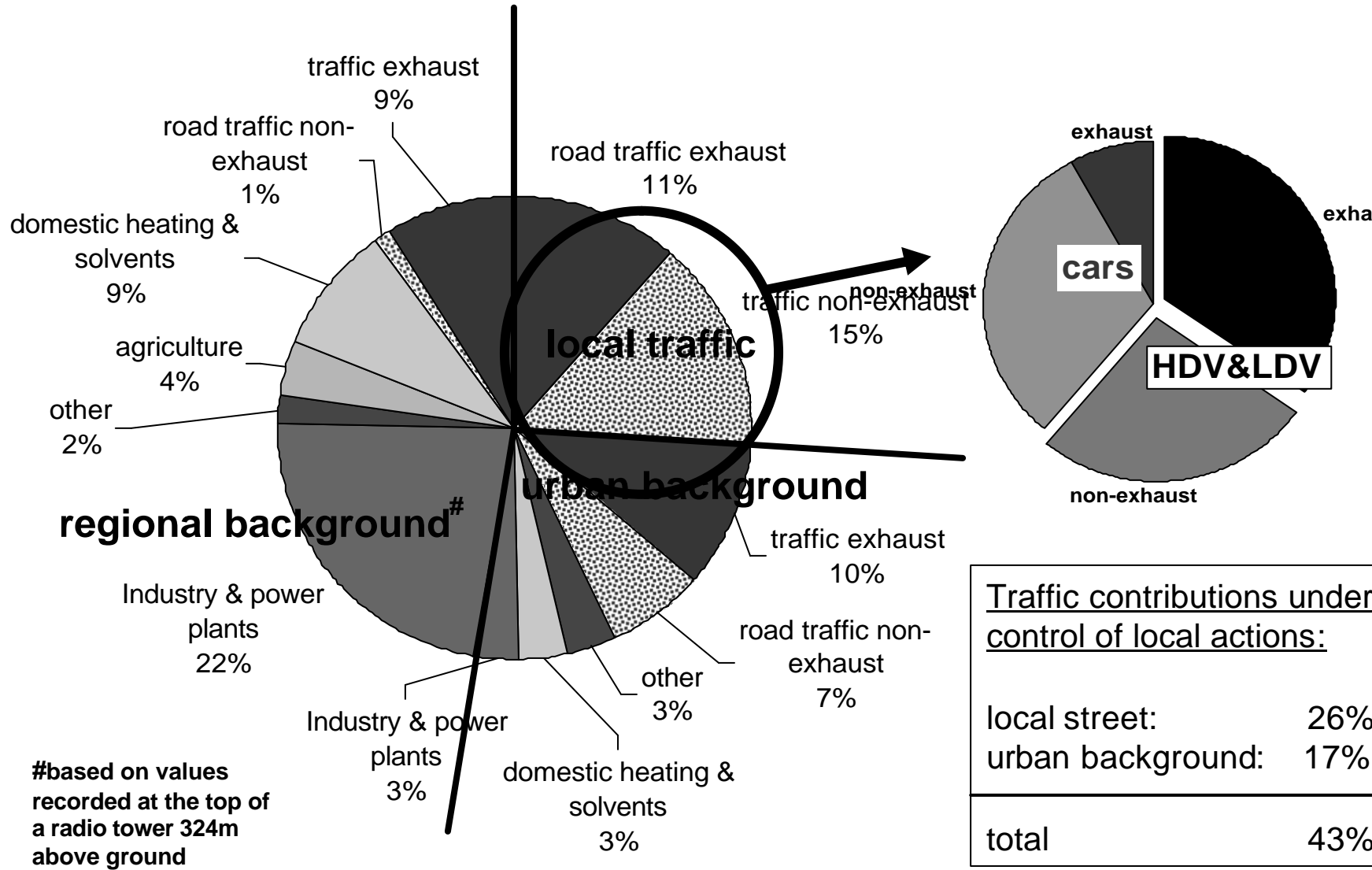


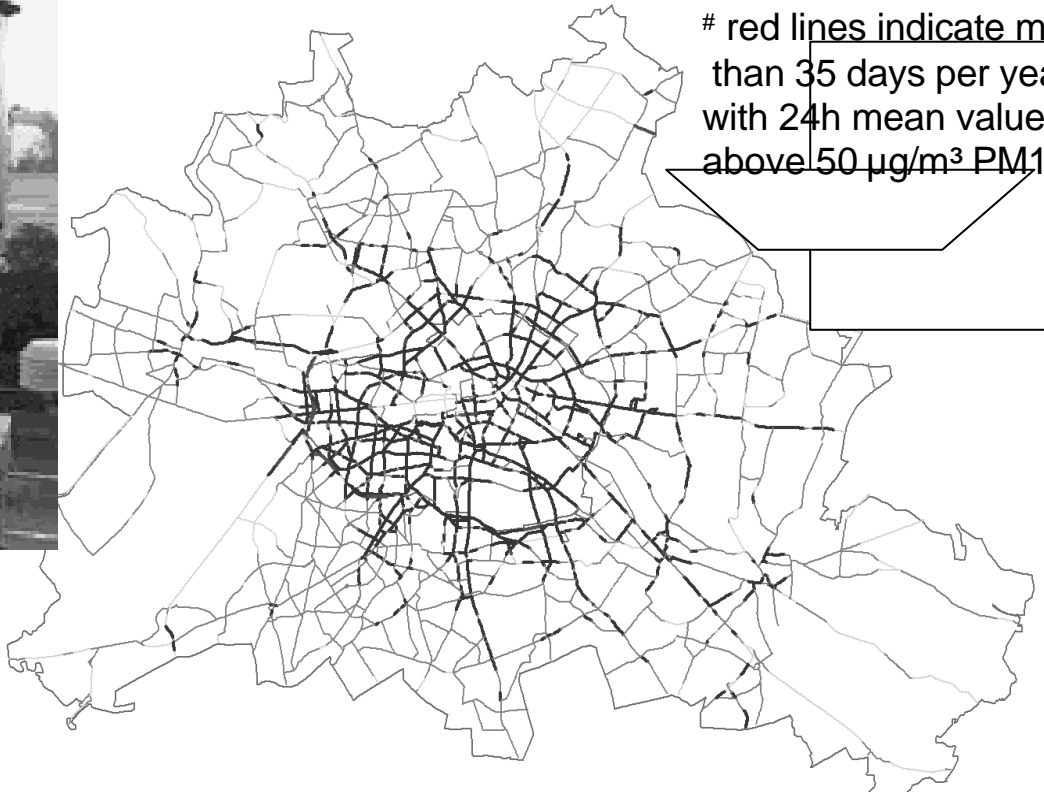


from 1998 to 2004:

- + 3,2% in urban road traffic volume
- quite constant level of PM 10 concentrations at all sites
- no significant progress in PM emission reduction

(Valid for the annual average)



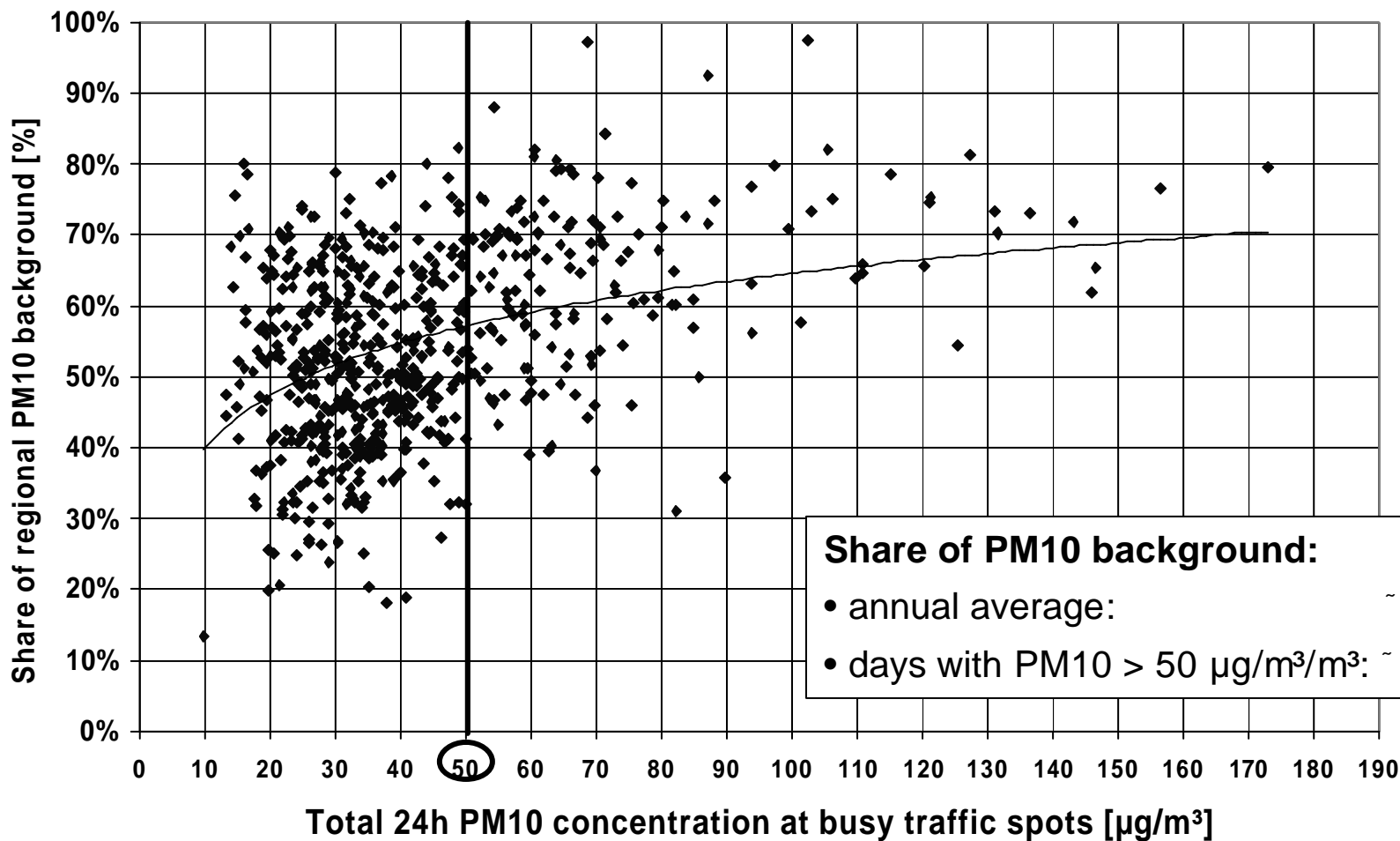


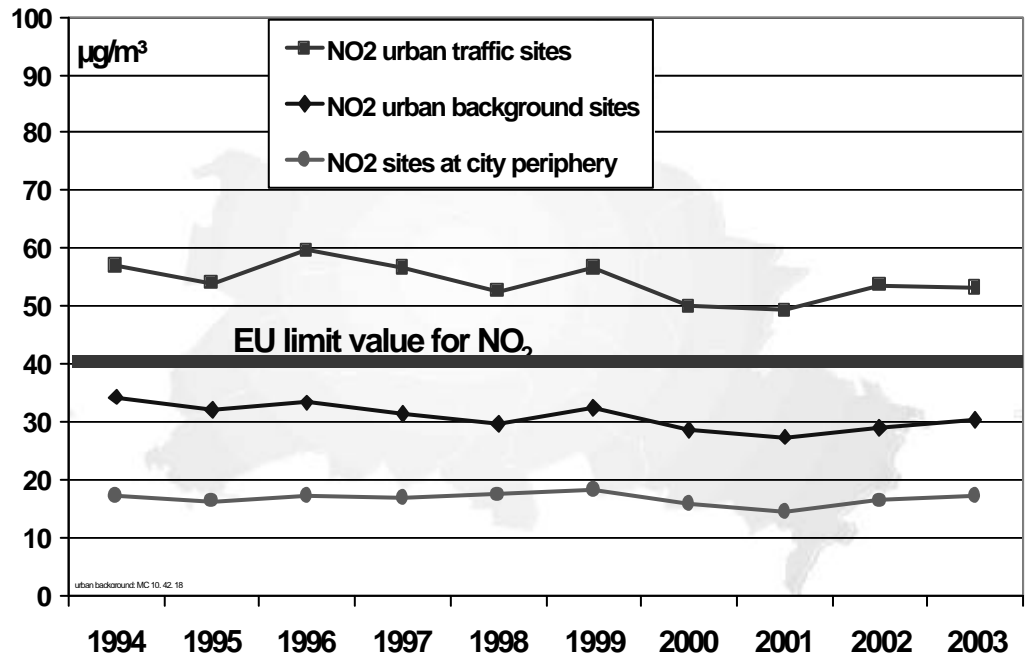
red lines indicate more than 35 days per year with 24h mean values above 50 µg/m³ PM10

~ 30 % (450 km) of main road network exceed PM 10 limit values # (24 h)

- Berlin:
- ~ 30 % (450 km) of main road network exceed PM 10 limit values # (24 h)
 - ~ 190.000 inhabitants live alongside this roads
- ~ 100 German cities complain about exceeding PM 10 limit values (stage I)

data from Jan 2002 to Sept 2003



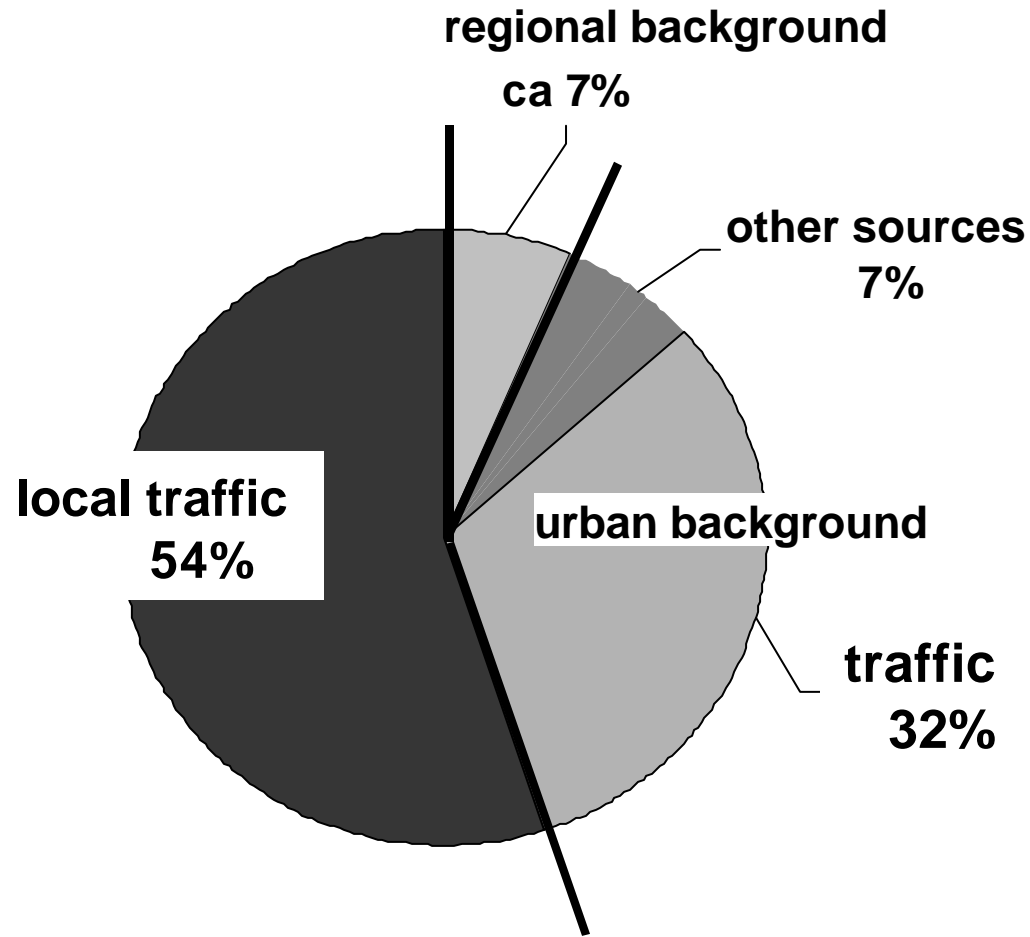


from 1994 to 2003:

- quite constant level of NO₂-concentration
- no significant progress in vehicle emission reduction
- high risk to exceed the NO₂ limit values in 2010

Consultation for Euro V proposal (passenger cars and light duty vehicles): comments by Berlin

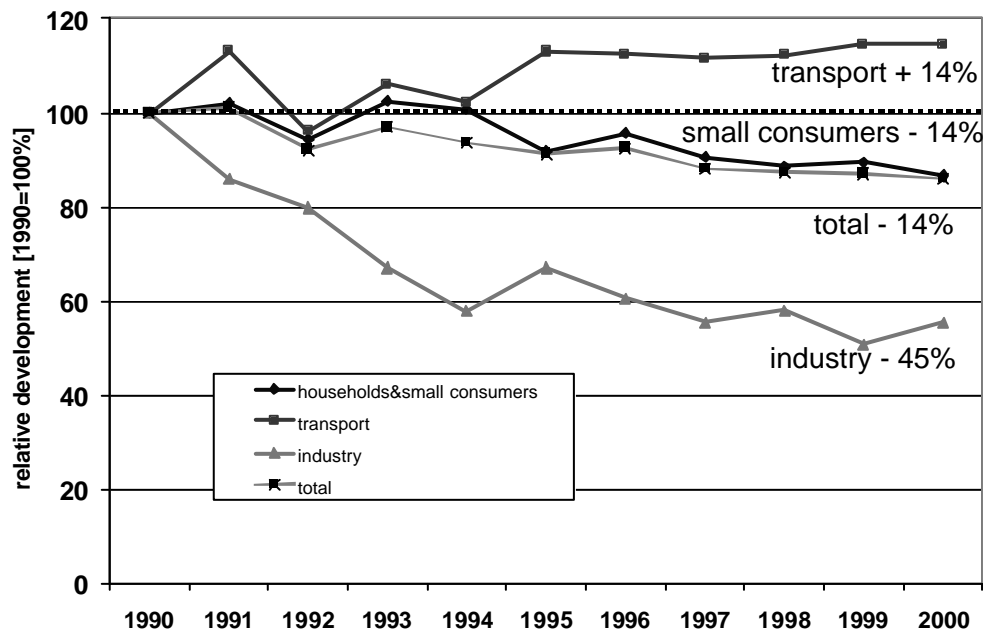
- lower NO₂ limit values (together with lower PM limits)
- no exceptions for diesel vehicles (identical NO₂ limit values for gasoline and diesel vehicles)



Basis: NO_x modelling



more than 80% of NO₂ from urban traffic



from 1990 to 2000:

1. reduction of total CO₂ emissions by 14%
2. increase of CO₂ emissions of the transport sector by 14%



- Which sector has to compensate for the increase in transport sector so as to comply with political targets?
- Can cities hope for limit values in transport sector?

The Berlin approach: profit of the advantages of CNG for PM 10 and NO₂ reduction

12 public filling stations for CNG

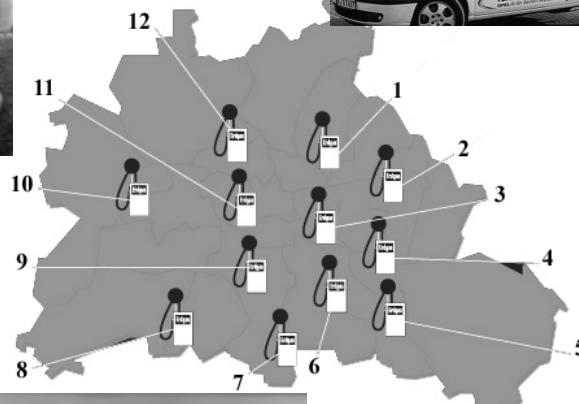
1.000 CNG „Eco Taxis“

100 CNG light duty trucks

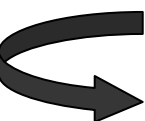
50 CNG garbage trucks

9 CNG buses

1.000 private cars



- introduction of clean fuels without a european roadmap
 - many isolated projects all over Europe, every project goes its own way in introducing different clean fuels (CNG, ethanol, biodiesel, H₂)
- confusing for car manufacturers, slow market introduction



Toolbox of the cities

with regard to EU air quality legislation and efficiency of measures in transport planning and traffic regulation

strategy	measures	efficiency with regard to air pollution abatement	time scale	political obstacles in implementation
reduction of traffic volume	spatial planning	high	long-term	low
bypass	new construction of roads, organisation of traffic flow	high, local, rare	medium – long-term	low - high, expensive
traffic management	speed limit, e.g. 30 km/h (constant/part time/dynamic) “combi-lanes”	low, local	short-term	high
technical improvement of the vehicle stock	low emission zone (ban of high polluting vehicles, rewarding cleaner vehicles)	high	medium	high
introduction of clean vehicles/fuels	grants	high	medium – long-term	low, expensive



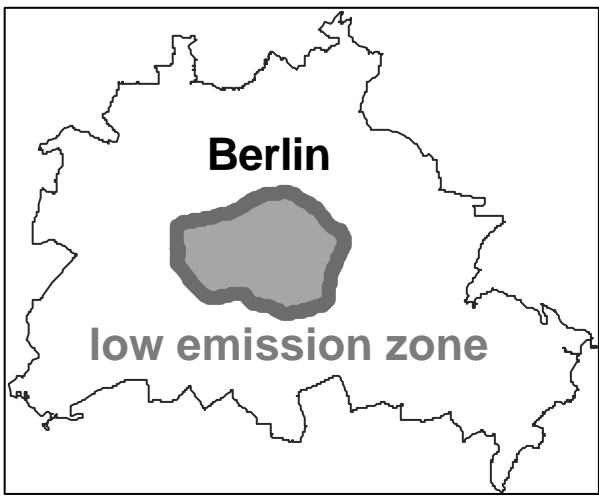
1. lack of effective short-term measures
2. need for strategic and consequent integration of spatial and transport planning, organisation of traffic and introduction of clean vehicles

The Berlin approach, e.g.:

- „combi-lanes“
- speed-limits (30 km/h in resident. areas, dynamic on highways)
- traffic restrictions for heavy duty vehicle (night time, ...)
- low emission zone (inner city: 100 km², 1 mio inhabitants)
 - > step 1 in 2008: minimum Euro II for all diesel vehicle
 - > step 2 in 2010: minimum Euro III + filter for all diesels, minimum Euro II for all petrol vehicles



combi-lanes



low emission zone



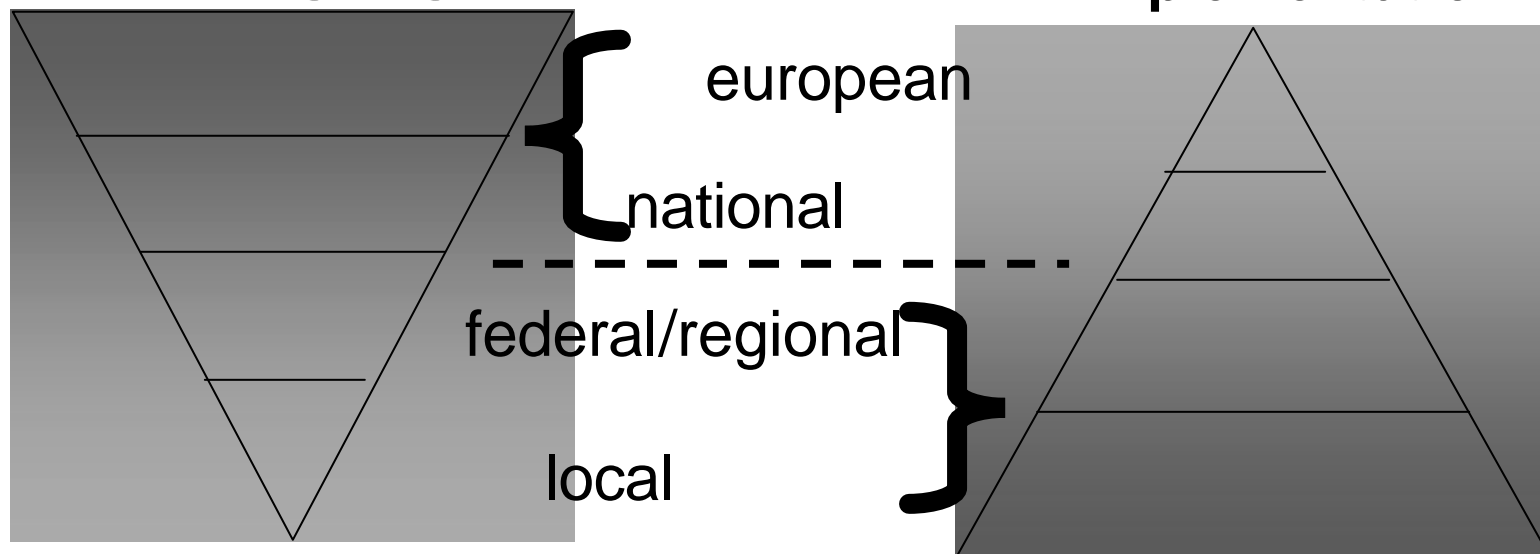
night time restrictions



speed limits

**involvement
in rule making (legislation)**

**political problems
in implementation**



deficits in implementation-oriented legal elements

- emission labeling (european-wide „interoperability“)
- traffic sign for low emission zones
- technical regulations for retrofitting particulate traps
- fiscal regulation to introduce retrofitted particulate traps

missing reliability for planning and investment
(fleet operators, car manufacturers, environmental authorities, ...)

**It is a marathon race to bring transport
and air quality together - let us do it!**

A black and white photograph of a large crowd of runners participating in a marathon race. The runners are running through the Brandenburg Gate in Berlin. The gate is a large, classical structure with six columns and a quadriga sculpture on top. The runners are in the foreground, and the gate is in the background. The text "Thank you for your attention." is overlaid on the image.

Thank you for your attention.