EU LEGISLATION ON AIR POLLUTION AND ACIDIFICATION

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Up to the early nineties, EU policy in regard to air pollution had tended to be fragmented. Such directives as existed were either those setting air-quality standards for a few selected air pollutants such as sulphur dioxide and nitrogen oxides, or others to control emissions from certain defined sources such as large power plants and road vehicles.

Some first steps towards a more clearly aimed and strategic policy could be seen in the fifth environmental action program, which was presented in 1992 and contained proposals for long-term environmental objectives both for air quality and acidification. As regards the former it stated that "all people should be effectively protected against recognized health risks from air pollution," and that "permitted concentration levels of air pollutants should take into account the protection of the environment." For the acidifying, ozone-forming, and eutrophying pollutants – sulphur dioxide, nitrogen oxides, volatile organic compounds, and ammonia – the aim was that there should be "no exceeding ever of critical loads and levels."

Also dating from 1992 was the auto-oil program, aimed at setting new environmental requirements for road vehicles (cars, trucks, and buses) and motor fuels. The requirements were to match certain defined aims for air quality and accord with the World Health Organization guidelines. They were to be cost-effectively attained by 2010. That program, which was concluded in 1996, resulted in several new directives being adopted in 1998 and 1999.

The mid-nineties also saw the emergence of a framework directive on air quality as well as a completely new directive for the integrated prevention and control of the pollution of air, water, and land (IPPC). The framework directive on air quality provided the springboard for various daughter directives setting limits to the concentrations of several separate air pollutants.

Strategy for combating acidification

In the wake of the fifth environmental action program and under the influence of the Convention on Long-Range Transboundary Air Pollution, the Commission presented in March 1997 a strategy for combating acidification within the Community which included an all-sector-embracing analysis to enable some clearly defined environmental targets to be attained as cost-effectively as possible by 2010. Presented as interim targets, these were to be regarded as first steps towards achievement of the long-term objectives of the fifth environmental action program.

The acidification strategy was later rounded out by a similar one to cut down the concentrations of ground-level ozone. The two laid the foundation for a Commis-

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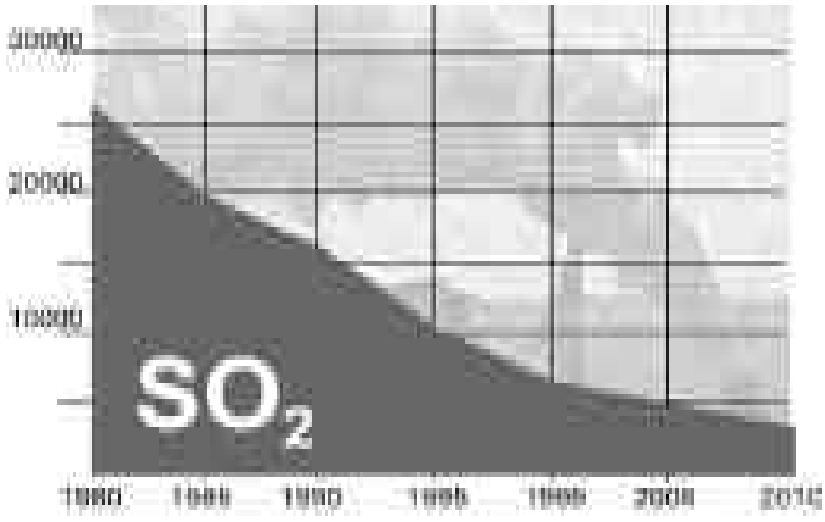


EU emissions of sulphur dioxide (thousands of tons) 1980-1999 and projection for 2010 according to the NEC directive. Source:EMEP.

sion proposal for a new kind of legislation to limit emissions – a directive setting binding national ceilings for the emissions of four acidifying and ozone-forming air pollutants, which was formally adopted last year (2001).

The EU acidification strategy came to involve a revision and tightening up of two important directives: the one for controlling the sulphur content of liquid fuels and the other on emissions of SO_2, NOx, and particles from large combustion plants.

Clean air for Europe

The more strategically oriented work on air quality that was set going in the nineties will now be followed up by a new program under the name of CAFE, Clean Air For Europe, which was presented by the Commission in 2001. The need for this new program derives from the fact that several directives of importance for emission levels and air quality are due for revision around 2004, and for proper results it will, in the view of the Commission, be necessary to gather them into a single program. The idea is that CAFE shall evolve into an on-going, cyclical program, for which 2004 will only be the first milestone. It will also be the first of the so-called thematic strategies announced in the Commission's proposal for a sixth environmental action program.

The CAFE program will deal mainly with particles and ground-level ozone, both because of their serious effects on health, and the fact that much will have to be done if concentrations are to be brought down to acceptable levels. Problems in respect of acidification and eutrophication that will still remain will however also come in for attention, and a watch will be kept on developments in regard to pollutants that are as yet unregulated, as well as on what is happening in "hot spot" areas with exceptionally extensive pollution.

One advantage of this more strategic and resolute action at EU level, as envisaged in the CAFE program, is that it should be able to bring about a more rapid and pronounced reduction in member states' emissions of pollutants. A further consideration is that such action by the EU will make it possible to put greater pressure on other European countries, outside the EU, to reduce their emissions by taking a more active stance in the context of the Convention on Long-Range Transboundary Air Pollution.

Here follows a list of EU legislative measures directly affecting emissions and concentrations of air pollutants. Over and above these are however a number of directives and other moves at EU level which can have indirect effect – such as those aimed at reducing the emissions of greenhouse gases and others capable of influencing developments in the energy, transportation, and agricultural sectors.

The directives

EU directives affecting emissions and concentrations of air pollutants:

NECs, directive on national emission ceilings for acidifying and ozone-forming air pollutants (2001/81/EC)

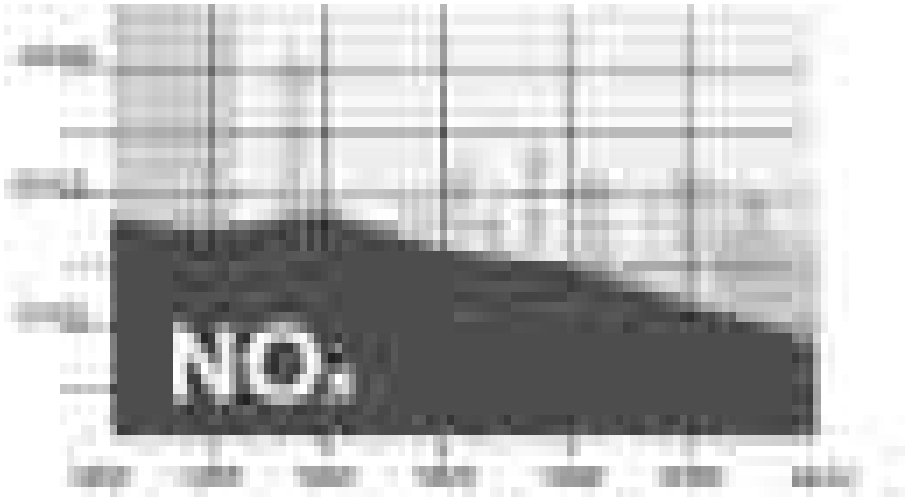
Sets binding ceilings to be attained by each member state by 2010. Covers four air pollutants: sulphur dioxide, nitrogen oxides, volatile organic compounds, and ammonia. The member countries' aggregate emissions of these four pollutants are to be reduced by 77, 51, 54, and 14 per cent respectively between 1990 and 2010. Scheduled for review and revision in 2004, when it is expected that proposals will be made to extend it to small particles and to set new ceilings.

Control of emissions from large combustion plants (2001/80/EC)

Covers plants with a rated thermal capacity of at least 50 MW and replaces the existing directive of 1988 (88/609/EC). Contains emission limits for sulphur dioxide, nitrogen oxides, and dust, varying according to the age and capacity of the plants, as well as the type of fuel burned. Not only tightens up the requirements for new plants, but also introduces for the first time emission limits for existing ones. Review and possible revision foreseen at latest by 2004.

Sulphur content of certain liquid fuels (99/32/EC)

Sets the maximum permitted concentration for sulphur in heavy fuel oil used in the EU at 1 per cent as from 2003, and for gas oils at 0.2 per cent, to be reduced to 0.1 per cent from 2008. Discussions are proceeding on a possible revision in or-



EU emissions of nitrogen oxides (thousands of tons) 1980-1999 and projection for 2010 according to the NEC directive. Source: EMEP.

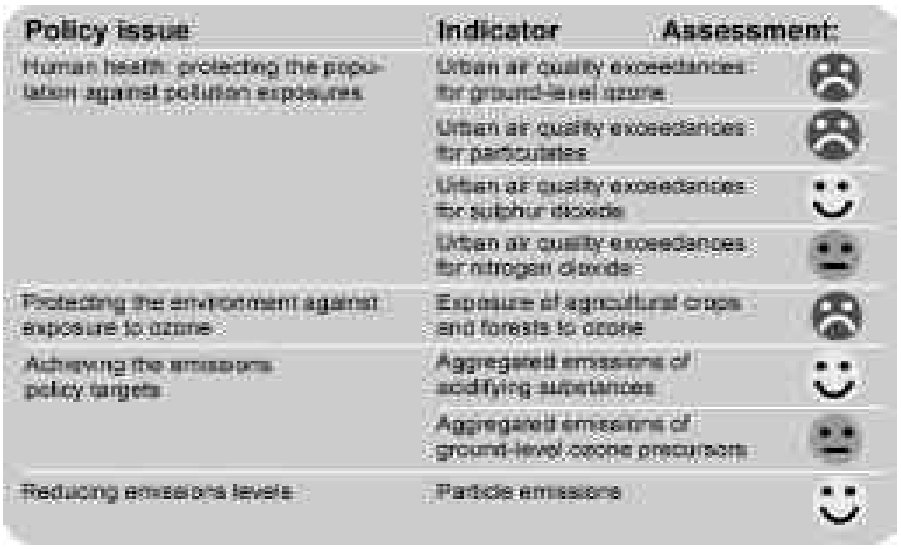
der to include bunker fuel (heavy fuel oil used in ships).

Quality of petrol and diesel fuels (98/70/EC):

Prescribes among other things 350 and 150 ppm as maximum sulphur content for diesel and petrol respectively. As from 2005 the figure will be lowered to in both cases 50 ppm (0.005 per cent). A proposal to lower it even further, to 10 ppm by 2010, which was presented in May 2001 is being discussed by Council and Parliament.

Emissions of air pollutants from road vehicles

Three directives addressing mainly the emissions of nitrogen oxides, non-methane volatile organic compounds, and small particles. That for **passenger cars and light commercial vehicles** (98/69/EC) specifies emission standards to be introduced in two steps - the first put in place in 2000 and the second coming into force in 2005. Directive 99/96/EC takes a similar stepwise approach for **heavy vehicles**, but with the inclusion of a third step (for 2008). Directive 97/24/EC sets emission standards for two and three-wheeled vehicles, **mopeds and motorcycles**. A proposal for an amendment, with stricter standards for motorcycles, which was presented in 2000, was agreed - after conciliation negotiations - in March 2002.



Assessment of the present air pollution situation in the EU, according to the European Environmental Agency, EEA (Source: Environmental Signals 2002, EEA)

Framework directive on ambient air quality assessment and management (96/62/EC)

Provides the means for setting limit values to the concentrations of pollutants in the air through **daughter direc-**

The EU legislative process

THE FOUR INSTITUTIONS playing the chief parts in the EU legislative process are the European Commission, the Council of Ministers, the European Parliament, and the European Court of Justice.

Of these only the **Commission** is entitled to put forward proposals for new laws. Its twenty members are appointed by agreement among the EU countries. While proposals for environmental law are usually elaborated within the Commission's General Directorate for Environment (DG ENV), for some matters they may come from other DGs, such as DG Enterprise, DG Transport & Energy, or DG Agriculture.

Present in the **Council** meetings are the ministers from each member state's government that are responsible for the matters on hand. Thus in the Environment Council it is the environment ministers who are representative. Two formal sessions are held in each six-month period. The Presidency is taken by each country in turn, also for a six-month period. From January to June 2002 it is being held by Spain, after which Denmark will take over (from July to December), followed by Greece from January to June 2003. And so on.

The **European Parliament** consists of 626 members elected for a five year period by universal suffrage in each member state. As a result of the Maastricht and Amsterdam treaties, its political role has become significantly strengthened, especially through extension of the co-decision procedure (see below) to practically all environmental legislation. There are several standing committees that draw up reports - usually with proposals for amendments - on draft laws. Environmental issues are usually handled by the Committee on Environment, Public Health and Consumer Policy.

Depending on the nature of the proposed legislation, various decision making processes can be applied. In the case of environmental issues, that most commonly used is the co-decision procedure, operating principally as follows:

1. Commission presents a proposal
2. Parliament adopts an opinion (at first reading), usually including proposals for amendments
3. On the basis of the Commission's proposal, the Parliament's opinion, and the views of member states, the Council adopts a Common Position (CP)
4. Commission presents its view on the CP
5. The second reading in Parliament must take place within three months. Then

a) Parliament approves the CP and the legislation is eventually adopted by the Council.

b) Parliament proposes amendments to CP and Council has to react

6. Council has to reject or approve within three months. Then

a) Council approves; legislation will – after consultation with the Commission – be adopted by the Council.

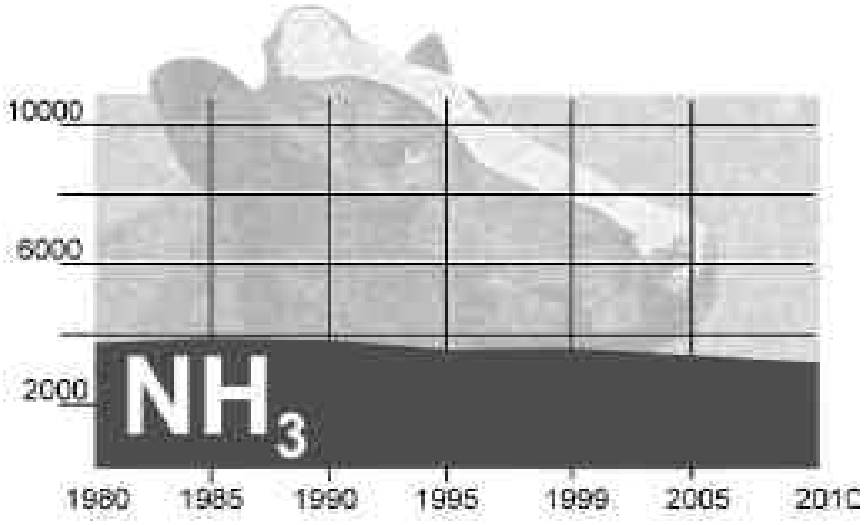
b) Council does not approve of (all) amendments. Conciliation procedure starts.

7. A Conciliation Committee is formed, involving in practice representatives of the Council, the Parliament, and the Commission, with the aim to agreeing on a compromise text within six weeks. Then there will either be

a) Agreement on a joint text and after approval by Parliament and the Council legislation will be adopted. Or

b) No agreement – no legislation.

The European Court of Justice is not directly involved in the preparation and approval of legislation, but is responsible for interpreting EU law and issuing judgement in cases of dispute.



EU emissions of ammonia (thousands of tons) 1980-1999 and projection for 2010 accor-ding to the NEC directive. Source: EMEP.

tives. The first (99/30/EC) sets standards for sulphur dioxide, nitrogen dioxide, particulates (PM_{10}), and lead. The second (00/69/EC) covers carbon monoxide and benzene, while the third deals with ground-level ozone (2002/3/EC). A proposal for a fourth daughter directive, covering polyaromatic hydrocarbons (PAH) and three heavy metals (nickel, cadmium, and arsenic), is expected to be presented by the Commission later this year. Review and revision of the first daughter directive is foreseen to take place in 2003.

Integrated pollution prevention and control (96/61/EC)

Aims at preventing or reducing pollution of air, water and land through a comprehensive system of permits. It applies to a significant number of activities, mainly industrial. Since the end of 1999 new installations are required to have a permit issued in compliance with the directive, which means they are expected to employ best available techniques (BAT). The same applies to existing plants, which however have until 2007 to comply. Guidance as to what is regarded as BAT for various sectors of industry is given in reference documents (BREFs). That for large combustion plants is expected to be adopted in 2002. (Altogether 30 to 35 BREFs will be published and regularly updated.)

Plants for incineration of waste (2000/76/EC)

Directive aiming to prevent or limit pollution from emissions to air, soil, surface and groundwater, from the incineration and co-incineration of waste – to be met by means of technical requirements, primarily in the form of binding emission-limit values. Review and revision foreseen to take place in 2008.

Emissions of VOCs from storage and distribution of petrol (94/63/EC)

Covers the whole chain from terminal to service station, but not the evaporative emissions that take place when cars are refuelling.

Use of solvents in industry (99/13/EC)

Intended to cut down the emissions of volatile organic compounds arising from the use of organic solvents in some twenty industrial processes.

There is yet no EU Legislation concerning the **VOC content of products** such as decorative paints and varnishes. Studies made by the Commission have shown however that the emissions from such products, as well as from operations such as vehicle refinishing, could be cost-effectively reduced. The Commission has indicated its intention to come forward with a proposal for a directive, probably by the summer of 2002.

Emissions from engines for non-road machinery (97/68/EC)

Applies only to compression (diesel) engines with power outputs of 18 to 560 kilowatts. In December 2000 the Commission presented a proposal to widen the scope of this directive so as to cover small spark-ignition (petrol) engines such as are used in lawn movers, chain saws, etc. Since most of these smaller engines are of the two-stroke type, the biggest reduction in emissions will be for VOCs. The new directive is expected to be adopted in 2002. Emissions from **tractors** used for instance in agriculture and forestry are regulated by directive 00/25/EC.

A proposal for a directive regulating the emissions of pollutants as well as noise from pleasure boats was put forward in October 2000. Its main effect as regards air pollutants will be to reduce emissions of VOCs from new two-stroke marine engines sold after 2005. An amendment of directive 94/25/EC, it is expected to be adopted in 2002.

In January the Commission announced that it is preparing a **Community Strategy on Air Pollution from Seagoing Ships**, to be presented by summer 2002. It is expected to include a proposal for modifying directive 99/32/EC on the sulphur content on liquid fuels so as to extend its scope to include heavy bunker fuel oils, as well as proposals for the introduction of economic incentives.

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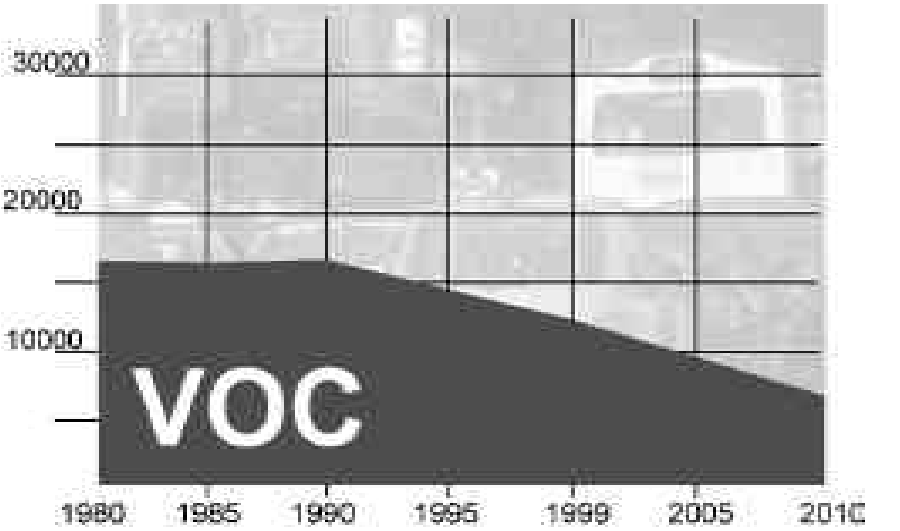
Further information

More information can be found e.g. at the website of the Commission's DG Environment:

www.europa.eu.int/comm/environment/air/index.htm



EU emissions of volatile organic compounds (thousands of tons), 1980-1999 and projection for 2010 according to NEC directive. Source :EMEP.