

# The National Emission Ceilings Directive State of Play & Outlook

39th Session of the Task Force on Integrated Assessment Modelling

24 February 2011, Stockholm

**Thomas VERHEYE**  
Deputy Head of Unit  
Industrial Emissions, Accidents, Air Quality & Noise  
DG Environment  
European Commission





2005

# Thematic Strategy on Air Pollution

National Emission Ceilings Directive

Transport

Energy

Agriculture

Industry

Households

Waste

Ambient Air Quality Directives



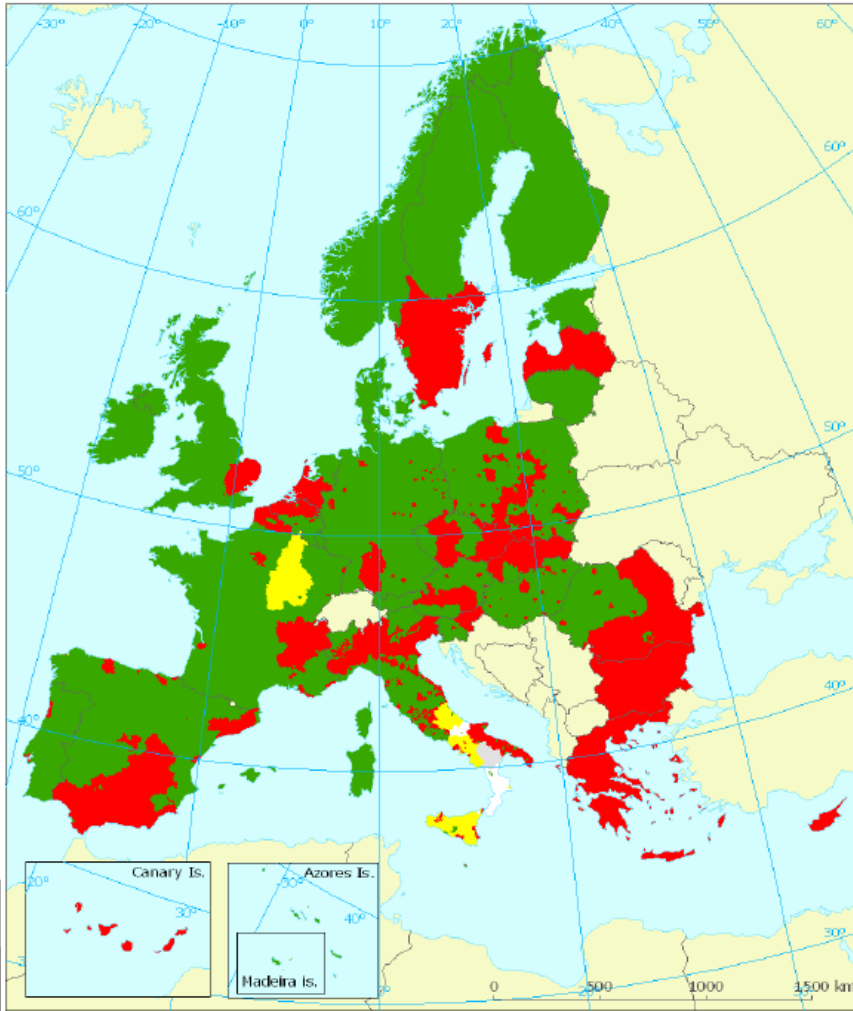
# Thematic Strategy on Air Pollution (2005)

## *Sectoral Actions*

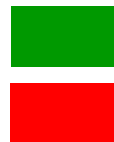
- **Updated Health and Environment Standards**
  - Review of existing ambient air quality legislation (PM2.5, streamlining)
  - Review of national emissions ceilings (2020, PM, streamlining)
- **New Actions to Reduce Emissions for Meeting Interim Objectives**
  - Measures on Industrial Emissions (VOC, IED) (small combustion plants...)
  - Measures in the Energy Sector (Renewable Energy, Energy Efficiency)
  - Measures in the Transport Sector (EURO vehicle and fuel standards,,)
  - Measures in the Agricultural Sector (Ammonia)
  - Measures at the International Level (IMO, CLRTAP, ...)
- **National and Local Measures**
  - Air Quality action plans (national & local, long-medium-short term)
  - National emission reduction plans

# Air Quality Standards

## PM<sub>10</sub> daily limit value exceedances in 2008



## NO<sub>2</sub> annual limit value exceedances in 2008



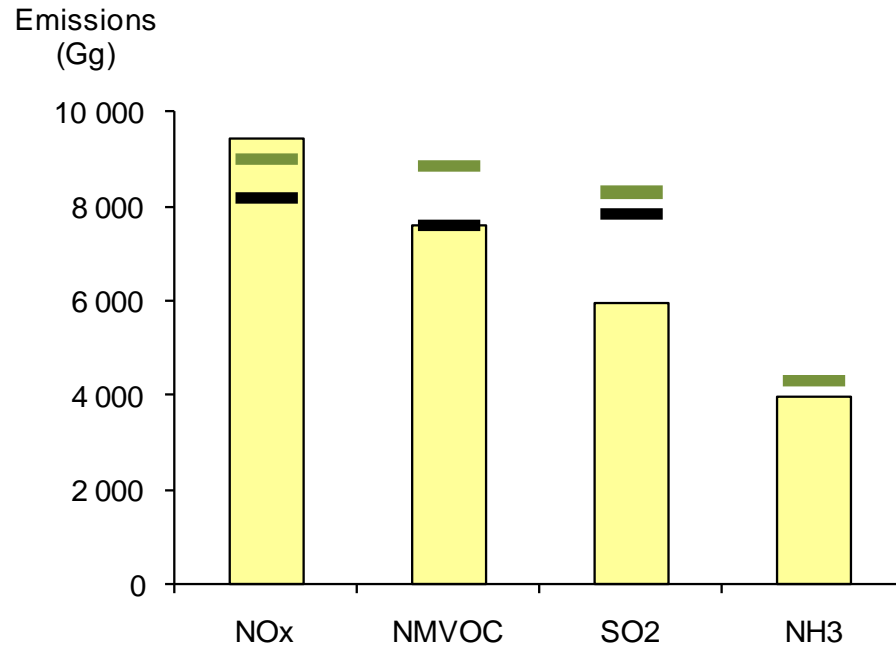
≤ limit value

> limit value



environment

# National Emission Ceilings



□ WM projections 2010

— Emission ceiling 2010 (Annex I)

— Emission ceiling 2010 (Annex II)

## Aggregated EU-27 emissions ceilings and projected emissions for 2010

*The emission ceilings shown are the aggregated EU-27 emission ceilings defined in Annex I and Annex II of the NECD. Annex II of the NECD does not define a ceiling for NH3. Projections are aggregates of the projections reported by individual Member States.*

- Limits trans-boundary air pollution
- Sets cost-effective ceilings to achieve common EU standards at lowest cost
- Enables flexibility to implement national measures adapted to national circumstances
- Current ceilings refer to 2010 and do not include PM

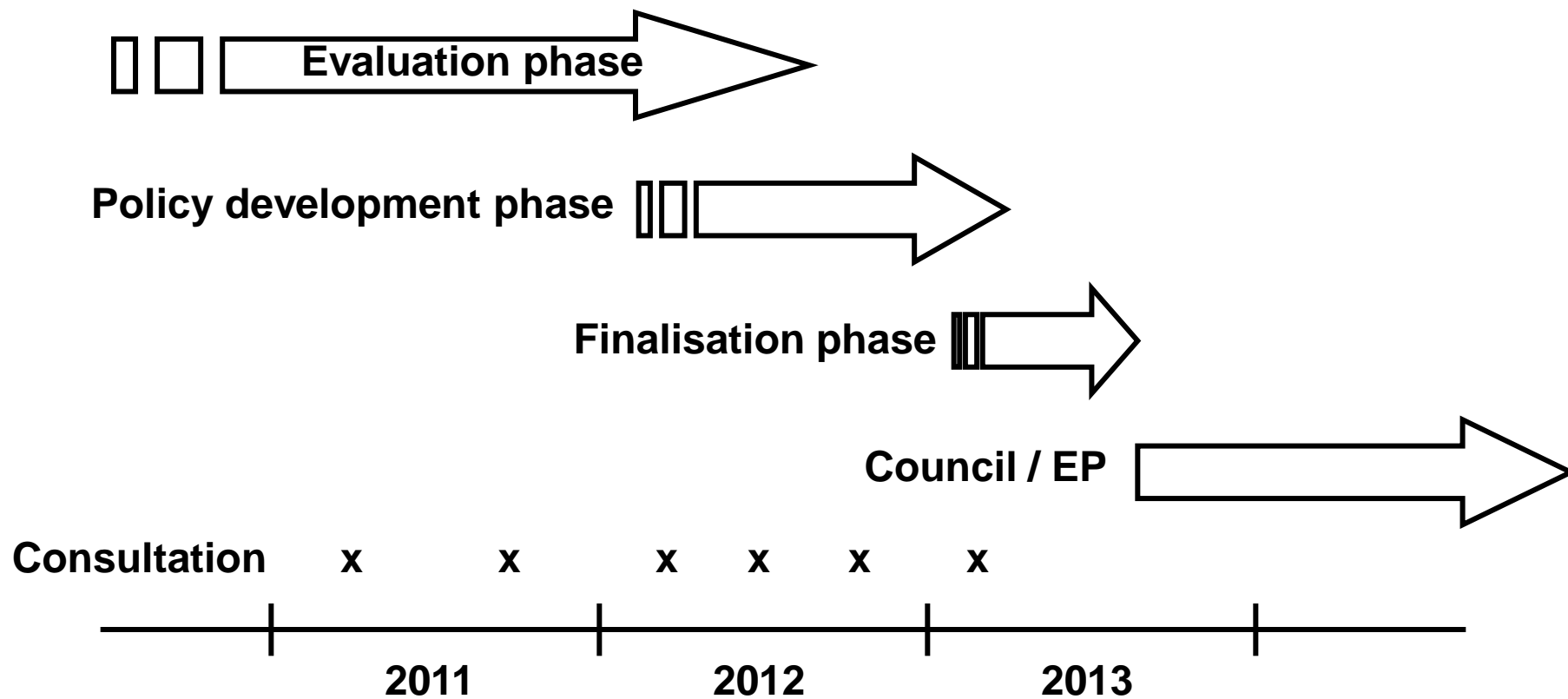
# European Commission College Debate

- **Stand-still is not an option (cost of inaction)**
- **Enforcement & compliance promotion**
- **Sulfur in shipping fuels**
- **Vehicle emissions and NRMM**
- **International (Gothenburg Protocol)**
  
- **Finish comprehensive review of EU Air Quality Policy by 2013 (latest)**
- **Revising NEC directive as part of the review**
- **Co-benefits with climate change agenda**
- **Other (transport, agriculture, small scale combustion, research,...)**
- **Link to Europe 2020 objectives, e.g. Innovation**
  
- **Close co-operation with Member States and Stakeholders**

# Key elements of the Review

- **EU Thematic Strategy on Air Pollution (2005)**
- **Review of the current air quality and emission ceiling legislation** (including reasons for non-compliance)
- **Review of the current air quality limits and targets**
  - PM<sub>2.5</sub> as required by Directive
  - Latest scientific evidence of air pollution impacts for ozone, PM<sub>10</sub>, heavy metals, PAHs, others?
  - new targets – long term objectives (2020 – 2030 – 2050?)
- **Link to climate change** (eg. co-benefits, short lived climate species, black carbon, minimise trade-offs)
- **Integration into sectorial policies** (transport, energy, vehicle emissions, etc.) – already 2011 (White Paper and 2050 roadmaps)
- **Possible new measures**
- **Simplification / smart regulation / streamlining**

# Process and timetable





# Thank You

**Further information:**

[http://ec.europa.eu/environment/air/index\\_en.htm](http://ec.europa.eu/environment/air/index_en.htm)



# EU Air Quality Standards

<i>Pollutant</i>	<i>Concentration</i>	<i>Attainment deadline</i>	<i>Permitted exceedences each year</i>
Carbon monoxide	10 mg/m <sup>3</sup>	1.1.2005	
Sulphur dioxide	350 µg/m <sup>3</sup>	1.1.2005	24
	125 µg/m <sup>3</sup>	1.1.2005	3
Nitrogen dioxide	200 µg/m <sup>3</sup>	1.1.2010	18
	40 µg/m <sup>3</sup>	1.1.2010	
PM <sub>10</sub>	50 µg/m <sup>3</sup>	1.1.2005	35
	40 µg/m <sup>3</sup>	1.1.2005	
Fine particles (PM <sub>2.5</sub> )	25 µg/m <sup>3</sup> ***	1.1.2015	
Lead (Pb)	0.5 µg/m <sup>3</sup>	1.1.2005	
Benzene	5 µg/m <sup>3</sup>	1.1.2010	
Ozone	120 µg/m <sup>3</sup>	1.1.2010 (TV)	25 days averaged over 3 years
Arsenic (As)	6 ng/m <sup>3</sup>	1.1.2012 (TV)	
Cadmium (Cd)	5 ng/m <sup>3</sup>	1.1.2012 (TV)	
Nickel (Ni)	20 ng/m <sup>3</sup>	1.1.2012 (TV)	
PAHs	1 ng/m <sup>3</sup> (Benzo(a)pyrene)	1.1.2012 (TV)	

# EU Air Quality Standards vs. latest WHO,...

Pollutant	EU	WHO	USA
SO <sub>2</sub>	350µg/m <sup>3</sup> (1 hour) 125 µg/m <sup>3</sup> (24 hour)	500 µg/m <sup>3</sup> (10 min) 20 µg/m <sup>3</sup> (24 hour) with interim target of 50 µg/m <sup>3</sup>	200 µg/m <sup>3</sup> (1 hour) <sup>[3]</sup> 370 µg/m <sup>3</sup> (24 hour) <sup>[4]</sup> 80 µg/m <sup>3</sup> (annual)
NO <sub>2</sub>	200 µg/m <sup>3</sup> (1 hour) 40 µg/m <sup>3</sup> (annual)	200 µg/m <sup>3</sup> (1 hour) 40 µg/m <sup>3</sup> (annual)	200 µg/m <sup>3</sup> (1 hour) 100 µg/m <sup>3</sup> (annual)
O <sub>3</sub>	120 µg/m <sup>3</sup> (max daily 8 hour mean)	100 µg/m <sup>3</sup> (max daily 8 hour mean)	150 µg/m <sup>3</sup> (8 hour mean)
PM <sub>10</sub>	50 µg/m <sup>3</sup> (24 hour) 40 µg/m <sup>3</sup> (annual)	50 µg/m <sup>3</sup> (24 hour) 20 µg/m <sup>3</sup> (annual) with interim target of 50µg/m <sup>3</sup> and 30µg/m <sup>3</sup>	150 µg/m <sup>3</sup> (24 hour)
PM <sub>2.5</sub>	25 µg/m <sup>3</sup> (annual)	10 µg/m <sup>3</sup> (annual) with interim target of 15 µg/m <sup>3</sup> 25 µg/m <sup>3</sup> (24 hour) with interim targets of 75, 50 and 37.5 µg/m <sup>3</sup>	15 µg/m <sup>3</sup> (annual averaged over 3 years) 35 µg/m <sup>3</sup> (24 hour )
CO	10 mg/m <sup>3</sup> (max daily 8 hour mean)		10 mg/m <sup>3</sup> (8 hour mean)