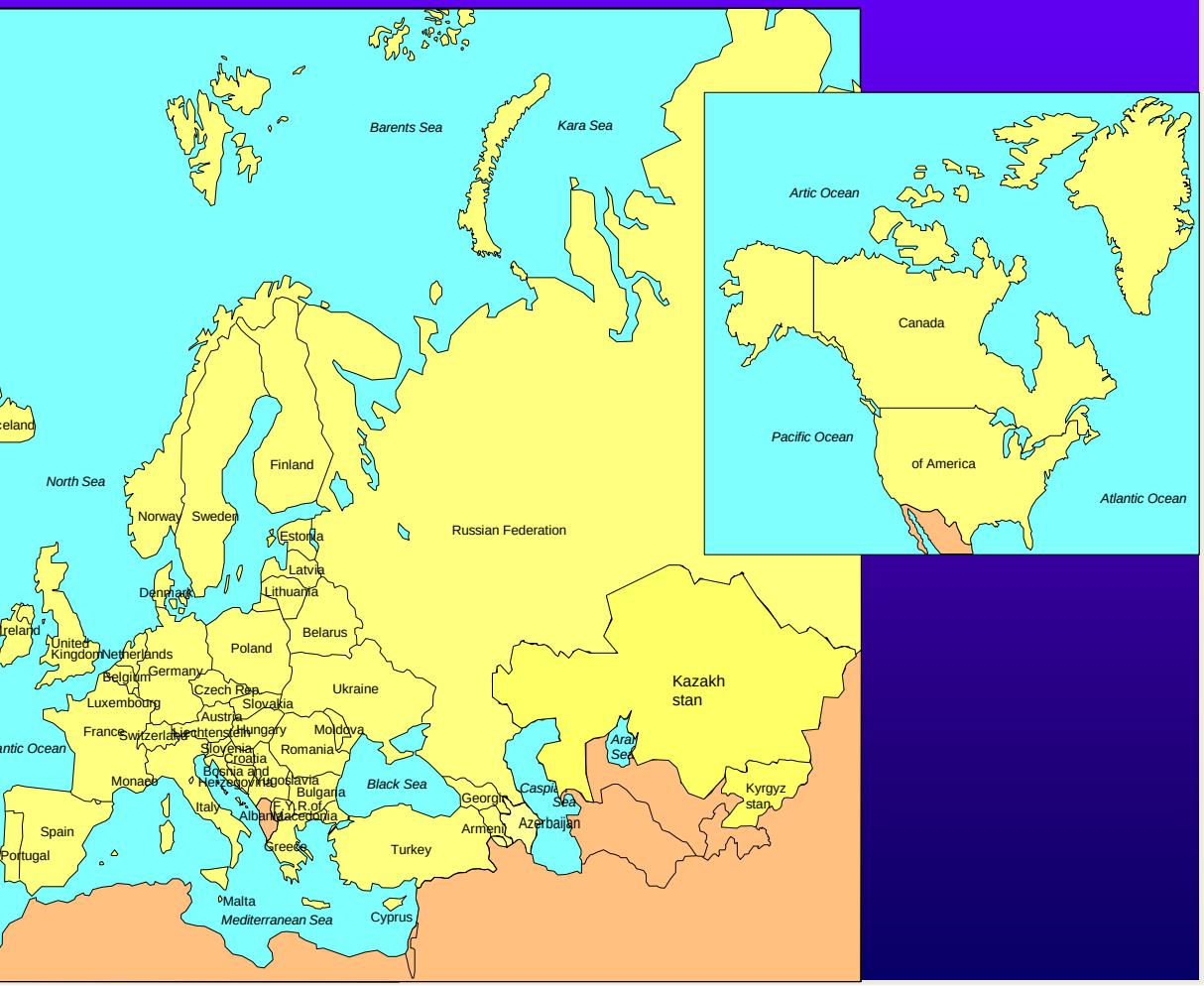
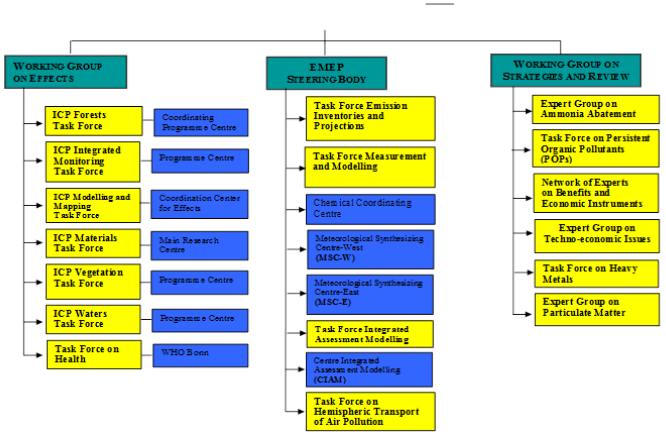
Past achievements and future challenges – ozone regulation under the UNECE Air Convention

Anna Engleryd

CONVENTION ON LONG-RANGE TRANSBOUNDARY AIR POLLUTION



- Signed in 1979, entered into force1983
- 51 parties
- 8 protocols
- SO2, NOx, NMVOC, NH3, PM2,5, BC, Hm , POP
- Close link between research and policy



The 1984 Protocol on Long-term Financing of EMEP

The 1985 Sulphur Protocol (The 30% club)

The 1988 NOx Protocol

The 1991 VOC Protocol

The 1994 Sulphur Protocol

The 2003 Protocol on Heavy Metals and its amended version

The 1998 protocol on POPs and its amended version

The 2005 Gothenburg protocol and its amended version

The Gothenburg Protocol

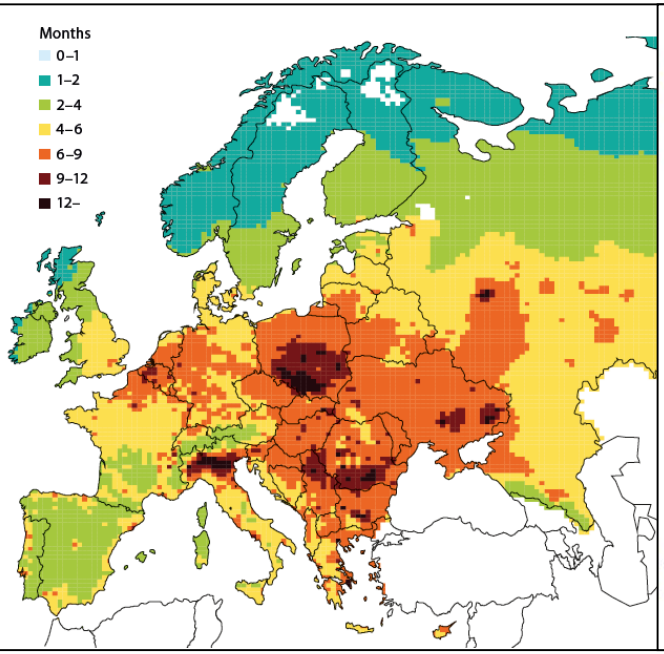
to Abate Acidification, Eutrophication and Ground-level Ozone

- Adopted in Gothenburg on 30 November 1999.
- Multi effect- multi pollutant
- Ecosystem effects and health
- Emission ceilings for sulphur, NOx, VOC, NH3 for the year 2010
- Guidance documents

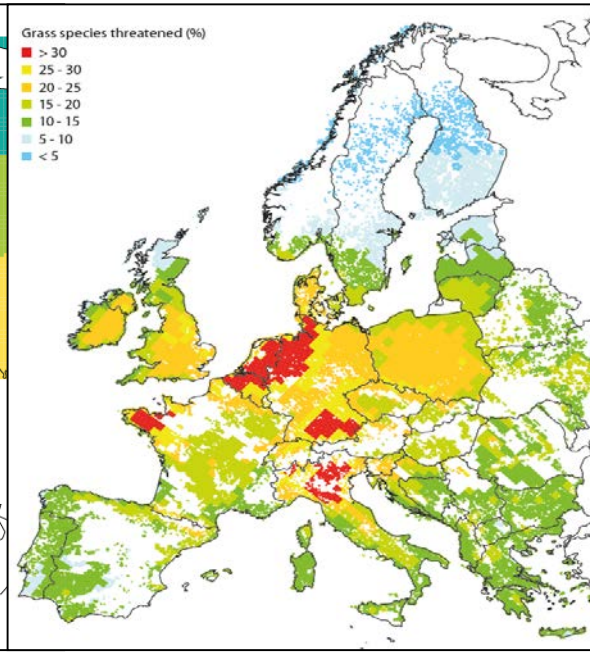
- abatement techniques and economic instruments

- Amended in 2012
- New tighter ceilings for the year 2020
- Commitment also for PM 2,5 – including BC
- Health and ecosystem effects , SLCP

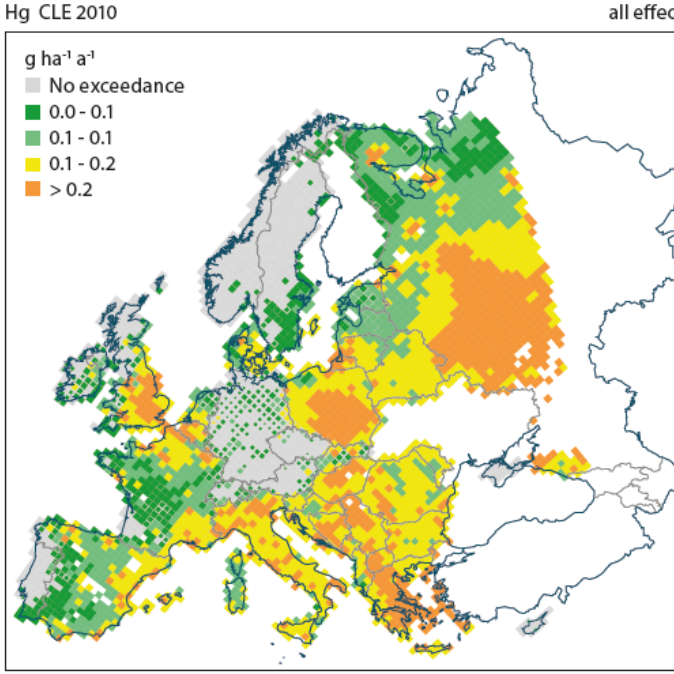
Air pollution still causes serious damage to health and ecosystems



Loss of life expectance (months)



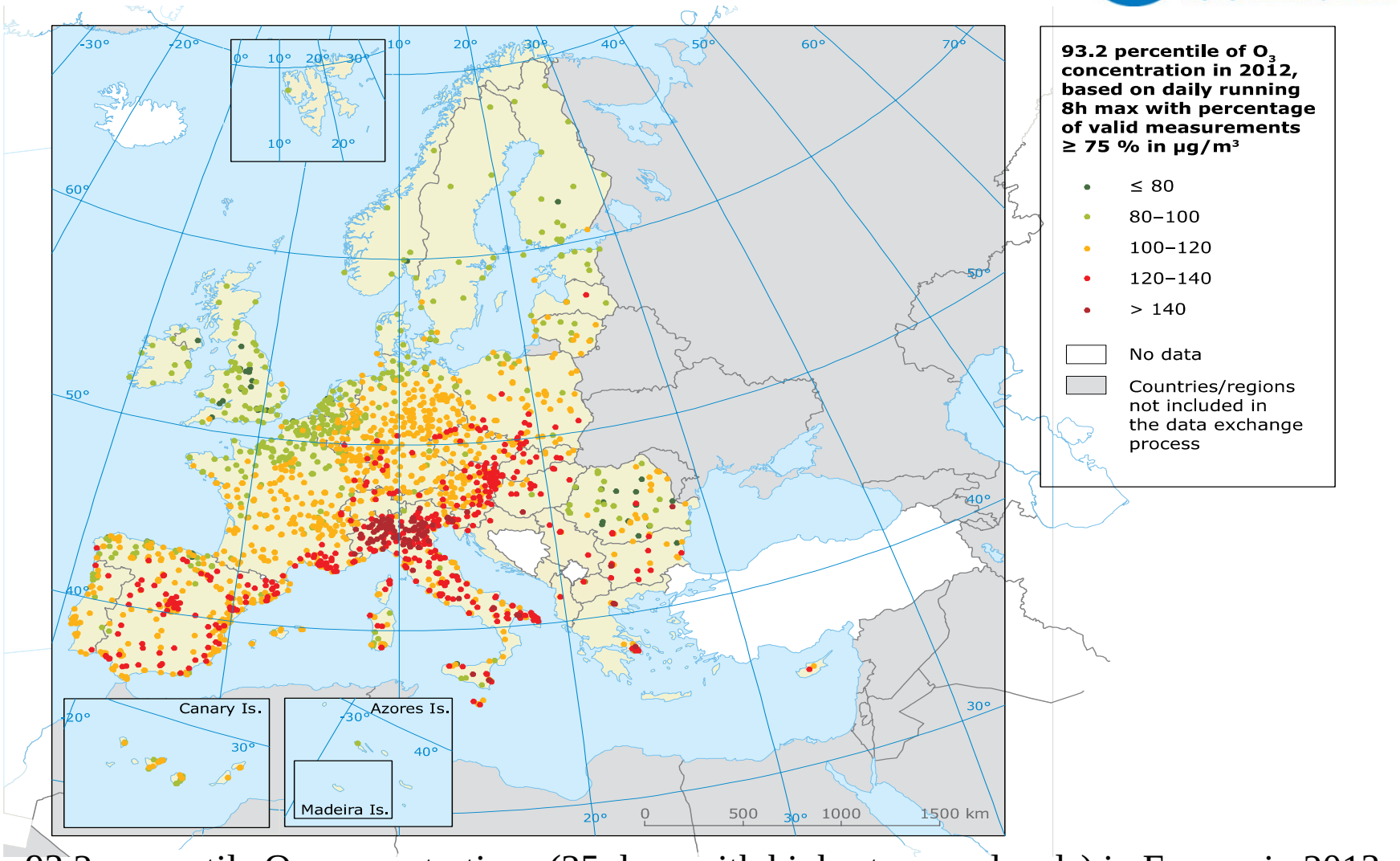
Plant species loss (% threatened)



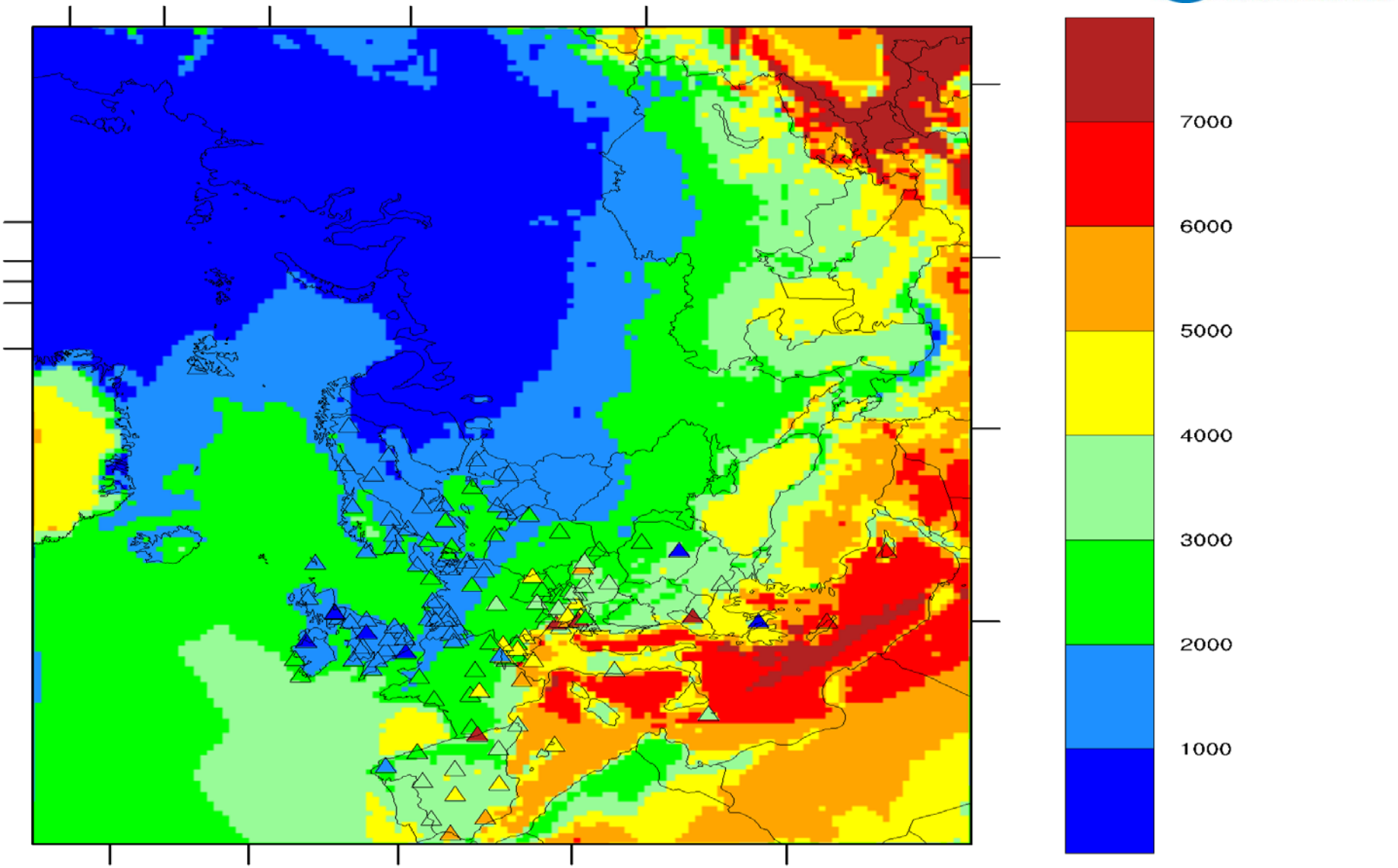
Mercury accumulation in soil (CL-exceedance)

Lower peak ozone levels, but no decline in average concentrations

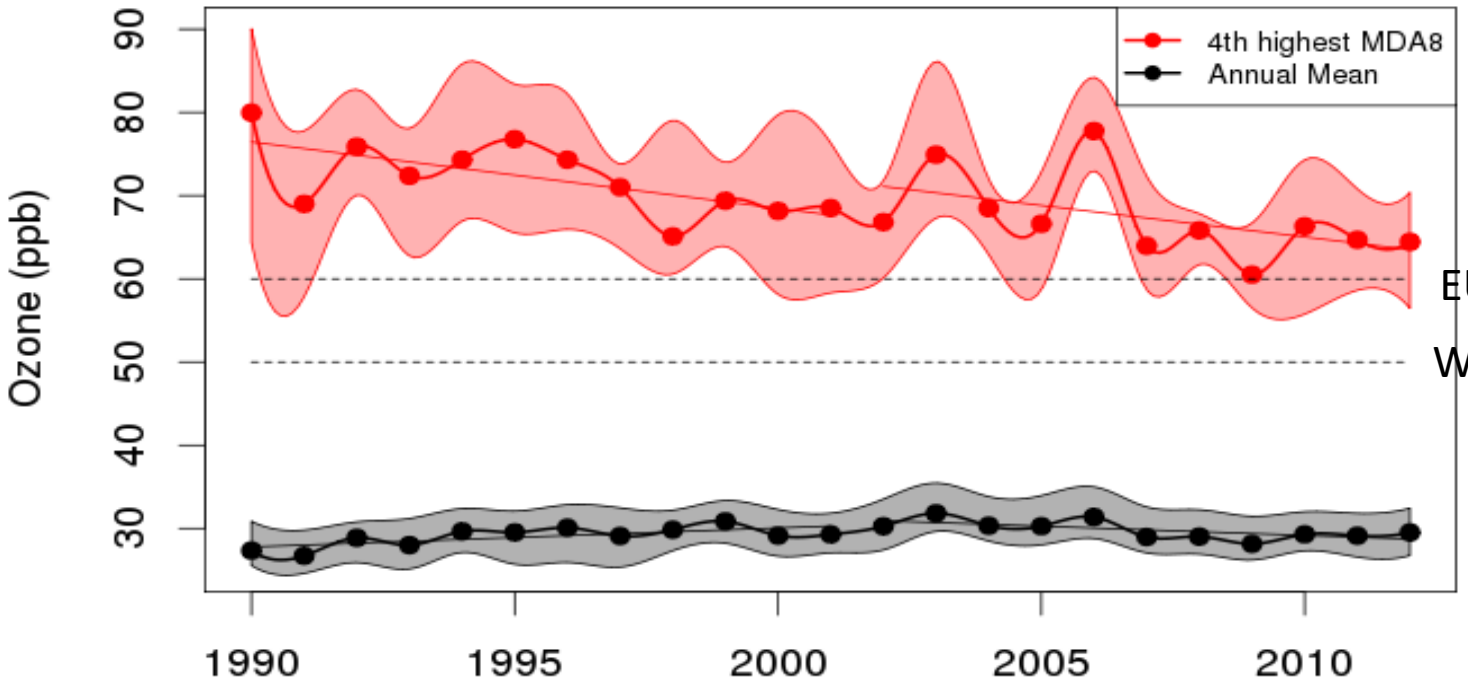

UNECE
Towards Cleaner Air
Scientific Assessment Report 2016



The 93.2 percentile O_3 concentrations (25 days with highest ozone levels) in Europe in 2013. Red means exceedance of the Eu Ambient AQ Directive target value for more than 25 days/year. Source: EEA, 2015.

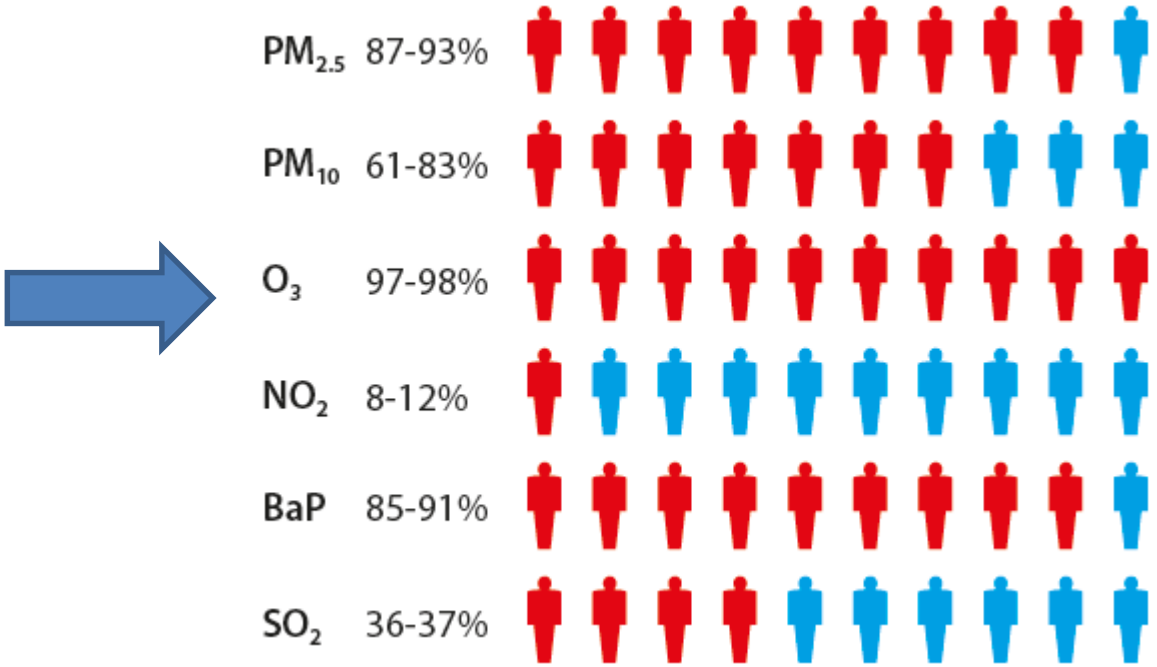


Calculated SOMO35 data for 2013 together with observations
Source: EMEP, 2015

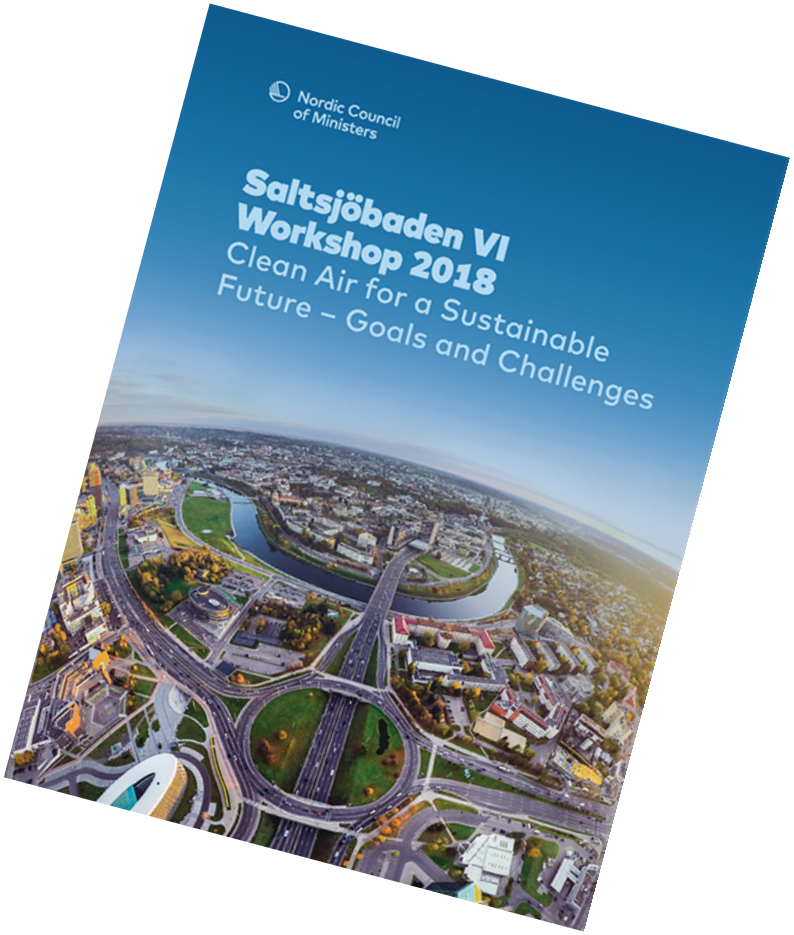


Evolution of ozone peak concentrations and annual mean concentrations.
(54 EMEP monitoring stations) Source: TFMM 2016

Majority of the EU population is exposed to concentrations above WHO guideline values



Source: EU Commission



http://urn.kb.se/resolve?urn=urn:nbn:se:norden:org:diva-5322

https://www.unece.org/env/lrtap/welcome.html.html

What's next ?

- Ratification and implementation
- Update of the Long Term Strategy dec 2018
  - Health effects of ozone and PM
  - The importance of Nitrogen for acidification and eurtrophication
  - Long term risks, HM and POP
  - Transcontinental transport of air pollutants
  - The importance of long range tansport for the air quality in cities
  - Links climate change – ecosystems - air pollution

- Next generation of policy instruments ?
- New substances ?
- Geographical coverage ?
- Special session on global cooperation in december 2018

Towards an integrated approach

In summary

- A lot has been achieved – but there is more to be done
- Air pollution remains to a large extent an international problem
- Air pollution policy matters
- Measures are available
- There are established policy arenas
- Work on different scales needed
- Ozone is an intercontinental issue

Thank you !