



# 31st IAPSC: Forthcoming issues and EC Directives

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- **Air quality framework and daughter directives**
- **Proposal for a 4th DD on heavy metals and PAH**
- **Implementation of adopted DD**
- **CAFE**



# AQ FWD 96/62/EC

- lists pollutants for which limit values are to be set
- sets out framework to manage AQ
  - ◆ assessment of AQ
  - ◆ monitoring methods and networks
  - ◆ plans and programmes to improve AQ
  - ◆ reporting to Commission
  - ◆ information of the public



# Daughter Legislation [1]

## ■ 1999/30/EC

- ◆ NO<sub>x</sub>, SO<sub>2</sub>, Particulate Matter (PM 10), Pb
- ◆ implementation by 19.07.2001

## ■ 2000/69/EC

- ◆ CO and benzene
- ◆ implementation by 13.12.2002



# Limit values set by 1999/30/EC and 2000/69/EC

■	SO <sub>2</sub>	Hourly	350 mg/m <sup>3</sup>	24 exceedances	2005
■		Daily	125 mg/m <sup>3</sup>	3 exceedances	2005
■	NO <sub>2</sub>	Hourly	200 mg/m <sup>3</sup>	18 exceedances	2010
■		Annual	40 mg/m <sup>3</sup>		2010
■	PM <sub>10</sub>	Daily	50 mg/m <sup>3</sup>	35 exceedances	2005
■		Annual	40 mg/m <sup>3</sup>		2005
■	Lead	Annual	0.5 mg/m <sup>3</sup>		2005
■	CO	8-hour-mean	10 mg/m <sup>3</sup>		2005
■	Benzene	Annual	5 mg/m <sup>3</sup>		2010



# Daughter Legislation [2]

## ■ 3rd Daughter Directive

- ◆ ozone
- ◆ adoption expected for January 2002
- ◆ transposition 2003

## ■ 4th Daughter Directive

- ◆ arsenic, cadmium, nickel, mercury and PAH
- ◆ BaP going to be used as a marker
- ◆ proposal under preparation



# Political agreement on Ozone: Human health

- **target value for 2010:**  
8 h-mean **120  $\mu\text{g}/\text{m}^3$**   
25 days of exceedance
- **long-term objective:** no exceedances
- **information threshold:** 1h **180  $\mu\text{g}/\text{m}^3$**
- **alert threshold:** 1h **240  $\mu\text{g}/\text{m}^3$**



# Political agreement on Ozone: Vegetation

## ■ target value for 2010:

annual                      AOT 40                      18.000  $\mu\text{g h/m}^3$

## ■ long-term objective:

annual                      AOT 40                      6.000  $\mu\text{g h/m}^3$



# 4th DD [1]: Limit values under consideration

■ As	6 ng/m <sup>3</sup>	excess risk 1:10 <sup>-5</sup> (possible threshold)
■ Cd	5 ng/m <sup>3</sup>	excess risk 1:10 <sup>-5</sup> (confounding by As)
■ Ni	20 ng/m <sup>3</sup>	excess risk 1:10 <sup>-5</sup> (speciation )
■ BaP	1 ng/m <sup>3</sup>	excess risk 1:10 <sup>-4</sup> (possible threshold)
■ Hg	50 ng/m <sup>3</sup>	not going to be proposed





# 4th DD [2]: Relevant sources

## ■ PAH

- ◆ residential heating
- ◆ cokeries
- ◆ road traffic

## ■ Heavy metals

- ◆ non-ferrous metals industry
- ◆ iron and steel industry
- ◆ refineries (Ni)



# 4th DD [3]: Current ambient air concentrations

values in ng/m <sup>3</sup>	As	Cd	Ni	BaP
<i>proposed limit value</i>	6	5	20	1
rural	1.5	0.4	2	< 1
urban	< 3	< 2.5	< 13	< 3
industrial	up to 120	up to 40	up to 30	up to 30



## 4th DD [4]: Consequences for legislation

- health based limit values can not be attained by applying BAT
- options for legislation:
  - ① set limit values, but foresee derogation near industrial installations
    - ◆ time limited until 2015
    - ◆ enforces application of Art 10 IPPC
  - ② set no limit values, but require monitoring and reporting
    - ◆ disproportionate measures would be avoided
    - ◆ “blame and shame”



# 4th DD [5]: Current proposal

- option 1 for PAH
- option 2 for heavy metals
- review in 2009 with regard to
  - ◆ new findings on health effects
  - ◆ effects via all routes of exposure, e.g. also ingestion
  - ◆ results from implementing IPPC

# 4th DD [6]: Time line



- entry into force (estimate) 2004
- implementation + 2 years 2006
- first full year of monitoring 2007
- IPPC for existing installations Oct 2007
- report on AQ in zones each year; first by Sep 2008
- notification of derogation Dec 2008
- report on measures every 3 years; first by Dec 2009
- Cion report Dec 2009
- foreseen end of derogation 2015

## 4th DD [7]:



# CEN Standards on monitoring

- PM 10
  - ◆ available
- As, Ni, Cd in ambient air
  - ◆ ratification of Standard by 2005
- BaP
  - ◆ Mandate under preparation
  - ◆ ratification of Standard by 2006
- Hg
  - ◆ Mandate considered for 2002

# Derogation and IPPC [1]



## ■ **Article 8:**

Where one of the limit values laid down in Annex I to IV cannot be achieved due to substantial contributions from specific industrial sources a Member State may ask for a time-limited extension to meet this limit value within the area concerned. The Commission acting in accordance with the procedure laid down in Article 11(2) may, at the request of a Member State grant such an extension until 2015 if the Member State can demonstrate the application of all cost effective measures in the area concerned and in particular the application of best available techniques to all industrial installations contributing to the exceedance, notwithstanding the application of Article 10 of directive 96/61/EC to those installation listed in Annex I of that directive.



# Derogation and IPPC [2]

## ■ **Article 8 ctnd:**

**The Member State must notify to the Commission before 1 January 2009 the request for an extension together with the area to which the extension should apply. The Member State must provide information on all measures taken and in particular a list of the industrial installations contributing to the exceedance and the techniques applied to them. Monitoring in accordance with the requirements of Annex VI shall be mandatory in that area.**





# Derogation and IPPC [3]

## ■ IPPC Art 10:

**Where an environmental quality standard requires stricter conditions than those achievable by the use of the best available techniques, additional measures shall in particular be required in the permit, without prejudice to other measures which might be taken to comply with environmental standards.**



# Implementation

## ■ Key issues

- ◆ assessment of air quality and reporting
- ◆ setting up plans and programmes

## ■ Working group on Implementation

- ◆ monitoring at hot spots
- ◆ harmonisation of modelling
- ◆ attainment strategies

## ■ Reports and background information available

## ■ Webpage:

<http://europa.eu.int/comm/environment/air/background.htm#ambient>



# Clean Air for Europe - CAFE

- Integrated strategy to improve AQ
- Key issues
  - ◆ stakeholder involvement
  - ◆ sector integration
  - ◆ indicator based
  - ◆ baseline scenario
  - ◆ integrated assessment of costs and benefits
- Workplan undergoing finalisation
- 1st CAFE report by 2005