Air quality legislation
Croatia and Turkey – the screening process

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In Europe, about 370,000 people prematurely die every year due to bad air quality [CAFE 2005]

Air pollution is also causing severe damage to ecosystems through acid rain and deposition of eutrophying substances.

Air does not respect borders
Air Pollution vs. Air Quality

- **Air Pollution**
  - Man-made emissions of pollutants into the air
  - Pollutants disperse, travel distances, go through chemical transformations in the atmosphere

- **Air Quality**
  - Concentrations in the near-ground ambient air
  - People breathe, get exposed to bad air quality
    - it affects their health

- **Improvement and protection through**
  - reduction of Air Pollution (emissions)
  - standards on Air Quality (concentrations)
Scope and Objective of AQ Directives

- **Framework Directive 96/62/EC Art. 1**
  - Establish common objectives for ambient air quality to avoid, prevent or reduce harmful effects on human health & environment
    - Limit values
    - Target values (to be attained where possible)
  - Assess ambient air quality on the basis of common methods and criteria
  - Public information
  - Maintain ambient air quality where it is good and improve it in other cases
• Directive 96/62: key obligations applying to all pollutants
  ○ designation of competent authorities, bodies
  ○ preliminary assessment
  ○ zones and agglomerations
  ○ assessment: measurement/modelling
  ○ public information
  ○ plans and programmes
  ○ reports to the Commission
Air Quality Daughter Directives (1)

- All include minimum monitoring requirements, stations criteria, reference methods
- Environmental standards kick-in at different times (2005, 2010), until that time for some pollutants application of older Community legislation

- Directive 99/30: limit values for PM$_{10}$, NO$_2$, NO$_x$, SO$_2$ and lead
  - Includes provisions for natural events, winter-sanding
Air Quality Daughter Directives (2)

- **Directive 2000/69: limit values for benzene and CO**
  - Includes a derogation scheme for benzene

- **Directive 2002/3:**
  - Target values for Ozone, includes long-term objectives
  - Monitoring of ozone precursors (NO$_2$, VOCs)
  - Additional reporting of provisional summer data
  - Extended provisions on cooperation due to transboundary pollution

- **Directive 2004/107:**
  - Target values BaP, As, Cd, Ni
  - Monitoring Hg, PAH, background measurements
Exchange of Information
Council Decision 97/101/EC

- **Objective**
  - Member States share monitoring data and metadata

- **A reporting obligation**
  - Mandatory to exchange primary data from all stations used in the assessment under AQ directives

- **AIRBASE**
  - European wide air quality database
  - Run by ETC/ACC, under contract by EEA
  - Data availability

  - [http://air-climate.eionet.eu.int/databases/airbase.html](http://air-climate.eionet.eu.int/databases/airbase.html)
Key tips

- Limit values apply everywhere
- Limit values for $PM_{10}$ and $SO_2$ are mandatory as from 1st January 2005!
- Serious compliance issues with PM10 throughout Europe
- $NO_2$ anticipated to have similar issues in 2010
Health issue: citizens complain!

Source of complaints in current MSs:

- Failure to measure concentrations
- Failure to inform the public
- Failure to establish plans and programmes
- Lack of penalties (must be effective, proportionate and dissuasive)
- ...and from 2005, compliance with the limit values!
Compliance checklist (1)

- Make sure that the concentration levels are assessed (by measuring or modelling) for all the regulated pollutants in all zones and agglomerations; don’t forget that measurement is mandatory in all agglomerations.
  - Are siting criteria, data quality objectives respected?
  - Have you demonstrated equivalence (if not using the reference method)?

- Ensure up-to-date and regular information of your citizens (and don’t forget to report to the Commission)
Compliance checklist (2)

- Draw up the list of zones and agglomerations for which a plan or program is required (= those in which one or more pollutant exceed limit values + margin of tolerance);

- Establish the plans and programs for attaining the limit values, and « target » your plan in accordance with the specific sources of pollution: complying with the limit values may be difficult, but you will be much more vulnerable to legal challenge if you don’t even try!
The Proposal to revise Air Quality legislation
Major conclusions from development (1)

- **Major risk to human health related to PM**
- **Statistical life expectancy currently reduced by 9 months**
- **WHO advice**
  - Long term exposure more important
  - PM$_{2.5}$ better proxy for health effects
  - However, coarser particles as well as short-term exposure must still be addressed: maintain PM10 current limit values
Major conclusions from development (2)

- Need to revise current AQ legislation
- Harmonise legal text
- Reduce provisions where appropriate
- Take account of experience in implementation
- Confirm legal obligations
- Redraft to introduce additional clarify
- Move towards simplified reporting system (shared information system, INSPIRE)
A. Respond to updated health advice
   ⇒ environmental objectives for PM$_{2.5}$

B. Address current compliance problems
   ⇒ flexibility of attainment date

C. Modernize reporting system

D. Miscellaneous
A. **Environmental objectives for PM$_{2.5}$**

**Twin approach:**

1. **Concentration cap to avoid unduly risks**
   from 2010
to be respected everywhere
annual average 25 µg/m$^3$

2. **Exposure reduction target (between 2010 and 2020)**
   - **Aim:** reduce general exposure in urban
     background by 20%
   - **Exposure indicator:** concentration monitored at
     urban background locations, averaged over 3
     years and over all locations
   - **Review within 5 years aiming at legally binding
     obligations**
What’s new (5)

C. **Miscellaneous**

- Additional requirement for background monitoring (supporting EMEP)
- Possibility to discount for contribution of natural sources (not just natural events)
- Further specification on QA/QC
- 4th DD will be codified into proposed AQD after transposition
Summary

- **Bad air quality**
  - the most potent environmental killer
- **Implementation - a challenge**
  - Need for strong commitment on quality of assessment and public information
  - Abatement may require unpopular measures, cooperation between levels of government
  - take advantage of Community tools & funds
  - Follow closely the implementation of the Thematic Strategy on Air Pollution
What’s new (3)

Addressing compliance problems (cont)

2. If attainment date already passed (e.g. PM$_{10}$)

   if LV cannot be achieved because of:
   - site specific dispersion characteristics
   - adverse climatic conditions or
   - transboundary contributions

   exempt to comply with those limit values until 31 Dec 2009 at the latest

   Provided that all conditions as in case 1. are fulfilled (plans and programmes/abatement programme)