



**SCREENING CHAPTER 27  
ENVIRONMENT**

**AGENDA ITEM:  
AMBIENT AIR QUALITY FRAMEWORK Directive  
(96/62/EC)  
AND ITS DAUGHTER Directives  
(1999/30/EC, 2000/69/EC, 2002/3/EC, 2004/107/EC)  
and  
Directive 97/101/EC**

**Country Session: The Republic of TURKEY  
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## CONTENT

- National Legislation and Competent Authorities
- Air Quality Monitoring System
- Assessment of Air Quality
- Public Information
- Studies and Progress
- Further Actions



## NATIONAL LEGISLATION AND COMPETENT AUTHORITIES

### **By-Law on Air Quality Control (AQC);**

- air quality standards for 17 pollutant parameters both in terms of long and short-term limit values,
- target limits and alert thresholds for SO<sub>2</sub> and particulate matter, the measures in general to be taken when alert thresholds are reached,
- principles for measurement and analysis.

### **Competent authorities**

Ministry of Environment and Forestry (MoEF), Ministry of Health (MoH), Governorships and Municipalities



## The long and short term standards for various air pollutants that (AQC):

	Unit	LTS	STS
1. Sulphur dioxide (SO <sub>2</sub> ) Including sulphur trioxide (SO <sub>3</sub> ) a) general b) industrial zones	(µg/m <sup>3</sup> ) (µg/m <sup>3</sup> )	150 250	400(900) 400(900)
2. Carbon monoxide (CO)	(µg/m <sup>3</sup> )	10000	30000
3. Nitrogen dioxide (NO <sub>2</sub> )	(µg/m <sup>3</sup> )	100	300
4. Nitrogen oxide (NO)	(µg/m <sup>3</sup> )	200	600
5. Chlorine (Cl <sub>2</sub> )	(µg/m <sup>3</sup> )	100	300
6. Hydrogen chloride (HCl) and gaseous inorganic chlorine (Cl <sup>-</sup> )	(µg/m <sup>3</sup> )	100	300
7. Hydrogen fluoride (HF) and gaseous inorganic fluorine (F <sup>-</sup> )	(µg/m <sup>3</sup> )	-	10(30)
8. Ozone (O <sub>3</sub> ) photochemical oxidizers	(µg/m <sup>3</sup> )	-	(240)
9. Hydrocarbons (HC),	(µg/m <sup>3</sup> )	-	140 (280)
10. Hydrogen sulfide (H <sub>2</sub> S)	(µg/m <sup>3</sup> )	-	40 (100)

Note: the figures in parenthesis are maximum hourly reference standards



## The long and short term standards for various air pollutants that (AQC) (CONT'D):

	Unit	LTS	STS
<b>11. Suspended particulate matter (PM) (Particles of 10 microns and smaller)</b>			
a) General	( $\mu\text{g}/\text{m}^3$ )	150	300
b) Industrial zones	( $\mu\text{g}/\text{m}^3$ )	200	400
<b>12. Lead (Pb) in PM and its compounds</b>	( $\mu\text{g}/\text{m}^3$ )	2	-
<b>13. Cadmium (Cd) in PM and its compounds</b>	( $\mu\text{g}/\text{m}^3$ )	0.04	-
<b>14. Settling dust (including particles larger than 10 microns)</b>			
a) General	( $\text{mg}/\text{m}^2\text{day}$ )	350	650
b) Industrial zones		450	800
<b>15. Lead (Pb) and its compounds in settling dust</b>	( $\mu\text{g}/\text{m}^2 \text{ day}$ )	500	-
<b>16. Cadmium (Cd) and its compounds in settling dust</b>	( $\mu\text{g}/\text{m}^2 \text{ day}$ )	7,5	-
<b>17. Thallium (Tl) and its compounds in settling dust.</b>	( $\mu\text{g}/\text{m}^2 \text{ day}$ )	10	-





## NATIONAL LEGISLATION AND COMPETENT AUTHORITIES (CONT'D)

The Law on Environment No.2872, as amended by the Law No.5491;

- describes the process on determining, monitoring and measurement of the air quality;
- determines the limit values of air quality and envisages necessary measures to be taken;
- regulates public awareness and access to information

### Competent authority

- MoEF



## COMPETENT AUTHORITY/IES AND BODIES

### 1. Measuring and Inspection Department

- 1. Environmental Inspection Division
- 2. Standards of Environment, Quality Assurance and Training Division
- 3. Laboratory Division

### General Directorate for Environmental Management

### 2. Air Management Department

- 1. Industrial Air pollution Control Division
- 2. Division for Control of Air Pollution Arising from Heating and Motor Vehicles
- 3. Noise and Vibration Control Division
- 4. Transfrontier Air Pollution Control Division
- 5. Division for Monitoring of Fuels and Materials Under Control

3. Water and soil Management Department

4. Waste Management Department

5. Chemicals Management Department

6. Marine and Coastal Management Department



## AIR QUALITY MONITORING SYSTEM

### Relevant Institutions

- Ministry of Health and its provincial directorates
- Ministry of Environment and Forestry and its provincial directorates
- Some municipalities particularly metropolitan municipalities



## AIR QUALITY MONITORING SYSTEM (CONT'D)

### Ambient Air Quality Measurements (Existing Actions)

- Air quality measurements for SO<sub>2</sub> and PM by MoH with semi-automatic measurement stations.
- Measurement of SO<sub>2</sub> and PM<sub>10</sub> parameters by MoEF (full automatic measurement stations) in 36 provincial centers, which are highly polluted.
- Measurement of SO<sub>2</sub>, PM<sub>10</sub>, Ozone and NO<sub>x</sub> parameters in Istanbul, Izmir, Bursa by municipalities (full automatic measurement stations).



## AIR QUALITY MONITORING SYSTEM (CONT'D)

### Ambient Air Quality Measurements (Future Plans)

- 45 new full automatic stations will be established until the end of 2006 by MoEF. The tender for these stations has been finalized.
  - all stations will be connected to the centre of the MoEF.
- 8 measurement stations will be established in Ankara by using the guidelines defined in Directives under Twinning Project.



## ASSESSMENT OF AIR QUALITY

- Information on concentrations of SO<sub>2</sub> and PM are evaluated.
- Cities are classified according to pollution levels as First Degree Polluted Cities or Second Degree Polluted Cities by MoEF.
- The results of the evaluation are announced to the Governorships by Official Circulars.



## ASSESSMENT OF AIR QUALITY (CONT'D)

According to AQC ;

- In case effects harmful to human beings and their environment arise or anticipated in all or a part of a pollution sensitive zone,
- Governorships shall develop Clean Air Plans.



## ASSESSMENT OF AIR QUALITY (CONT'D)

- Governorships have to take necessary measures at provincial level in the form of Action Plans.
- Governorships are authorised to take the following precautions;
  - restriction for mobile installations to operate,
  - temporary restrictions for vehicles, other mobile and stationary sources unless certain clean techniques are being used,
  - restriction for the use of fuels at plants and heating installations increasing air pollution significantly.
  - additional measurements





## ASSESSMENT OF AIR QUALITY (CONT'D)

### Preliminary Assessments

- Preliminary assessment studies have been finalized;
  - for Ankara and Kütahya under Matra Project;
  - for Karabük under Environmental Heavy-Cost Investment Planning for Turkey Project.
  - for Kırıkkale, Eskişehir by the Universities.
  
- In addition, pre-studies for preliminary assessment have been done in Kocaeli and Gaziantep Cities under Twinning Project.



## PUBLIC INFORMATION

- SO<sub>2</sub> and PM concentrations have been measured by the MoH and sent periodically to the TURKSTAT since 1990.
- Data are have been evaluated and published as monthly, winter season and annual news bulletins by TURKSTAT.
- All the bulletins are available on the TURKSTAT web site [www.tuik.gov.tr](http://www.tuik.gov.tr) and news bulletins are announced at the time of release data. They are sent to the media and some officials by e-mail.



## PUBLIC INFORMATION (CONT'D)

- Information on concentration of SO<sub>2</sub> and PM are announced in MoEF's web site [www.laboratuvar.cevreorman.gov.tr](http://www.laboratuvar.cevreorman.gov.tr) for 36 provincial centers.
- In case air quality limit values are exceeded, necessary measures are taken by governorships and the information on air quality is announced to the public by using local TV boards and radio.



## STUDIES AND PROGRESS

- There have been significant reductions in concentrations of both SO<sub>2</sub> and PM in urban areas in the last 5 to 10 years, largely due to the major changes in fuel mix used in these areas:
  - domestic coal with high sulphur content was prohibited for heating by the By-law on Air Pollution Control from Heating
  - major investments were made in gas transport and distribution, so that natural gas could be substituted for coal in several cities.



## STUDIES AND PROGRESS (CONT'D)

- By-Law on Control of Air Pollution Arising From Motor Vehicles in Traffic regarding to the Control of Air Pollution.
- By-Law on Industrial Air Pollution Control was enforced.
- Leaded gasoline was prohibited on 01.01.2006.





## STUDIES AND PROGRESS (CONT'D)

### Project on Capacity Building in the Field of Environment for Turkey, Component 1: Air Quality

- Project completion by the end of 2006.
- Preparation of a draft Framework Law (Air Quality and Air Pollution Control)
- Strengthening institutional capacity
- Development of action plans

## STUDIES AND PROGRESS (CONT'D)

The Technical Study on Ambient Air Quality Assessment and Management in Turkey consists of ;

- Directive 96/62/EC on ambient air quality and assessment (Air Quality Framework Directive)
- Directive 1999/30/EC relating to limit values for SO<sub>2</sub>, NO<sub>2</sub> and NO<sub>x</sub>, PM and Pb in ambient air (First Daughter Directive)
- Directive 2000/69/EC relating to limit values for C<sub>6</sub>H<sub>6</sub> and CO in ambient air (Second Daughter Directive)
- Directive 2002/3/EC relating to O<sub>3</sub> in ambient air (Third Daughter Directive)
- Directive 2004/107/EC relating to As, Ca, Cd, Hg, Ni and P(a)H in ambient air (Fourth Daughter Directive)



## STUDIES AND PROGRESS (CONT'D)

### Progress Under the Twinning Project;

- Technical Study on Ambient Air Quality Assessment and Management was prepared and sent to related institutions for assessment.
- Designation of zones and agglomerations with a view of the ambient air quality assessment
- Preparation of a Strategic Action Plan for Air Quality are in progress.



## STUDIES AND PROGRESS (CONT'D)

### Studies Regarding Council Decision (97/101/EC);

- Project on Institutional Building and Access to Environmental Information.
- The project, "Strengthening of the implementation of the Council Directive 96/62/EC and Council Decision 97/101/EC on ambient air quality assessment and management, and reciprocal information exchange in the Refik Saydam Centre of Hygiene, Ministry of Health, Turkey".
- The Twinning Air Quality Project under Project on Capacity Building in the Field of Environment for Turkey.



## **STUDIES AND PROGRESS (CONT'D)** **(Council Decision)**

### **Main Objectives of Project on Institutional Building and Access to Information:**

- to develop an Environmental Information System,
- to support the requirements of national and international reporting obligations,
- to access to current environmental data,
- to ensure reporting on the status of the environment to the European Environment Agency.





## FURTHER ACTIONS

- Revision of AQC,
- A Strategy on Air Quality,
- Strengthening of institutional capacity,
- Investment cost of establishing of a network with air quality monitoring stations (maintenance, calibration, quality management, data validation etc.).



***THANK YOU FOR YOUR ATTENTION***