



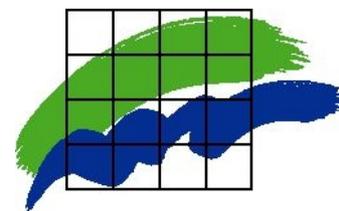
Assessment of the Effectiveness of European Air Quality Policies and Measures

B4-3040/2003/365967/MAR/C1

FINAL REPORT ON TASK 3.4: Transparency and Public Participation

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**Incorporating Commission comments from 17 November 2004*

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The views expressed herein are those of the consultants alone and do not represent the official views of the Commission.

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Abbreviations

AQ	Air quality
CH₄	Methane
C₆H₆	Benzene
CO	Carbon monoxide
EPA	Environmental Protection Agency
EPER	European Pollution Emission Register
GHG	Greenhouse gases
IPPC	Integrated pollution prevention and control
LCP	Large combustion plant
LR	Local representative
MoE	Ministry of Environment
MS	Member State
NEC	National Emissions Ceiling
NGO	Non-governmental organisation
NH₃	Ammonia
NO_x	Nitrogen oxides
O₃	Ozone
Pb	Lead
PM₁₀	Particulate matter < 10 µg in diameter
PM_{2.5}	Particulate matter < 2.5 µg in diameter
SO₂	Sulphur dioxide

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Executive Summary

Task 3.4 of the project “Assessment of the Effectiveness of European Air Quality Policies and Measures” required the project team to test the application of the transparency principle in the area of air quality and emissions data.

The first part of the report presents the opinions of stakeholders (national and local representatives, industry, NGOs, and academics) on transparency in the area of air quality. Notably, half of the stakeholders surveyed felt that not enough had been done to make the public sufficiently aware of the information that is available on air quality, air pollution and emissions. The stakeholders identified websites as the most important sources of information of information which raises the question whether this information is accessible to all members of the public. When asked whether information that is currently being provided is adequate, clear, comprehensive and accessible, the general feeling amongst the stakeholders was that air quality information is difficult for the ordinary citizen to understand. Several respondents suggested that a common simplified tool should be introduced so that there was a more standardised way of providing information across Europe. The other conclusion drawn from the survey was that there are insufficient explanations provided on the effects of air pollution and health.

In order to determine what information is readily available in the EU Member States on air quality and on emissions, the team developed a *structured questionnaire* and lined up nine experts in nine case study countries. The responses to the questionnaires enabled us to present case studies explaining the major sources of information on air quality in each country and to analyse the strengths and weaknesses of the systems. For example:

The UK, the Czech Republic, Denmark, Greece and Lithuania have opted to provide information to the public through a completely centralised system, i.e. where one body is appointed with responsibility for providing and disseminating air quality information for the entire country. France, Italy and Spain, in contrast, provide information on a decentralised basis. Belgium was the only Member State analysed which adopted a mixed approach.

All of the authorities in the case study countries provide air quality information on websites and through publications. The Czech Republic, the UK and the Athens region of Greece provide free phone numbers with recorded messages charting the air quality situation. Spain and Greece make pollutant level information available on information screens in cities. UK, Czech Republic and Denmark also put air quality information on their teletext pages.

The “user friendliness” of each of the case study countries’ systems for providing information was assessed. Belgium (Flanders), Czech Republic, Denmark, France and the UK’s systems were found to be highly user friendly. This was because all of these countries issue regular forecasts which use colour-coded air pollution forecasts – whether composite or pollutant specific. Greece, Italy and Spain’s systems were considered highly user friendly only in the regions which were actively disseminating information and low in all of the other regions. Lithuania’s system was not considered to be user friendly as information was only provided in rather complex graphs and tables.

Generally, it was found that all of the case study countries were providing information on pollutant levels as required by the Daughter Directives. Again, in the regions of Spain, Italy and Greece which do not operate active dissemination policies, this information would have to be requested. Sometimes

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information on lead and benzene was not kept and provided as required by the relevant Daughter Directives.

At present, only the authorities in Belgium (Flanders), Denmark, France, certain regions of Italy, certain regions of Spain and the UK provide an effective explanation of the link between air pollution and health. This appears to be an area where considerably more effort is required on the part of the Czech Republic, Greece, Italy (certain regions), Lithuania, and Spain (certain regions).

The current provision of information to the public in the case study countries can be roughly evaluated as follows:

High Transparency	Medium Transparency	Low Transparency
Czech Republic	France	Greece
Denmark	Lithuania	Italy
Belgium		Spain
United Kingdom		

Other conclusions from these case studies on information provision were:

- Provision of information in a decentralised system contains the most pitfalls than providing information in a centralised way.
- Use of colour-coded composite indexes of air pollution levels appeal to the public who find air quality information hard to understand.
- Member States should not rely on the Internet as the sole media for disseminating information - it is preferable to have a range of information media.
- Often the public do not know what information is available. Member States must ensure that information officers are in place and that concrete steps are taken to inform the public about the existence of the information officer and the availability of the information.

In order to test how transparency actually works in practice in the case study countries, *three sample letters* requesting information on air quality and emissions were translated into the nine national languages and posted locally as follows:

Letter 1 – to a responsible official at local level (e.g. a municipality)

Letter 2 – to a responsible official at national level (e.g. at Ministry of Environment)

Letter 3 – to a responsible official at an Environmental Protection Agency

The report maintains the anonymity of the countries, but does find that three out of the nine Member States are considered have very effective systems in place for responding to requests for information, two out of nine have adequate (but not perfect) systems in place and the remaining four Member States did not appear to be complying with the basic obligation to provide information to the public (since only one or no responses were provided to the 3 sample letters sent out).

The report also looks at public participation in the field of air quality via case studies on two consultations which were carried out for very different purposes and also had very different results. The first case study explains how a public enquiry was carried out by the regional Government of Wallonia in Belgium in 2002 on a Global Air Plan. The second case study looks at the consultation process that has been organised by the Irish Department of Environment in 2003 on the Irish Strategy to Reduce Emissions of Transboundary Pollution under the EU's NEC Directive. On the basis of these two case studies, the report discusses the three elements that were found to be indispensable for effective public consultations, namely: (1) broad publication, (2) flexibility and timeliness, and (3) ease of participation.

1. Introduction

This final report is the deliverable as requested in Task 3.4 of the consortium's nine-month contract with the European Commission entitled 'Assessment of the Effectiveness of European Air Quality Policies and Measures' (Service Contract B4-3040/2003/365967/MAR/C1).

The Terms of Reference for the project sets out the objective for Task 3.4 of testing the practical application of the transparency principle in the area of air quality and emissions data. The Terms of Reference breaks this down into three distinct tasks, namely:

- Test the actual level of transparency in various places and for various air quality and emission linked parameters
- Ensure a relevant comparison of the public access to information
- Analyse some public enquiries concerning air quality management plans

At the inception meeting with the Commission in January of 2004, it was agreed that the team would approach this task by focusing particularly on several case study countries. It was emphasised by the European Commission how it would be important to cover a balanced spread of Member States – from Scandinavia, Southern Europe, Central Europe and some of the new Member States. Bearing this in mind, the team selected the following case study countries: Belgium (Flanders region); Czech Republic; Denmark; France; Greece; Italy; Lithuania; Spain & United Kingdom.

The following sets out the methodology which has been used by the team to achieve this task.

The first step of our study was to determine what information is readily available in the case study countries on air quality and on emissions. To this end, the team developed a *structured questionnaire* and lined up nine experts in each of the above-mentioned case study countries. This questionnaire can be seen in full at *Appendix I*. As can be seen, the questionnaire starts with a very general question asking each national expert to find and then try out all of the sources of information on air quality and emissions in their country. The national experts were asked to also contact an official responsible for air quality at either the Ministry of Environment or the Environmental Protection Agency to ask for information on air quality and to assess the assistance that they were given. The remainder of the questionnaire consists of questions designed to test the application of the provisions on public information in the three air quality Daughter Directives in the case study countries. The final section of the questionnaire posed some more general questions on access to air quality information. The completed questionnaires from each of the national contacts provide the information for the nine case studies presented at section 4 of this report.

In order to test how transparency actually works in practice in the case study countries, the team developed *three sample letters* requesting information on air quality and emissions. The three sample letters are set out at *Appendix II*. Letters 1 & 2 ask for information on air quality whereas letter 3 asks about emissions from a specific facility. The team wanted to test the various levels of administration involved in providing air quality information and therefore all of the national experts were asked to translate the letters into their local language, amend them to reflect the factual situation of their locality, post them locally to the following persons:

Letter 1 – to a responsible official at local level (e.g. a municipality)

Letter 2 – to a responsible official at national level (e.g. at Ministry of Environment)

Letter 3 – to a responsible official at an Environmental Protection Agency

Each expert recorded the length of time that was taken by the officials to reply to the letters and also evaluated the adequacy of the response. The responses provided to our national experts to these

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sample letters have allowed us to present the analysis and commentary set out at section 5 of this report.

To ensure that this study reflected how the everyday man in the street was treated by officials, at no point in either the official contacts arising from completing the questionnaire or in the sample letters was the role or position of our national experts revealed. To complement this, we asked national expert to answer questions in the questionnaire such as “Do you think the information is clear and comprehensible?”, from the point of view of a lay person.

Lastly, in order to review a sample of public enquiries on air quality management plans, the team interviewed two persons who had been heavily involved in two very different public consultations. Their answers to a series of structured questions form the basis of the case studies presented at section six of this report.

2. Legal obligations to provide information to the public on air quality

The legal obligations requiring the provision of information to the public on air quality and on the involvement of the public in the development of air quality plans can be found in a host of European Union legislation.

Some of the obligations that apply are general and are found in the EU legislation which has resulted from the EU's commitments under the 1998 UNECE Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, better known as the Aarhus Convention. Obligations relevant to this report can be found in the following pieces of legislation adopted by the Community in order to align with the Aarhus Convention:

1. *Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information and repealing Council Directive 90/313.*

This directive goes much further than its predecessor Council Directive 90/313. It sets out the practical arrangements for ensuring the right of access to environmental information held by public authorities and requires that environmental information is progressively made available and disseminated to the public in order to ensure the widest possible systematic availability and dissemination. It has to be noted however that the deadline for implementation of this directive is February 2005 and so at the time of writing (August 2004) none of the case study countries are as yet required to have implemented it.

Article 3 deals with access to environmental information upon request and so will be considered in relation to the sample letters that the national experts sent out. Environmental information is to be provided as soon as possible and the general rule is at the latest within one month after receipt by public authority¹. Member States are to ensure that officials support the public in seeking access to information. If an authority does not hold the information requested, it is entitled to refuse the request but it must transfer the request to an authority that does hold the information and it must explain to the applicant what is happening.

2. *Directive 2003/35/EC of the European Parliament and of the Council of 26 May 2003 providing for public participation in respect to the drawing up of certain plans and programmes relating to environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC.*

This Directive must be implemented by 25 June 2005. The main obligation, stated in Article 2(2), is that Member States must ensure that the public is given early and effective opportunities to participate in the preparation and modification of certain plans or programmes listed in Annex I. Annex I includes plans drawn up under Article 8(3) of Council Directive 96/62/EC of 27 September 1996 on ambient air quality assessment and management.

Other relevant obligations can be found in specific air quality directives such as:

1. *Council Directive 96/62/EC of 27 September 1996 on ambient air quality assessment and management ("the Framework Directive")*

This directive requires Member States to inform the public when alert thresholds are exceeded by means of radio, television and the press. Under Article 8(3) of this Directive, Member States are directed to prepare plans for zones & agglomerations where pollutant levels are higher than the limit value plus the margin of tolerance as set out in the daughter directives. These plans are to

¹ Article 3(2)(b) provides a longer time period of two months if the information requested has a large volume and is complex.

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set out measures which will result in the reduction of pollution levels. These plans have to be made available to the public. The directive also specifies the information that must be included in these local, regional or national plans and programmes for improvement of ambient air quality.

2. *Council Directive 1999/30/EC of 22 April 1999 relating to limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air (“the first Daughter Directive”)*

The first Daughter Directive requires that up-to-date information on ambient concentrations of sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead are routinely provided to the public and specifies how often this information must be updated. The information must explain the limit values and alert thresholds and must give appropriate information regarding the effects on health. It also provides that when alert thresholds are exceeded, the public is informed. Plans or programmes to reduce levels of these pollutants have to be made available to the public and to appropriate organisations.

3. *Directive 2000/69/EC of the European Parliament and of the Council of 16 November 2000 relating to limit values for benzene and carbon monoxide in ambient air (“the second Daughter Directive”)*

Similarly, the second Daughter Directive requires that up-to-date information on ambient concentrations of benzene and carbon monoxide are routinely provided to the public and to appropriate organisations and specifies how often this information must be updated. This directive gives more examples of the ways in which information can be provided, by adding teletext, telephone or fax.

4. *Directive 2002/3/EC of the European Parliament and of the Council of 12 February 2002 relating to ozone in ambient air (“the third Daughter Directive”)*

Also, up-to-date information on ozone concentrations must be routinely made available to the public and appropriate organisations. The information has to indicate all exceedances of the long-term objective, the information threshold and the alert threshold and give short assessment of the effects on health. Annex II lays out the details that must be supplied to the public when an alert threshold or a information threshold is exceeded.

A listing of the provisions relevant to this study in these directives can be found at *Appendix III*.

3. Survey of opinion on stakeholder involvement and transparency

Task 3.3 of this project involved the team drafting a questionnaire to send to various European stakeholders in the field of air quality – national and local representatives, industry, NGOs, and academics. The final section of this questionnaire was used to find out what these stakeholders thought of current policies and practices on transparency in the area of air quality. The responses from the stakeholders on this topic are summarised below². It is interesting to have this picture in mind before considering the very specific situations that are presented in the case study countries at section 5.

The first question that was posed was “Has enough been done to make the public sufficiently aware of the information that is available on air quality, air pollution and emissions?”. Half of the stakeholders (17) answered “Yes” whilst half (18) answered “No”. Unsurprisingly, those answering “Yes” were mostly national and local representatives, and those answering “No” were the NGOs.

Some of the explanations provided by France, Ireland, industry representative, Slovakia academic, EP, Finland and EC officials were that considerable data is provided to the public, but often without enough explanations. Most politicians and ordinary citizens are not aware of the order of magnitude of health and environmental problems caused by air pollution, and as a result are not willing to change behaviour or introduce new laws

The NGO and industry representatives considered that the main problem was that ordinary citizens usually do not know where to find the information, and additionally the information provided is not clear and easy to understand.

Stakeholders were then asked to note the main information sources on air quality, pollution and emissions found in their countries and to rank these in order of importance (1: most important, 6: least importance). The following table presents the results:

	Websites	Phone numbers	Tele-text	National forecasts	Regional forecasts	Alert messages	Other
Belgium	3			1	2	1	brochures, publications – 4
Belgium LR	1	2	In progress	5	6	4	car free days, environmental fair – 3, in-street digital display – in progress
Belgium academic	4	5	5	1	2	3	
Czech Republic	X		x	x		x	
Germany	3	6	5	1	2	4	
Germany LR	1	6	2	5	4	3	
Germany NGO	1			2	3		
Latvia					2		
Finland	1			3	2		
Finland LR	2	5	3		1(radio)		info in newspapers – 4
Italy LR	1	5	4	5	5	5	reports and

² The stakeholder responses to the other sections of the questionnaire are analysed in a parallel report for this project.

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	Websites	Phone numbers	Tele-text	National forecasts	Regional forecasts	Alert messages	Other
							publications – 2
Bulgaria NR	1	2		3	4	5	6-information screens
Bulgaria LR	2	4				1	informational display – 3, leaflets, printed materials - 5
Ireland	1			2		3	
Cyprus	1						2 - reports
Denmark	1	2	3	1	4	3	
Denmark	3			1	2		
France	1	4			3	2	
France NGO	1	2		4	3	2	Street bulletin board
Latvia	1	2	6	3	4	5	5 annual reports on Ministry website
Hungary	1	4 (paying)		2		3	Direct info required by letters, e-mails etc. for private persons, NGOs etc. given by different authorities.
Norway	2					1	
Norway NGO	1			2	3		
Sweden	X						
Sweden academic	1						Info from NGOs, news media (no forecasts)
Netherlands	2	5	1	3		4	
Austria	1		2			3	
UK academic	X	x	x	x	x	x	
UK consultant (NGO)	3	4	2	6	5	1	
Slovakia academic	1	6	2	3	7	4	5- real time info monitors – 1g cities
Lithuania NGO	1			2	2	2	

The results show that stakeholders clearly consider websites to be the most important sources of information, followed by national and regional forecasts. Alert messages are also mentioned by most of the stakeholders as a priority source of information to the public.

The stakeholders were asked whether or not they agreed with statements saying that information provided to the public is adequate, clear, comprehensive and accessible. Certain comments provided in relation to this section were very interesting.

The general feeling was that air quality information is difficult for the ordinary citizen to understand. This means that it is not enough for authorities to simply present the correct information; but considerable care must be taken to present the information in an easily understandable manner and with clear explanations. The Finnish local representative made the point that the information on limit values and exceedences is particularly hard to understand. The Italian local representative

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commented that it is not particularly easy for a lay person to have a global understanding of the situation from all of the reports and data available on sites and in publications.

The other general feeling was that insufficient explanations were given of the effects of air pollution on health. At the moment, it is hard for the public to understand the real risks when they are simply given statistics. The Belgian academic considered that during the August 2003 heat wave there was a particular shortage of information given to the public about the seriousness of the air pollution episode.

It was acknowledged that most of the information currently provided is web-based and this may not be either accessible to all members of the public or convenient.

Lastly, the stakeholders were asked whether additional European measures should be taken in order to increase access to information on emission, air quality and the effects of air pollution. Twenty-two respondents said “Yes”, and fourteen answered “No”. It is not surprising that it was mostly the NGO stakeholders who answered “Yes”, and many national representatives who answered “No”.

Several respondents went on to suggest what those additional European measures might be. The representatives from Ireland, Finland, France, Germany, NGOs, industry all suggested that there was a need for a more standardised approach on how to present information across Europe - a common simplified tool.

Some suggested that a Europe-wide website for air quality data and emissions might be very efficient, that would have links to national or regional networks or pollution registers, lists with addresses (e-mail/phone) of national and regional databases. Of course, this idea has now materialised, at least with respect to industrial emissions, in the form of the European Pollutant Emission Register or, EPER³.

The stakeholders considered that enhanced comparability across countries is also needed since the public like to compare one country's air quality with another country's.

The Austrian representative suggested that there should be an EU level conformity checking process carried out on the implementation of existing regulations in all MS.

³ See <http://www.eper.cec.eu.int/eper/>. EPER was established by a Commission Decision of 17 July 2000 and is based upon Article 15(3) of Council Directive 96/61/EC concerning integrated pollution prevention and control. According to the EPER Decision, Member States have to produce a triennial report on the emissions of industrial facilities into the air and waters. The report covers 50 pollutants which must be included if the threshold values indicated in Annex A1 of the EPER Decision are exceeded. The EPER Decision obliges the European Commission to make this data publicly accessible on the internet.

4. Introduction to the case studies

As mentioned earlier, a structured questionnaire was completed by national experts in each of the nine case study countries. The answers to this questionnaire have been analysed and form the basis of the case studies presented in the next section of this report.

Each case study notes the main sources of information on air quality and emissions and services provided to the public in the countries. The case studies also look at how information is provided on each of the pollutants mentioned in the three daughter directives: sulphur dioxide, nitrogen dioxide, particulate matter, lead, carbon monoxide, benzene and ozone. It was also considered necessary to understand the process in each country by which the public is informed of any exceedances of alert thresholds. Each case study also considers how information on the link between high pollutant levels in air and corresponding health effects is disseminated.

5. Case studies on transparency

1 – Belgium (Flanders)

Belgium has opted to provide information on air quality on both a centralised and decentralised basis. Generally, the competence to provide information on air quality, as is the case for almost all aspects related to environment, belongs to the regions⁴. Nevertheless, information on ozone remains a shared competence.

This means that the main sources of information on air quality are dispersed, but nevertheless it is easy to find the information. This is mainly thanks to the clever co-ordination of the system through different web links.

Mostly all the information is actively disseminated online, in different databases. Information is also available upon request by telephone or email.

At the central level, the main sources of information are the website of the Federal Ministry of Environment and the websites of the Interregional Cell for Environment (IRCEL).

The section on air quality of the **Federal Ministry of Environment**⁵, provides general introductory information on a range of pollutants, *inter alia*, SO₂, NO₂, CO and O₃ of the pollutants to be analysed. The information includes sources, effects on the environment and detailed information on the effects on health. The Ministry provides also information through reports, publications and official documents on ozone – which, as mentioned above, is a shared competence between the regions and the Ministry.

The **IRCEL** provides information on air quality for Belgium's three regions and is available in French, Dutch and English. The IRCEL coordinates the information from the different regions providing information on pollutants on an hourly basis, including interactive maps and graphics per town. The IRCEL uses colours to indicate in an easy and friendly user manner the meaning of the values indicated. It demonstrates air quality on a range from 1 to 10 with corresponding colours going from blue to dark red. IRCEL contains:

⁴ Belgium has a federal system and is divided in three regions : Wallonia, Flanders and Brussels capital.

⁵ http://www.environment.fgov.be/Root/tasks/atmosphere/atmpol/set_nel.htm

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- Historic data from 2001 to present, except for ozone where the historic information is available from 1999. This section provides data on pollutants for a specific date and on a daily average and with specific sections on ozone, particulate matter and weather.
- The General Air Pollution Index, which gathers the general air pollution index from each region (see more explanations below). It incorporates comparative graphics for all the regions.
- A Daily Top 10 report on air quality for the three regions, main polluted areas and weather parameters.
- Publications concerning air quality in Belgium.

At the regional level, the main source of information for the Flemish region, which is the focus of this case-study, is the website of the **Flemish Environmental Agency (VMM)**⁶. The VMM website offers lots of possibilities for research (by pollutant and area). It provides information on air quality for the 58 Flemish municipalities in the format of tables and graphics. Measurements are provided for O₃, NO₂, SO₂, CO, PM₁₀ and PM_{2.5} and Benzene updated on an hourly basis. The website also displays data on graphic representations with half-hour updated information. Finally, the system also allows for the user to search information on a geographical disseminated manner, through maps. This data includes information on the sources of pollution and their consequences on health. The database also contains:

- The General Air Pollution Index: this index consists of a general air pollution index and an urban pollution index based on data from SO₂, NO₂, O₃ and PM₁₀. As mentioned before the index is based on a scale from 1 to 10 complemented by colours going from dark blue to red⁷. The index is an average of four pollutants per day and per region.
- Reports on air quality of the Flemish region
- Links to the Aalst Library on information related to air quality, including the list of publications.

More traditional sources of information can be downloaded from the **AMINAL** (Flemish Administration for Environment, Nature, Land and Water Management)⁸ website – for example, the **brochure** on air quality. This brochure contains information on all air pollutants and their effects on health. The VMM also publishes three times a year a **revue** called “De verrekijker” where different environmental issues are discussed and therefore, timely information on air quality is provided. Subscription to this review is free.

Apart from the websites, which are the main sources of active dissemination of information, data can be obtained upon request by *telephone*. The VMM has a “information desk” number where information on air quality can be requested as well as an email address⁹. There is a person in charge of dealing with enquiries who will direct the caller to the information sought or, if the request is more detailed, may direct the caller to another person who can provide the information requested.

Information on sulphur dioxide, nitrogen dioxide, particulate matter, carbon monoxide, benzene and ozone is actively disseminated to the public via the internet and the information is updated more frequently than required in the applicable Daughter Directives, sometimes every half hour. It has to be mentioned that for carbon monoxide and benzene, although the data are available on the tables and maps, they do not appear in the list of pollutants whose information can be obtained. For lead, as with many of the other case study countries, information is only available upon request.

⁶ www.vmm.be

⁷ (1)=excellent (dark blue), (2)=very good (light blue), (3)=good (dark green), (4)=quite good (light green), (5)=good (yellow-green), (6)=moderate (yellow), (7)=inferior (light orange), (8)=bad (dark orange), (9)=very bad (light red), (10)=extremely bad (dark red)

⁸ <http://www.mina.be/wiewezijn.html>

⁹ The information desk number is +32 (0) 53726445. Calls to this number are not free. The email address is info@vmm.be.

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Finally, information on ozone is particularly accurate and special sections and reports dealing with ozone exist both at national and regional level. For example, there is information on the recent ozone data received from around Europe through a special link to the Smog Warners' Web Page, examples of warning messages, specific maps on measurements and evolution of ozone concentrations (in Flanders these maps also exist for particulate matter), or special reports.

The VMM sends *press releases* to mass-media when an alert threshold for sulphur dioxide or nitrogen dioxide has been exceeded. It is the IRCEL, with its competence for ozone, who is responsible for drafting the ozone alert message and forwarding it to TV, radio and other media.

The box below shows the information which is presented in an alert message. It is based on an alert message for ozone issued by IRCEL in August 2003. In order to make the information presented in this box purely illustrative, the detailed information on the region and stations where exceedences have been measured has been deleted.

<p>I. SITUATION</p> <p>Detailed information on the regions and stations where the exceedences occurred the day before.</p> <p>II. FORECAST</p> <p>Information on ozone levels for the current day and short term future.</p> <p>III. PRECAUTIONS TO BE TAKEN</p> <ul style="list-style-type: none">• Population risk: children, older people, persons with respiration problems• What they have to avoid: physical efforts, outside exercise and movements between 12h and 20h• General: better not to have long physical efforts (jogging)• No symptoms• More information on website and by bulleting• Avoid exposure! <p>Hourly update is available. The bulleting on air quality can be set by request via smog@irceline.be. Any update information or new alert messages will be sent to you as soon as they are out</p>

It should be noted that this alert message dates from 7th August 2003 and therefore was issued under the older ozone directive, Council Directive 92/72/EEC of 21 September 1992 on air pollution by ozone. A working group has been set up and, at the time of writing, is reviewing the alert procedures with the intention being that a revised alert procedure, in line with the Third Daughter Directive, will be operational for the summer of 2004.

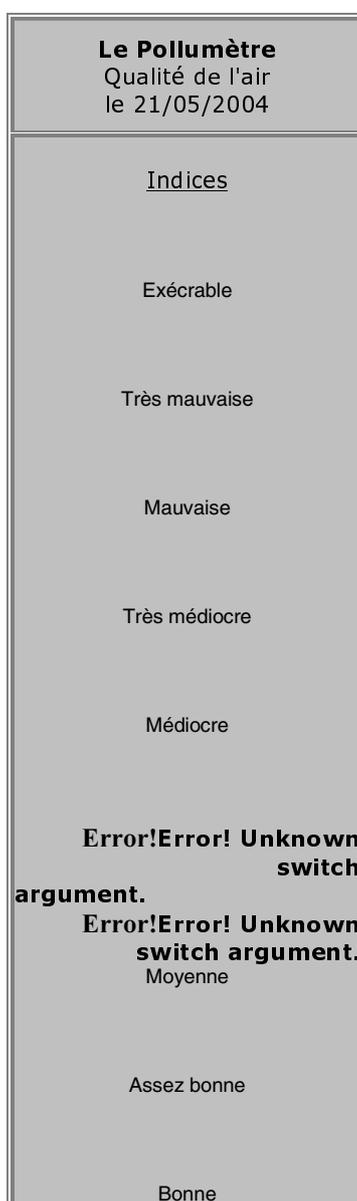
As mentioned before, the authorities can also send more general press releases giving information on a specific pollutant and related health concerns. This has been the case for particulate matter, due to the fact that particulate matter concentrations had exceeded the threshold for more days in a 7-month period than allowed for in the Directive.

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To conclude, air quality information is provided in a very clear and comprehensive manner in the Flanders region of Belgium. The maps and the colour coding scheme used help lay persons to understand the figures. The tables are less comprehensive as they only provide numbers and therefore they are more technical. The information provided is linked to the effects that the pollutants may have on health, although in different sources (Federal Ministry of Environment, IRCEL and AMINAL). Almost all information is actively disseminated via Internet which may cause difficulties for persons not having access to internet.

This case study has focused on information available in the Flanders region of Belgium. However, an interesting advancement has been taken as of May 2004 *in the region of Brussels capital*, and is worthy of note. The responsible body, the Institut Bruxellois pour la Gestion de L'Environnement, has created a tool called "Le Pollumètre" (see below). It is a tool that shows pollution levels on two indexes – a global index measuring the general quality of air for the entire region and a traffic index which measures pollution in zones close to roads. The Pollumètre is going to appear in panels at strategic places, such as on entry to the Brussels ring, in order to impress upon drivers what the effect of driving is on air quality, particularly in the summer.



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Très bonne

Excellente

2 – Czech Republic

The Czech Republic has opted to provide air quality information on a centralised basis using the services of the Czech Hydrometeorology Institute. The main source of air pollution information is the Institute's easy-to-use web pages commonly known as the Hydromet: <http://www.chmi.cz/uoco/act/aim/aregion/aim_region.html>. The Hydromet draws on information from 140 geographical monitoring points in the Czech Republic. All of the 140 geographical locations monitor hourly levels of sulphur dioxide, nitrogen dioxide, and nitrogen oxides. Most locations also monitor carbon monoxide, ozone, and particulates, but less than 10 stations provide information about benzene and toluene. The Hydromet provides the following types of services:

(1) Current Information on pollutants. This service provides hourly data on eight pollutants - sulphur dioxide, nitrogen dioxide, nitrogen oxides, particulate matter (PM₁₀), carbon monoxide, ozone, benzene and toluene. The service allows the user to locate the geographical location, select the pollutant(s) and immediately the web page displays hourly concentrations during the last 48 hours, including information as recent as one hour ago. This service is very user-friendly with its presentation of a map of the entire country divided into different regions, and you click on your region in order to find the specific pollutant information¹⁰.

(2) Database of Historical Air Quality Information. This database contains six years of historic information on pollutants concentrations from each of the 140 monitoring stations. There is also aggregated historical information on monthly, quarterly, and annual basis, with charts and actual data.

(3) Database of Historic Emissions Information. The database provides a 10 year historical overview of emissions of the major pollutants. This information is aggregated by districts and provides information on emissions by four categories of sources – large, medium, small, and mobile.

(4) Information in written form. The Hydromet also produces information on air quality in traditional format. It publishes monthly, quarterly, annual, and 5-year overviews of pollutant concentrations.

Other sources of information include an enquiries telephone number for the Hydromet (+420 4403 2400¹¹), a recorded free phone number and teletext pages. A person dealing with specific enquiries answers the Hydromet enquiries telephone number, and will direct the caller to information sought or if the request is more detailed, he may arrange a meeting where they will show you all of the information they have. The teletext pages present information from the Hydromet, e.g. pages 177-180 hourly updates on concentrations of sulphur dioxide, nitrogen dioxide, particulate matter and ozone by region. Page 176 highlights current ozone concentrations and advises on recommended exposure times.

There are no regular air quality updates provided on TV or radio in Czech Republic, and this only occurs when there is a high smog alert or an exceedance.

In addition to the Hydromet services, the municipality of Prague runs its own environmental protection website <www.premis.cz> which includes air quality information. Admittedly, the air quality data is taken directly from the Hydromet data but the site provides some useful features such as a pollution map of Prague with current information and forecasted information and reports assessing the quality of environment in specific locations in Prague. Prague is the only city in Czech Republic to provide such a website; other city sites simply link back to the Hydromet.

¹⁰ http://www.chmi.cz/uoco/act/aim/aregion/aim_region.html

¹¹ Calls to this number are not free.

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Information on sulphur dioxide, nitrogen dioxide and particulate matter, carbon monoxide, benzene and ozone is actively disseminated to the public via the internet (on Hydromet's **Current Information** service) and on television (teletext pages), and the information is updated more frequently than required in the applicable Daughter Directives. As with other case studies, the problem is with information on lead – none is actively disseminated.

The boxes below show the three types of air pollution alerts and four levels of smog alerts which are applied in Prague. When there is a high smog alert, or a “regulation” or “warning” level of air pollution, the local authorities will announce the alert on radio and television and may deny car travel to affected area, most likely to city centres.

Air pollution alerts in Prague

- 1) **Notice** – announced when concentration of SO₂ exceeds 250 µg/m³, or NO₂ exceeds 200 µg/m³ or O₃ 180 µg/m³ at at least one monitoring station in three consecutive hours, and at the same time air dispersion conditions are bad and the forecast is that they will not improve in the next 8 hours
- 2) **Regulation** – announced when concentration of SO₂ exceeds 500 µg/m³, or NO₂ exceeds 400 µg/m³ at at least one monitoring station in three consecutive hours, and at the same time air dispersion conditions are bad and the forecast is that they will not improve in the next 8 hours
- 3) **Warning** - announced when concentration of O₃ exceeds 240 µg/m³ at at least one monitoring station in three consecutive hours, and at the same time air dispersion conditions are bad and the forecast is that they will not improve in the next 8 hours

Smog alerts in Prague

I. Level of Pollution No. 1: No immediate precautions are required.

II. Level of Pollution No. 2:

In location A (relatively very clean) no immediate action are required.
(Locations A,B. And C are marked on map of Prague)

In locations B and C (slightly polluted or polluted), it is advised to:

- Limit time spent outside between 6 and 10 o'clock, and between 16 and 20 o'clock
- When outside limit physical activity.

III. Level of Pollution No. 3:

In location A it is advisable to:

- Reduce time spent outside between 6 and 10 o'clock and between 16 and 20 o'clock
- When outside limit physical activity

In location B and C, it is advised to:

- Limit time spent outside to a minimum, limit opening of windows, do not spend time in smoke-filled rooms

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- Do not use aerosol sprays
- Do not carry out painting or work with solvents
- Do not use fireplaces
- Do not perform, or limit, significant physical strain, physical labour, sport when outside. Try to avoid activity that causes heavy breathing, sweating, reddening of the face.
- Do not carry out physical exercise outside. Limit exercise inside.
- Limit time spent outside only to locations A and only between 10 and 16 hours.

IV. Level of Pollution No. 4:

For all locations A, B, and C precautions are valid for Level III.

In reality, the only alerts which have occurred in recent years have been for smog in Prague and sulphur dioxide concentrations in Northern Bohemia. The media is required by law to issue alerts that are deemed to be of national or local importance. In cases of sulphur dioxide exceedences, large power plants can be required to reduce output so that emissions of PM, SO₂, and other pollutants can be decreased. Also, the same caution is issued for children and the elderly, e.g. no outside activity, no physical strain, keep windows closed. Additionally, the Hydromet has a special section on exceedences. By clicking on this button the user can find out which of the 140 measuring stations measured concentrations that exceed the limits.

Information is provided in a very clear and comprehensive manner in the Czech Republic and in a variety of ways. The only criticism of the system is the lack of explanation of the link between high levels of pollutants and effects on health. The health effects are not presented along with the pollutant levels. Instead considerable effort is required to find this information. The best option would be to contact the State Health Institute, Center for Environment Hygiene¹². There one can download a number of statistical reports on the assessment of environmental pollution effects on health, including air pollution. Some reports deal with specific pollutants. Perhaps more useful for the lay person is a brochure published by an NGO, Koniklec, which has some information about health impact of air pollution.

The system that has been set up in the Czech Republic to provide information on air quality is of a high standard and functions efficiently. The range of information available in the Czech Republic on the internet or teletext is very detailed and thorough. For someone with internet access, virtually all environmental data is available and is updated hourly. Teletext also provides updated information on hourly basis of the measured concentrations, so that someone without internet access can have good knowledge of the current pollution levels.

¹² <http://www.szu.cz/chzp/monitor/>

3 - Denmark

Air quality information is provided in Denmark in a centralised manner and it is the responsibility of the Danish National Environmental Institute (also known as NERI). NERI operates two networks of air pollution monitoring stations – the urban network (“LMP”) and the background network (“BOP”)¹³. In the first place, NERI uses their web pages to disseminate information and their pages on air can be found at <http://www.dmu.dk/1_viden/2_Miljoe-tilstand/3_luft/default_en.asp>. NERI provides a variety of services including:

(1) 3 Day Forecast. This is a 3-day (i.e. current day and 2 days after that) forecast for air pollution which covers all of Denmark and uses the so-called THOR system. THOR is an integrated air pollution forecasting and scenario management system which has been developed by NERI¹⁴. The forecast gives specific levels of each pollutant (including sulphur dioxide, nitrogen dioxide, particulate matter, lead, carbon monoxide & ozone). The service covers all of Denmark but is more detailed for the two cities of Copenhagen and Aalborg where there are predictions for selected streets and urban areas provided in co-operation with the local authorities. In comparison, there are general predictions for rural areas. The forecast is colour-coded and so is very user-friendly. Also, precise levels are shown on maps and graphs.

The 3 day forecast is also broadcasted daily on Copenhagen’s radio¹⁵.

(2) Actual data and historical data from Air Quality Monitoring Stations. Information on sulphur dioxide, nitrogen dioxide, particulate matter, lead, carbon monoxide and ozone is actively disseminated to the public via the internet is found on NERI’s **Actual data from Air Quality Monitoring Stations** service and is updated in accordance with the requirements of the relevant daughter directive. All automatically collected data are updated every hour at the web page. Data on benzene however is not actively disseminated on NERI’s internet services, but will be provided upon request. As with many of the other countries reviewed, data on lead is not updated on 3 monthly basis, but rather on a yearly basis. Data on lead is available in NERI’s quarterly report on air quality.

(3) Danish Air Emission Inventories NERI works out the Danish atmospheric emissions inventory and reports to the EU and relevant international conventions. The inventory is updated annually. Currently the inventory covers data from 1980 to 2002, and the inventory for 2003 will be ready at the end of 2004.

Air quality information is also provided on teletext pages 580 to 582. In comparison with the information provided on the website, the teletext information is somewhat limited due to the primitive graphics used and the radio broadcasted information is very short, but this is simply the nature of these media rather than any particular defect. NERI also publishes quarterly and annual reports on air quality¹⁶ as well as so-called “theme reports”. Theme reports are intended more for the general public and are used for example by high schools. Publications can be ordered from NERI (and there is a charge for this service) but the most recent reports can be downloaded free of charge.

¹³ For more information on the monitoring system see: http://www.dmu.dk/1_Viden/2_Miljoe-tilstand/3_luft/4_maalinger/5_maaleprogrammer/oversigtskort_en.asp.

¹⁴ For more information on THOR see: <http://www.thor.dmu.dk>

¹⁵ NERI transmits its air quality monitoring data to Denmark’s Radio automatically every hour, including alerts.

¹⁶ There are separate annual reports from the LMP & the BOP.

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In addition to NERI's services, the municipalities have their own web pages¹⁷. It is interesting to note that in the past the municipality of Copenhagen did operate a recorded telephone service of the forecast. However, this service has now been stopped on account of low public uptake.

In reality the requirements to inform the public in the case of alerts have only been used in relation to ozone, as there have not been exceedences of the other pollutants. It is also NERI's responsibility to monitor whether alert thresholds have been exceeded and to draft the alert message and a press release. NERI will then pass on the alert message and press release to Denmark's Radio and to the newspapers. Denmark's Radio is obliged to announce the alert. When there have been ozone alerts in Denmark, the message will usually advise sensitive groups to stay indoors.

Sufficient information is given in Denmark to explain the link between the high levels of pollutants and effects on health. Explanations can be found on the forecast pages of NERI's website to the population on how to react in cases of high pollution. Explanations are also provided regarding the limit values and the EU directives. Information on health effects is also presented when there is an alerts messages in radio, teletext and web.

In conclusion, Denmark's air quality information system works efficiently and provides the necessary amount of information in an easily digestible and straightforward manner. The pollutant specific information is provided on NERI's website and usually presented in graph format. For those wishing a more simplified understanding of air quality issues, the theme reports which are produced are perhaps the best option. Undoubtedly, the main media for providing information in Denmark is the internet but given the Danish public's lack of uptake for more traditional sources (e.g. telephone) this appears to be in line with the public's wishes. It is also commendable that considerable information is provided by NERI in English as well as in Danish.

¹⁷ Actual air quality data and 3 days forecasts for Copenhagen, see <<http://www.miljoe.kk.dk/luftudsig>> and for Aalborg, see <http://www.aalborg-trafikinfo.dk/dynmenu/jump.asp?url=dmu/index.asp&n1=1&n2=5>.

4 – France

Information on air quality in France is provided on a decentralised regional basis. The Ministry of Environment's web pages on air quality provides only very general information such as national level reports¹⁸. Perhaps unsurprisingly after the heat wave of summer 2003 which caused so many deaths in France, several comprehensive reports have been written on the exceedence of ozone concentrations last summer. These reports present monitoring data, explain the situation that occurred and the effects that it had on the population. The reports also include information on the measures taken by the government to control ozone pollution.

It can be said that telephoning the Ministry of Environment is not the most efficient way of retrieving air quality information in France. The Ministry of Environment may wish to consider appointing someone in each department responsible for answering telephone queries, as it is not always easy to reach the relevant officials, who are no doubt very busy.

Instead, the best way for members of the public to retrieve information is to refer to the relevant regional websites in France as they are responsible for providing air quality information. All of the different websites for the "départements" of France are found on the website referred to in footnote¹⁹. These contain the official air quality monitoring information and constitute a network known as **Le Reseaux Atmo**. The member of the public would then be able to benefit from the following types of services:

(1) ATMO index. This service covers the following pollutants: sulphur dioxide, nitrogen dioxide, ozone, particulate matter, in a composite manner. The scale that is used is from 1 to 10 where 1 is very good (blue colour) and 10 is very bad (red colour). Every day, a composite grading is provided on air quality for each sub-region of each region. The historical gradings for the last week are also available. Each day at 5pm a prediction of the index for the next day is provided.

(2) Specific levels of pollutants from measuring stations. This enables a member of the public to select a monitoring station that they are interested in and find out what were the specific levels of pollutants that are monitored there (including sulphur dioxide, nitrogen dioxide, nitrogen oxide, benzene, carbon monoxide, ozone and particulate matter₁₀ & particulate matter_{2,5}). The results are presented in the form of a graph. It is also possible to find historic levels for these pollutants on this site back as far as December 1999.

(3) Questions. The information for each of the regional websites is provided by one or a group of organisations. Each regional website provides the public with information on how to contact the organisation directly to ask questions either by telephone or by the facility of being able to post on-line specific questions to the relevant organisation.

The quality of the regional websites varies from region to region. Unsurprisingly, the website for the Paris region "AIRPARIF"²⁰ was the best developed and is especially good if you are searching for information on traffic related emissions.

The greatest differential between the regional websites was with the range of pollutant information available – for example, the Paris region website contained data on ten pollutants (sulphur dioxide, nitrogen dioxide, nitrogen oxide, benzene, xylene, toluene, carbon monoxide, ozone and particulate matter₁₀ & particulate matter_{2,5}), whilst other regional sites contained only data on four pollutants

¹⁸ <<http://www.environnement.gouv.fr/actua/cominfos/dosdir/DIRPPR/dosdppr.htm#air>>

¹⁹ <<http://www.environnement.gouv.fr/actua/cominfos/dosdir/DIRPPR/resair.htm#s>>

²⁰ <<http://www.airparif.asso.fr/>>. The AIRPARIF site gathers its information from 44 automatic measuring stations which monitor the quality of air for the more than 11 million persons living in the Paris region.

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(sulphur dioxide, nitrogen dioxide, ozone, particulate matter). A degree of consistency was ensured between all of the regions since all the websites use the **ATMO index**²¹ and contain the basic composite grading of air quality.

France has not put in place a recorded telephone service providing current levels of air pollutants.

The information on ambient concentrations of sulphur dioxide, nitrogen dioxide and particulate matter should be disseminated via the various regional websites. However, as mentioned above, some regional sites do not give ambient concentrations of all the pollutants of interest. It can be generally said that information on sulphur dioxide, nitrogen dioxide, particulate matter and ozone is consistently well disseminated by all of the regions. The same cannot be said for lead, benzene and carbon monoxide. Again, the best and widest range of information is available for the Paris area (but even this region does not actively disseminate information on lead).

The procedure with regard to alert messages is where an information threshold or an alert threshold is exceeded for sulphur dioxide, nitrogen dioxide or ozone, this will be shown on the regional websites. The well developed Paris regional website contains a search engine that lets you search a database of alerts for NO₂, SO₂ and O₃ back until 1999. Alerts are also announced on national and/or regional TV and radio, and in regional newspapers. Major roads also have electronic screens to show the air quality situation. When levels exceed the allowable concentrations, these screens indicate the permissible speed limit on the road where it is placed.

Sufficient information is provided in France on the link between high levels of pollutants in the air and effect on health. Much of this information is found on the internet. For example, each regional website contains information on the principal air pollutants and each of these pages in turn contains a paragraph on the health effects (see example below on particulate matter). Other more traditional information, in the form of brochures, is issued by the Ministry of Environment.

In conclusion, it can be said that in France use of the daily ATMO Index composite grading of pollution does provide easily digestible information for the public on air quality. However, it can be harder for members of the public – in certain regions - to find on their own the precise levels of certain pollutants, and they may have to resort to telephoning the organisation that operates the regional air quality website.

The regional AIRPARIF website has a high level of detailed information. It also has a relatively new information service called “En direct de la Rue”²² which is worthy of note. This service enables the public to access and compare emissions of pollutants arising from traffic on certain streets throughout the capital. Various services are available. You can find out the total emissions from traffic in different areas of Paris on a day from 2002 to the present, or you can search on a historic database of emissions from traffic back to 2002. Alternatively, the annual report on emissions of atmospheric pollutants from road traffic is made available on this website.

²¹ <<http://www.atmofrance.org/index2.htm>>

²² <<http://www.airparif.asso.fr/heaven/>>

5 – Greece

Greece has opted to provide air quality information to the public on a centralised basis and the Hellenic Ministry for the Environment, Physical Planning and Public Works (“MoE”) is the responsible body. Much of the information is provided to the MoE by the Hellenic National Meteorological Service.

There are two significant problems with the system in Greece. Firstly, is a basic problem – the official monitoring network which gathers the relevant data is rather limited – it covers only Greece’s five main cities: Athens, Thessaloniki, Patras, Heraklion and Volos²³. Secondly, information is actively disseminated currently for only the Athens region. The MoE’s Annual reports (mentioned below) present data from these four other cities, but individuals seeking data for any part of Greece other than Athens would have to request it from the MoE. The remainder of this case study, therefore, presents the information actively disseminated by the MoE on Athens.

Information on air quality for the Athens region is disseminated on the MoE’s webpage <<http://www.minenv.gr/>>. The website has a special section on air pollution and interestingly presents information not only in Greek, but also in English²⁴. The MoE provides the following information services in relation to air quality in Athens online:

The daily report on air pollution levels for Athens. The report (see example below) is updated daily at 2pm and gives current values and yesterday’s values for ozone, nitrogen dioxide, sulphur dioxide, carbon monoxide, smoke, and particulate matter. It is presented by showing the viewer how much the level has varied from yesterday. It also states what public information and alarm levels are for each pollutant in order that a person can compare it with the current level. The daily report also contains a general forecast of air pollution (this is a couple of sentences explaining what levels of pollution are expected for the next day) and an analytical report of yesterday’s maximum pollution levels.

	Today on 30/07/2004 the levels varied:	Yesterday on 29/07/2004 the levels varied:
Error!Error! Unknown switch argument.	<ul style="list-style-type: none"> • from 1 µgr/m³ at the N.SMYRNI station • to 168 µgr/m³ at the AG.PARASKEYH station 	<ul style="list-style-type: none"> • from 1 µgr/m³ at the N.SMYRNI station • to 182 µgr/m³ at the AG.PARASKEYH station
	Public information level 180 µgr/m³ -- Alarm level 240 µgr/m³ (For three consecutive hours). Hourly mean values	
Error!Error! Unknown switch argument.	<ul style="list-style-type: none"> • from 1 µgr/m³ at the THRAKOMAKEDONES station • to 153 µgr/m³ at the PATISION station 	<ul style="list-style-type: none"> • from 1 µgr/m³ at the THRAKOMAKEDONES station • to 185 µgr/m³ at the PATISION station
	Alarm Level 400 µgr/m³ (For three consecutive hours). Hourly mean values.	

²³ It should be noted that measurements are taken also at unofficial monitoring stations operated by municipalities and private companies.

²⁴ Information on air quality in Greek:
<http://www.minenv.gr/1/12/122/12204/g1220400.html>

Information on air quality in English:
<http://www.minenv.gr/1/12/122/12204/e1220400.html>

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Error!Error! Unknown switch argument.	<ul style="list-style-type: none"> from 2 $\mu\text{gr}/\text{m}^3$ at the LIOSIA station to 81 $\mu\text{gr}/\text{m}^3$ at the ATHINAS station 	<ul style="list-style-type: none"> from 2 $\mu\text{gr}/\text{m}^3$ at the ATHINAS station to 101 $\mu\text{gr}/\text{m}^3$ at the GALATSI station
	Alarm Level 500 $\mu\text{gr}/\text{m}^3$ (For three consecutive hours). Hourly mean values.	
Error!Error! Unknown switch argument.		<ul style="list-style-type: none"> from 2 $\mu\text{gr}/\text{m}^3$ at the ARISTOTELOUS station to 28 $\mu\text{gr}/\text{m}^3$ at the PATISION station
	Limit value 125 $\mu\text{gr}/\text{m}^3$ -- Not to be exceeded more than 3 times per year. 24 hourly values.	
Error!Error! Unknown switch argument.	<ul style="list-style-type: none"> from 0.1 mgr/m^3 at the PIREAUS. ÄÇÌ station to 3.5 mgr/m^3 at the PATISION station 	<ul style="list-style-type: none"> from 0.1 mgr/m^3 at the PIREAUS. ÄÇÌ station to 3.8 mgr/m^3 at the PATISION station
	Limit value 10 mgr/m^3 . 8 hourly values	
Error!Error! Unknown switch argument.		39 $\mu\text{gr}/\text{m}^3$ at the PATISION station
	Public information Level 250 $\mu\text{gr}/\text{m}^3$ -- Alarm Level 300 $\mu\text{gr}/\text{m}^3$. 24 hourly values.	
Error!Error! Unknown switch argument.		<ul style="list-style-type: none"> from 10 $\mu\text{gr}/\text{m}^3$ at the MAROUSI station to 67 $\mu\text{gr}/\text{m}^3$ at the LIKOBRSI station
	Undefined Alarm level. Limit value 50 $\mu\text{gr}/\text{m}^3$ -- not to be exceeded more than 35 time per year . 24 hourly values.	

Historic information. The MoE website also contains historic information on certain pollutants.

The MoE also provides information in more traditional formats:

The Athens weather phone. By dialling 1448 a person can access the weather phone. Option number 2 on this service allows you to listen to a recorded message presenting air quality levels that are updated every 3 hours. The message presents the general levels of pollution (i.e., low, moderate, high) and usually also gives the magnitude by which the pollutants have varied (i.e., SO_2 minimum at station x up to maximum at station y).

Brochures & Reports. The MoE has produced some brochures on air quality in general and on the effects of air pollutants on health. Annual reports are produced and are available by the middle of the next year.

Information screens in Athens. Every day information screens in the centre of Athens display information on concentration levels of the main pollutants.

From the research conducted to write this case study, the author became aware that many of the technicians in charge of the monitoring networks are frustrated by the lack of interest and support given at the MoE for public access to information. Provision of information to the public has suffered from the inconsistent policies of successive governments. These technicians would like to see the

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current monitoring network extended and more of the information that is gathered being disseminated to the public.

There are some other problems with the Greek system. One is the lack of information provided to the public on the link between high levels of air pollutants and the effects on health. Another problem would appear to be the existence of three different monitoring networks in the Greater Athens Area. These are not co-ordinated by the same authority and instruments are not inter-calibrated. This has meant that information is not always comparable across the Greater Athens Area.

Information on ambient concentrations of sulphur dioxide, nitrogen dioxide, particulate matter, carbon monoxide and ozone *in Athens* is actively disseminated to the public via the internet (on the MoE's website) and is updated in accordance with the requirements of the relevant daughter directive. A member of the public without internet access could also send a fax or telephone the Ministry to request this information.

No lead measurements are carried out at the moment. Benzene levels are monitored but the information is not then actively disseminated on the internet pages. A person would have to contact the Ministry to specifically request information on benzene levels.

Alert messages are issued by the press office of the MoE's Department of Control of Atmospheric Pollution and Noise Department. The Ministry passes the alert messages on to radio and to television stations. This means that altogether the public will be informed of alerts via TV, radio, information screens in Athens and on the MoE's web pages.

In conclusion, the Greek system of provision of information to the public on air quality suffers from some fairly major problems. Firstly, the limited coverage of the monitoring stations, and secondly the fact that information is only actively disseminated for the Athens area.

The information that is made available for Athens, whether on the website, on the telephone service or in the annual reports, is easily digestible and comprehensible. However, even in the Athens region though there are deficiencies, such as the lack of information on the link between air pollution and health, only passive dissemination of information on benzene and lead levels, and the lack of comparable monitoring data across the Greater Athens Area.

6 – Italy

Italy has opted for a decentralised system to provide information on air quality. Italy is divided in 20 regions, and each region has the competence for informing people about air quality. Almost all the updated and detailed information is provided by the regional Agencies for Environmental Protection (“ARPA”s). There is no national centralised system which gathers the information from the different regions, as is the case in Belgium. The national level authorities, the Ministry of Environment and the National Agency for Environmental Protection (ANPA/APAT) provide in their websites more general information and links to the Regional agencies.

The Ministry²⁵ is responsible for providing more general information, including articles on air pollution or topics and explanation of air pollution related terminology. The ANPA²⁶ provides general information on air quality, sets standards and is in charge of monitoring. The website provides information on the Air Quality Survey Network including an explanation of the pollutants (sulphur dioxide, nitrogen dioxide, carbon monoxide, ozone, particulate matter 10, benzene, lead and others), legislation in force for every pollutant, the existing method and the future one to be put in place.

It is at the regional level where specific information on air quality can be found. The amount and depth of information provided was found to vary from region to region²⁷. Some regions have a more sophisticated system in place, including updated on-line information, whereas other regions provided information in their respective websites in a more general manner, similar to that provided at national level by the Ministry of Environment or the ANPA.

The main regional sources for the public to consult are:

(1) Air Pollution Bulletin (online). In the regions which operate systems of active dissemination of air quality information (e.g., Emilia Romagna and Umbria,) the ARPAs website displays a Air Pollution Bulletin. This is a pollutant-specific service with daily updated information on sulphur dioxide, nitrogen dioxide, carbon monoxide, ozone, PM₁₀ and benzene. The information is provided on a geographical basis (per city). The information is provided with colours that indicate the level of pollution: green (good), yellow (acceptable), orange (bad), red (very bad), fuchsia (alarm). The system also provides the names of the monitoring sites and in some cases (i.e., Emilia Romagna), an air quality assessment of sulphur dioxide and nitrogen dioxide.

(2) Direct questions to regional officials. Depending on the region, there are different systems in place to enable persons to ask specific questions. In the case of regions not having a system of active dissemination of information, this will be the only tool for the public to access information on air quality. These questions/requests can be addressed, for example, to the person in charge of air quality and monitoring, or you can send emails requesting for information. For persons without internet access, it is always possible to use post.

(3) Telephone numbers. Depending on the region, it may be possible to telephone a specific telephone number to request environmental information. For example, in Emilia Romagna, a free telephone number (800-743333) is available to find out about traffic restrictions which could affect air quality. In other cases, the general information telephone number will simply refer the enquirer to the competent authority.

²⁵ <http://www.minambiente.it/Sito/home.asp> and http://www.minambiente.it/Sito/temi/tema_inquinamento.htm

²⁶ <http://sinanet.anpa.it/aree/ATMOSFERA.ASP> and <http://www.apat.it/site/it-IT/Temi/Aria/>

²⁷ The researcher of this national report decided to focus on three regions - Emilia Romagna, Umbria and Lazio.

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(4) Reports. There are national reports on the state of the Italian environment from 1999 which include information on air quality, the last one being 2001²⁸.

Information on sulphur dioxide, nitrogen dioxide, carbon monoxide, ozone, PM₁₀ and benzene is routinely available on the website of those regions that carry out active dissemination. However, it seems that information on lead is only available on a yearly basis, through specific reports. On the other hand, information on ozone is very accurate in some regions – in Emilia Romagna data from the last 24 hours is provided, as well as highest daily levels, annual summaries etc.

The link between high pollutant levels and health effects is dealt with better by some of the regions than others. It has to be mentioned that in the case of Emilia Romagna, there is a special website called “Liberiamo l’aria” displaying specific information on health effects of high levels of pollution, sensitive population, information and preventive measures²⁹. However, a more standardised approach to making the link between air pollution and health should probably be made throughout the regions.

Concerning the provision of alert messages, some regions are in the process of putting such information systems in place. For example, the Umbria region intends to have a system in place for informing the public via alert messages for exceedences of sulphur dioxide or nitrogen dioxide from April or May 2004. Other regions, like Emilia Romagna already have operational systems and release information through press releases. The box below shows a translated example of one of these alert messages issued by the Emilia Romagna ARPA:

On Wednesday the 27th, a surge of ozone levels has been recorded; they exceeded the level of 200 µg/m³. Since Thursday the situation has become normal in the entire region.

The high levels were recorded on Wednesday the 27th August in Bologna (226 µg/m³), in Piacenza (221 µg/m³), in Reggio Emilia (195 µg/m³) and Parma (190 µg/m³). The situation is better in the eastern provinces, which are all within the tolerance level of 180 µg/m³.

At the weekend, the ozone pollution situation will improve; a low pressure wave brings moderately instable weather conditions, and will therefore facilitate a decrease of concentration of ground level ozone.

Information on ground ozone concentrations and previsions/forecasts are available everyday on the internet: www.arpa.emr.it/ozone

In conclusion, air quality information is provided by the regional ARPAs rather than at national level and without a centralised system gathering information for the different regions. There did not appear to be any uniform standard of information provision between the regions. Some regions (e.g. Emilia Romagna) have opted for an active dissemination system via internet and provide high quality, easy to understand, and comprehensive information. Others provide some information actively (e.g. Umbria). Other regions (e.g. Lazio) only provide information upon request, although many of these regions may be working towards establishing a more sophisticated system, similar to other regions with an active dissemination system.

The other problem that was evidenced was the lack of co-ordination between the Ministry of Environment and the regional ARPAs. This was particularly evident if a person was looking for some information that was slightly out of the ordinary. When calling a relevant authority, you may quite frequently be passed from one person to another and to one institution to another – Ministry of the

²⁸ http://www.minambiente.it/Sito/settori_azione/iar/iam/dati_statistiche/dati_statistiche.asp

²⁹ <www.liberiamolaria.it>

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Environment – ANPA – ARPAs and other local offices. This does not very much help the attempts of the lay person in Italy to find information on air quality.

7 – Lithuania

In Lithuania, it is the Environmental Protection Agency (the “EPA”) that is responsible for ambient air quality monitoring and assessment at the national level and also for the provision of information to the public. Air quality monitoring measurements are taken by fourteen national, stationary continuous automatic monitoring stations and one mobile laboratory. The stationary air quality monitoring stations are located in the five biggest cities (five stations in Vilnius, one in Kaunas, two in Klaipeda, one in Panevežys, one in Šiauliai) and also in hot spots (there is one each in Mazeikiai, Naujoji Akmene, Kedainiai, Jonava). The national measuring stations report the measuring results to the Regional Environmental Protection Departments who then pass this on to the EPA.

The main source of detailed and up-to-date information on air pollution can be found on the EPA’s website <<http://aaa.am.lt/>>. A variety of options are available:

(1) Real time air quality measurements data from all fourteen stations.

(2) Daily bulletin with information on air quality measurements. Processed daily measurements data are provided for particulate matter (daily average), carbon monoxide (maximum 8 hour average), sulphur dioxide (daily average and maximum one hour average), nitrogen dioxide (maximum one hour average), ozone (maximum one hour average and maximum eight hour average).

(3) Historic air quality data. The EPA collects and stores historical data. Approximately two years of historical automatic measurements data are now available on line. The data on air quality for previous years is available on the EPA’s archive, but only on hard copy format.

(4) Reports. The EPA produces annual **air quality reviews**. These are available for the years 1998-2001 on their website. The **Annual Report on the Environmental Status** also includes data on air quality, as well as the other environmental sectors. For example the 2002 annual report featured a report describing how concentrations of particulate matter (PM10) in certain parts of Vilnius had exceeded limit values in winter time when wind speed is very slow. The feature included graphs explaining the correlation of the hourly concentrations of PM10 and wind speed. The annual report is available on the internet. Hard copies are available – members of the public can purchase it from the Ministry of Environment.

It is also possible to telephone the Ministry of Environment’s Public Information Division (+370 523663659) and the EPA’s Air Quality Division (+370 52727784) to request further information, but there is no recorded telephone service on current levels of air pollutants.

It should not be overlooked that some municipalities own their own monitoring stations, particularly Šiauliai and Kaunas³⁰. The local stations usually only monitor sulphur dioxide, nitrogen dioxide, particulate matter, ozone and lead. Municipal monitoring of air quality tends to serve a different purpose than the national monitoring – it is carried out for the purpose of local development and planning. Currently discussions are going on how as to how to improve the exchange of air quality data between national and municipal levels.

Information on concentrations of sulphur dioxide, nitrogen dioxide, particulate matter, benzene, carbon monoxide and ozone in ambient air is actively disseminated to the public via the internet (on the EPA’s website) and is updated in accordance with the requirements of the relevant daughter directive. Unlike most of the other case study countries, Lithuania monitors lead on a monthly basis

³⁰ Kaunas city municipality owns three automatic monitoring stations.

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(i.e. more frequently than required by the first daughter directive) and disseminates this information on the EPA's website.

The Lithuanian public is informed via radio, TV and press in a case of an exceedance or in the case of environmental accidents (e.g. the case of peat bogs wild fire in summer 2002)³¹. There has not yet been an exceedance of the ozone alert threshold, but the public information threshold has been exceeded. When an exceedance of an alert threshold does occur, the EPA is responsible for recording this and drafting the alert message. The information will be shown on the EPA's internet site and the EPA will pass on the alert message to the Ministry of Environment's public information division who in turn pass it on to the mass media.

Presently, it cannot be said that a sufficient explanation is given about the link between high levels of air pollutants and effects on health in Lithuania. The State Environmental Public Health Center³² at the Ministry of Health does have information on the air pollution effects on health.

The national plan on public health does take into consideration environmental effects. However, currently no particular information is disseminated on either the Ministry of Health or Environment's websites. The Ministry of Health and the Ministry of Environment are now preparing a regulation on how to provide information to the public on the effects on health of environmental factors. The intention is to have explanations of the health effects beside the pollution forecasts on the EPA web site. This information will focus on the effects for vulnerable/sensitive members of the population.

In conclusion, the Lithuanian EPA's website contains very detailed information on air quality in the form of graphs and tables to show the pollutant levels. The limit values are marked in red, thus it is very clear to see when the exceedance occurred and the level of the exceedance. The information may be rather complicated for a lay person to understand, and it might be worth the EPA introducing a simple indication - a so called "air quality index" of what was air quality during a day and/or month (for example, good, average, bad, etc.) Since the majority of information is actively disseminated only through the medium of the EPA's website, this can of course cause difficulties for persons seeking information without internet access.

³¹ For further information, please refer to Lithuanian Governmental Regulation No. 1175 on the Submission of Environmental Information to Public 22 October 1999. The regulation sets the procedure on how the information should be provided by the national and municipal institutions to the public. There is also an order of the Minister of Environment No. 248 on the Actions to be undertaken in Case of Emergency and Accidents and Management of the Ravage Made 20 May 2003.

³² http://www.vvspt.lt/visuom_sveik_centras.htm

8 – Spain

Spain has a very decentralised system for providing information to the public on air quality. This is due to the quasi-federal structure of Spain, which is divided into 17 Autonomous Communities (hereinafter CCAA) and two autonomous cities. The CCAA have competence for almost all environmental issues, being able to create their own legislation, sometimes on the basis of a national framework instrument. They have the competence to inform the public on air quality and in some cases, they have delegated this competence to the municipalities. For these reasons, in some cases the information will be found only at the municipal level, although centralised regional systems are being developed for those regions not yet having one.

Almost no information can be found at national level. In fact, the Ministry of Environment website does not provide any information on air quality. Under the theme environmental quality there is no reference to air pollution where at least general information could be found. The only information on air quality are the national reports on environmental quality (last one dated 2001) and the link to the National Meteorology Institute (INM), which provides information on the weather.

The Ministry of Environment does however provide links to all the Regional Ministries (Consejerías) of Environment and requests for information can be made. There is no National Environmental Protection Agency in Spain³³.

It is therefore at the regional level that the analysis for this case study must be done and where some active dissemination of information policies exist. Every CCAA has its own website and more precisely, each Regional Ministry of Environment as well. At the date of this report there are nine CCAA which provide active dissemination of information on air quality via internet. The other CCAA have pages where general information on air quality can be found, mainly legislation, measuring stations, methodology, thresholds, EIONET, information on the pollutants etc.

The websites of each CCAA are linked. This means you can be resented to another CCAA's Ministry website or even to the specific page dealing with air quality, as well as to the municipalities' websites.

The main sources of information at regional level are:

(1) Databases. For those CCAA with active dissemination of information, there is a specific page dealing with air quality. In general these databases contain sometimes very detailed information on the national and regional legislation, description of the network, including detailed information and geographical placement of measuring stations, methods of calculation, explanation on how to interpret data, description of the pollutants, sometimes linked to the effects that they may have in human health if thresholds exceeded. Apart from these general information sections, specific data can be obtained. In almost all of these CCAA the section concerning data was organised as follows:

- **Online data:** this section includes current data updated on an hourly basis that can be searched by pollutant and/or by station. This data is not normally validated, but a subsection on validated data is also included. Sometimes a specific section on ozone is included. The data can be downloaded, requested by email or automatically retrieved from the system (see below). The data is presented on tables which use a colour coded chart of each hour of the day. The colours indicate the level of pollution. The colour codes may vary from one CCAA to another but in general green/blue is excellent, yellow admissible, orange bad, red very bad and dark brown alarm.

³³ The only national authority apart from the Ministry of Environment is the ICONA, which is the institute for the protection of nature and deals with aspects related to fauna and flora.

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- Historic data (sometimes called validated data): this section includes data that can be searched in general terms, by pollutant, day/month and/or year, on an hourly basis, and station, including specific possibilities to search for exceedences (annual or per pollutant). This data is presented by tables or sometimes by graphics which are very visual and easy to understand. The system normally allows the researcher to compare different years for the same pollutant and sometimes different pollutants for the same year, week, month etc.
- Evaluation of air quality: this can be found sometimes in some CCAA (Valencia) with more comparative information on tables and graphics
- Index on air quality: it normally shows maps indicating the level of air quality by area and with colours (as mentioned before).

The databases display maps of the CCAA indicating the measuring station so that it is easier for users to carry out geographical research.

(2) Brochures. there are explanatory brochures in almost all CCAA on air quality and more precisely on ozone, explaining legislation, thresholds, where to find more information, links with health etc.

(3) Video Presentation. The Madrid website contains an innovative presentation which provides information on ozone. It is very easy to understand as it is a video of a man talking about how ozone is formed, what the thresholds are, who are the most sensitive members of the population, and what measures can be taken etc.

(4) Bulletins. In almost all CCAA (including those not having information on air quality values online) it is possible to find weekly or monthly bulletins with information on environment. Usually there is a specific section dealing with air quality. Some CCAA, like Valencia, have bulletins on ozone with daily information throughout the period of the campaign "Previozono"³⁴. These bulletins can be downloaded from the website or can be received by mail or email free of charge once you have subscribed.

(5) Direct questions. It is always possible to ask for information. In the case of the Ministry of Environment via email is the easiest way. It is possible to receive information on values of pollutants by sending an email to the specific "contact us" section provided on the website. It has to be mentioned that the information provided by the Ministry website, as almost all CCAA websites, is in the five Spanish official languages (Castellan, Catalan, Basque, Galician and Valencian) and in addition in English and French. At the CCAA level, there is always the possibility to ask for information related to air quality via a general environmental information email or to a specific one on air quality (i.e., Catalonia and others). Sometimes you can even address your question directly to the person responsible for air quality. Possibilities for information to be provided by normal posted mail also exist.

(6) Telephones. Some CCAA have put in place a free telephone number for environmental information (i.e., Madrid, Catalonia, Balearic Islands). These telephones can be for freephone or paying services, and there is a person dealing with calls. In case she/he is not able to answer the request, the enquirer will be redirected to the person responsible for the subject matter of the request. From a certain hour on, the telephone provides an automatic service.

(8) Reports. at national and autonomic level it is possible to find reports on air quality in general or on specific pollutants, such as carbon monoxide, ozone, lead or particulate matter. These reports can be technical or more didactic, and they include maps and comparative graphics.

³⁴ This is an annual campaign highlighting ozone pollution which runs from May to September.

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quality data. Finally it seems that those CCAA not having a regional centralised system of data online are gradually putting them in place.

9 – United Kingdom

Air quality information is disseminated in the UK in a well-structured and centralised manner. The main source of information is a comprehensive internet site called the UK National Air Quality Information Archive³⁵. All the other sources mentioned below are secondary in the sense that they draw on or simply repeat the information found in it. The National Air Quality Information Archive provides various services including:

(1) Air Pollution Forecast. This is a general 24-hour air pollution forecast for sixteen urban areas and sixteen regions of the UK. The information is normally updated twice daily (at 11 a.m. and 4 p.m.). The main intention is that this forecast is easy for the public to understand and so it is not pollutant specific. The information used to produce the Air Pollution Forecast covers five pollutants (namely ozone, nitrogen dioxide, sulphur dioxide, carbon monoxide and PM₁₀ particle). However, the forecast provides for each area a composite "worst case" of all the pollutants and location types. The forecast is described in terms of an air pollution index (1 – 3 (low), 4 – 6 (moderate), 7 – 9 (high) and 10 (very high)) which is based on the health effects of each of the different pollutants. It provides three assessments of pollution - in the city near busy road, in city away from roads and in a rural area.

(2) Air Pollution Bulletin. This service is more sophisticated – it is a pollutant specific hourly update of the mean levels of ozone, nitrogen dioxide, sulphur dioxide, carbon monoxide and PM₁₀. This information is provided again for the sixteen urban areas and sixteen regions of the UK. It also provides the corresponding level of air pollution on the above-mentioned scale of 1 – 10.

(3) Database. The National Air Quality Information Archive also contains a database of historic air quality data. The database can be searched in 3 ways: (1) raw data and simple statistics (2) annual statistics and exceedence statistics (3) data availability. The results can be either shown on the screen (if data set is less than 10000 rows) or can be emailed to you (if more than 10000 rows). It must be said that the database is fairly complicated to navigate and it does take some practice before a person can use it effectively. The complexity of using the database was commented upon recently in an article published in the November 2003 edition of the journal "Air Quality Management". The author of this article produced an step-by-step flow chart guide to pulling off statistics from the database.

(4) Direct questions. Lastly, there exists a facility for persons with specific question to email their question to the Air Quality Archive. This system works relatively well and the applicant will receive an email with the answer to their question and all questions and answers are posted on the site so that they are accessible to other members of the public.

Other sources of air quality information are a free phone number (0800 55 66 77) and teletext pages 155 and 169. By dialling the free phone number the public may benefit from the **Air Pollution Bulletin Service**. This free service is effectively an oral presentation of the **Air Pollution Forecast** mentioned above, the only difference being that it is updated hourly. The **Air Pollution Bulletin Service** has a handy feature - it gives codes for all of the areas which enables regular callers to jump quickly to the information on his/her area.

Some other forms of active dissemination exist. A free **brochure** entitled "Air pollution: what it means for your health" publicises the sources of air pollution information and the health effects³⁶. Free **emails** containing the Air Pollution Forecast are sent every day by the Governments to a variety of bodies including regional and national newspapers, television and radio stations, environmental

³⁵ <<http://www.airquality.co.uk>>

³⁶ Published by DEFRA in partnership with Department of Health, the Scottish Executive and the Department of Environment for Northern Ireland. The brochure is available from DEFRA's publications unit or can be downloaded from the internet.

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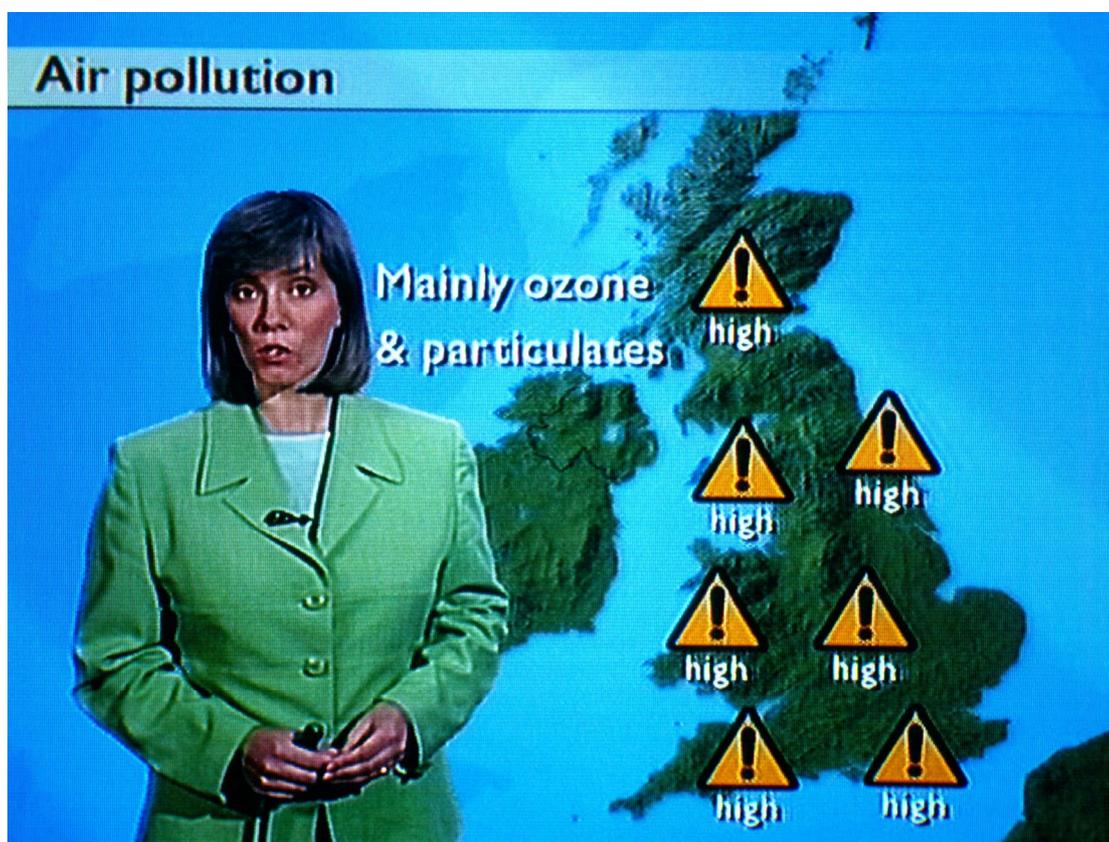
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groups, local authorities, etc. From enquiring with DEFRA, it appears that ordinary members of the public can register to receive these emails, but this option does not seem to be overly well publicised.

Information on sulphur dioxide, nitrogen dioxide and particulate matter is actively disseminated in the UK to the public via the aforementioned **Air Pollution Bulletin** and the information is updated more frequently than required in the first Daughter Directive. However, the information regarding lead is not disseminated so actively. Lead levels are not covered in the **Air Pollution Bulletin**. Instead, monthly information can be found up until 2002 by searching on the **Database**. When asked particularly about how to find data on lead from 2003 until the present, the Air Quality Archive referred the applicant to its contractors Casella GMSS, and so it appears that the required information on lead is available, but is not actively disseminated to the public.

Information on ambient concentrations of carbon monoxide is actively disseminated via the **Air Pollution Bulletin**. Information on ambient concentrations of benzene are not disseminated so actively but can be found by searching on the **Database**. Both are updated as regularly as the second Daughter Directive requires. Information on ambient concentrations of ozone can be found also on the hourly updated **Air Pollution Bulletin**.

The procedure is that when an alert threshold is passed for ozone, sulphur dioxide or nitrogen dioxide, DEFRA will publish a press notice. The press notice will be provided to the local press, but the press are under no obligation to publish this information. No media organisations routinely publish air pollution data in the UK, and it tends to happen on an ad-hoc basis and usually when high pollution levels are recorded or predicted. The picture below shows a BBC weather presenter issuing an alert during a time of high pollution.



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According to a DEFRA official³⁷, last year the ozone threshold was exceeded in three monitoring sites in London. The Evening Standard newspaper published information on this, together with an article entitled “Gasping for Air” with a picture of Canary Wharf and the city smog. All alert messages will appear in a rather prominent box on a page of the National Air Quality Information Archive³⁸ and will be announced on the freephone **Air Pollution Bulletin Service**. Members of the public can also search for exceedance statistics on the **Database**.

A fairly simple but sufficient explanation of the link between pollutant levels and effects on health is provided on the UK’s National Air Quality Archive and also in the brochure “Air Pollution: What it means for your health”. These sources provide the following health effect index:

Pollution band and Health effect numerical index	
1–3 (LOW)	<i>Effects are unlikely to be noticed, even by people who know they are sensitive to air pollutants</i>
4–6 (MODERATE)	<i>Mild effects are unlikely to require action, but sensitive people may notice them</i>
7–9 (HIGH)	<i>Sensitive people may notice significant effects, and may have to act to reduce or avoid them (for example, by reducing time spent outdoors). Asthmatics will find that their reliever inhaler should reverse the effects of pollution on their lungs</i>
10 (VERY HIGH)	<i>The effects of high levels of pollution on sensitive people may worsen when pollution becomes very high Sensitive individuals are people who suffer from heart and lung diseases, including asthma, particularly if they are elderly.</i>

The brochure also provides a further explanation on effects of air pollution on humans, and particularly contains sections for persons suffering from asthma and heart disease, and also on smokers. Whilst the information does show the link between pollutant levels in the air and health effects, it has to be said that the information provided is very basic. However, the Department of Health provides more detailed information on air pollution and health in a free information pack.

To conclude, it can be said that the UK has created a highly transparent, user-friendly and effective way of communicating air quality information to the UK public. The system of grading air pollution (1 – 10) and the corresponding information on health effects of different levels of air pollution is presented very clearly and very simply in the brochure “Air Pollution: What it means for your health”. Also, this brochure explains the methods of information available to the public on air pollution. All of the sources of information to the public (internet, freephone, teletext) then use this same grading system which means that the overall system of providing information to the public used in the UK is consistent and easy to understand.

³⁷ In an unofficial telephone conversation.

³⁸ http://www.airquality.co.uk/archive/uk_forecasting/apfuk_home.php

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Whilst the information is presented to the public in an easily digestible and straightforward manner, one criticism could be that the information provided (other than in the National Air Quality Information Archive database of historic air quality) is rather too simplistic, especially considering that it lumps all of the pollutants together and provides one overall grade for air pollution. However, a DEFRA official explained that previously the **Air Pollution Forecast** had been pollutant specific. The Forecast was then changed three years ago as results of DEFRA survey showed that people did not understand the pollutant level figures. The current simplified overall grading system for air pollution follows also the Sun index and the Pollen index that are used in the UK.

If a person requires pollutant specific data, he/she can consult either the **Air Pollution Bulletin** or the **Database**. Of course, these two services are only available on the internet. For persons without internet access, DEFRA will provide the information by another method (e.g. posting out the data).

10 – Comparative overview of case studies

The table on the next page is a comparative overview of the most important findings in each of the nine case study countries that have just been presented.

It should be noted that the grading of transparency pertains only to the dissemination of information and not to the aspect of responding to information requests in order to maintain the anonymity of section 6.

Criteria	Belgium-Flanders	Czech Republic	Denmark	France	Greece	Italy	Lithuania	Spain	United Kingdom
Information provision centralised or regional	Mostly regional, except ozone	Centralised	Centralised	Regional; at départements level	Centralised	Regional; by ARPAs.	Centralised	Regional; by autonomous communities; "CCAA"	Centralised
Information actively disseminated by:	<ul style="list-style-type: none"> ✓ Websites ✓ Publications ✓ Freephone recorded message ✓ Teletext 	<ul style="list-style-type: none"> ✓ Websites ✓ Publications ✓ Teletext ✓ Copenhagen Radio 	<ul style="list-style-type: none"> ✓ Websites ✓ Publications ✓ Athens Freephone recorded message ✓ Information screens 	<ul style="list-style-type: none"> ✓ Websites ✓ Publications 	<ul style="list-style-type: none"> ✓ Websites ✓ Publications 	<ul style="list-style-type: none"> ✓ Websites ✓ Publications ✓ Online ozone video presentation ✓ Information screens 	<ul style="list-style-type: none"> ✓ Websites ✓ Publications ✓ Freephone recorded message ✓ Teletext 		
User friendliness (high, medium, low)	High : use of the colour-coded General Air Pollution index	High : use of map of country divided into regions, on which one clicks for detailed info.	High : the pollutant specific Three Day Forecast is colour-coded	High : use of composite ATMO index	High : only in Athens region where the Daily Report on air pollution levels is clearly and simply set out. Low : in all other parts of Greece.	High : only in those regions actively disseminating Air Pollution Bulletin. Low : in regions with no active dissemination policy in place.	Low : detailed information is provided in graphs & tables; no simple index exists.	High : only in 9 regions actively disseminating info due to use of Index on Air Quality and colour-coded online data. Low in other regions.	High : use of composite Air Pollution Forecast & free brochure explaining what information sources are available.
Providing information as required by Daughter Directives?	Yes, but more limited for CO & C ₆ H ₆ , lead only on request.	Yes, but lead only on request.	Yes, but C ₆ H ₆ only provided on request.	Yes, but for Pb, C ₆ H ₆ and CO only on request.	Only for Athens, but for C ₆ H ₆ only on request and lead not measured at present; in other cities only by request.	Only in regions that are actively disseminating, in other regions, only by request; very accurate for ozone.	Yes.	Only in regions that are actively disseminating, in other regions, only by request; very accurate for ozone.	Yes, but lead only on request.
Alert threshold information	Good: via press releases	Good: in national papers & on relevant website	Good: press release to Denmark's Radio and to the newspapers	Acceptable: alerts displayed on regional websites.	Good in Athens: displayed on website and alert messages passed to media.	Quality of alerting to exceedance public varies region to region.	Good: displayed on website and alert messages passed to media	Quality of alerting to exceedance public varies region to region.	Good: displayed on website and alert messages passed to media.
Effective explanation of link between health & air pollution	Yes; on relevant websites & in VMM's "De verrekijker" review	No, underdeveloped at present.	Yes, explanations found with the Three Day Forecast.	Yes, on relevant websites & in Ministry of Environment publications.	No, underdeveloped at present.	Yes in some regions, but not in others.	No – under preparation.	Yes in some regions, but not in others.	Yes, on relevant websites & in free brochure <i>Air Quality: what it means for your health</i>
Subjective grading of transparency *(high, medium or low)	High – but heavy reliant on internet based sources	High - but further development of information health required	High	Medium – varied quality and content of regional websites.	Low given that information only actively disseminated for Athens region; & monitoring network limited.	Overall Low – given that amount & depth of info varies from region to region.	Medium – all information is provided as required, but in rather complex format.	Low - given that amount & depth of info dependent on if CCAA is actively disseminating.	High

6. Responses to sample letters requesting air quality & emissions information

In March 2004, the national experts in each of the nine countries sent out their three sample letters³⁹. In the cases where their own names would have been recognised by the authorities, they used their family and friends to send out the letters.

The texts of these letters are found at Annex II. All of the letters were translated into the national language, made specific to the locality and then posted out locally. The *first letter* was sent to a responsible official for air quality at a local level (e.g. municipality). It was designed to reflect the concerns of a parent who each day took her child to school whilst walking along a busy main road. It requests information for pollution levels along this road in February 2004 and for an explanation of the effects of these levels on health.

The *second letter* was sent to an air quality official at the Ministry of Environment in each of the countries. It was supposedly written by a college student who is looking for information on pollutant levels of six specific pollutants in July in three consecutive years.

The *third letter* was sent to an official responsible for air quality matters at Environmental Protection Agency in each country where such a body exists. Where this body does not exist, the national experts sent out the letter to another authority of their choice. This letter was written from the point of view of a student undertaking an environmental science project and who required information on emissions from a specified local industrial installations in July 2002 and 2003.

Number of responses

It is worth noting that since 1992 Member States have been obliged, by Article 3 of Council Directive 90/313/EEC on the freedom of access to information on the environment, to make available information to citizens when they request it.

The box below presents the numbers of responses that were received from the sample letters in each of the countries.

Number of responses received	
Responses to all 3 sample letters	3 countries
Responses to 2 out of 3 sample letters	2 countries
Responses to 1 out of 3 sample letters	2 countries
Responses to none of the sample letters	2 countries

Our findings show that currently six out of the nine Member States which we tested have not yet put systems in place to ensure that competent authorities routinely and effectively respond to every request for environmental information.

³⁹ N.B. This section has been written without disclosing the names of each case study country.

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Three out of the nine Member States considered have very effective systems in place, two out of nine have adequate (but not perfect) systems in place and the remaining four Member States did not appear to be complying with the basic obligation to provide information to the public.

There has frequently been heated debate regarding whether environmental laws are better enforced in northern European countries compared to southern European countries. In this regard, it is interesting to note that three out of the four Member States who did not appear to be in compliance can be classified as “southern European” Member States.

Those Member States whose systems of responding to information requests are not yet sufficient may soon face problems, as from 14 February 2005, they are required to have implemented the tighter requirements of Directive 2003/4/EC on public access to environmental information, which repeals Directive 90/313/EEC. Most notably, Article 3(1) clearly requires that Member States are to ensure that public authorities are required to make available environmental information held by them to any applicant upon request and without the requester having to state an interest.

The Directive does provide in its Article 4 for exceptions which would allow the Member State to refuse the request for information, but these are strictly limited. For example, requests can be refused if:

- the request is manifestly unreasonable (Article 4(1)(b))
- the request is formulated in too general a manner (Article 4(1)(c))
- disclosure would adversely affect confidentiality of proceedings of public authorities where such confidentiality is provided for by law (Article 4(2)(a))

The only exception that our experts' sample requests for information may have fallen into would be Article 4(1)(a). This provides that if an authority does not hold the information requested, it is entitled to refuse the request but it must transfer the request to an authority that does hold the information and it must explain to the applicant what is happening.

Only in one Member State analysed did the authorities respond that they did not hold the information required and provide an alternative address to whom the letters should be sent. Our national experts in that Member State duly resent the letters but still did not receive any response from these authorities.

It cannot be concluded therefore that those four Member States are complying with the obligation set out in Article 3(5)(a) of Directive 2003/4/EC that officials *support* the public in seeking access to information.

Speed of responses received

Only considering now the seven countries in which the authorities did provide responses, the following box shows the speed of those responses:

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Speed of responses		
Country A	Letter 1	1 week
	Letter 2	1 week
	Letter 3	2.5 weeks
Country B	Letter 1	4 days
	Letter 2	1 week
	Letter 3	3 days
Country C	Letter 1	1.5 weeks
	Letter 2	2 weeks
	Letter 3	4 days
Country D	Letter 1	1.5 weeks
	Letter 2	3.5 weeks
Country E	Letter 1	4 weeks
	Letter 3	4 weeks
Country F	Letter 3	1.5 weeks
Country G	Letter 2	1 week

Our test has revealed that the countries who did provide responses to the requests for information do seem to be already in compliance with Article 3(2) of Directive 2003/4/EC and are providing the information at the latest within one month after receipt by public authority⁴⁰. It can be concluded that the countries who have put systems in place to deal with requests for information are functioning quite adequately and are in line with the most recent legal requirements.

Adequacy of responses received

We next assessed the adequacy of the content of information provided in these letters, and present our findings in the box below. We give a grading of “1” where the response was totally inadequate. A grading of “2” denoted where the response was less than adequate - some questions were answered, but some were left unanswered. A grading of “3” denoted that the information provided was adequate and all questions were answered. Lastly, a “4” grading showed an answer that was more than adequate – such an answer was considered to be very full and comprehensive, went beyond information requested.

⁴⁰ Article 3(2)(b) provides a longer time period of two months if the information requested has a large volume and is complex.

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Adequacy of response on Scale of 1: inadequate – 4: more than adequate

Country A	Letter 1	3
	Letter 2	4
	Letter 3	2
Country B	Letter 1	4
	Letter 2	4
	Letter 3	4
Country C	Letter 1	4
	Letter 2	4
	Letter 3	4
Country D	Letter 1	3
	Letter 2	2
Country E	Letter 1	4
	Letter 3	2
Country F	Letter 3	2
Country G	Letter 2	3

It was interesting to note that all of the responses received to *letter "1"*, i.e. answered by the local authorities, scored highly (three graded "4" and two graded "3"). Generally, the authors of this report were impressed by the care taken by local authorities in these five Member States when responding to the letter which expressed concern about pollutant levels near busy roads and the effects that this might have on the health of children.

All of these five responses suggested that the officials had taken time to either provide the information requested or to explain where the information could be found. In addition, details about local situations were provided. One official, for example, took the trouble to explain how transport infrastructure changes would shortly result in improved air quality in the city. Another official explained how, due to exceedences of pollutant levels, one particular area had been declared an air quality management area and an action plan was being developed. The official went on to describe the consultation process that was taking place on this action plan.

The Ministry of Environment in countries A, B and C all responded to their respective *letter "2"*, and their responses were graded "4" - more than adequate - by our national representatives. When one considers the content of these three letters, it is revealing to note that they all receive the top grading despite the fact that they responded to the information request in very different ways.

The Ministry of Environment in Country A was the only Ministry who actually provided the pollutant data themselves, in the form of three tables. They also explained that data on PM_{2.5} was not available for that location as it was not measured there. They also went on to provide a website address which could be used to gather any further data freely.

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An official at the Ministry of Environment in Country B responded by telephoning the letter writer to explain personally what website she should consult in order to find the information she needed. The official assured her that if she had problems in finding the information again, she should call him back or alternatively, he provided her with the contact details of a person directly responsible for compiling the information.

An official at the Ministry of Environment in Country C responded by letter and also provided the address of a website containing a database on which the writer could find the pollutant data she required. The official helpfully admitted that the database was not the most easy to use, and he went on to – very usefully – set out in detail the steps that needed to be taken to find the information required. Lastly, the official provided the email address of the local area council who could be contacted if the person seeking the information had problems using the online database.

The conclusion which can be drawn from this is that a clear explanation of how to find the information required, along with the provision of a contact name should problems occur, can be just as helpful as provision of the information itself. In all of the responses which scored the highest grading, it could be seen that considerable care and time had been taken to respond to the requests.

In *letter “3”*, the writers requested information on emissions in 2002 and 2003 from a well-known industrial installation in their locality. Environmental Protection Agencies in five of the case study countries responded, and the quality of their response varied from gradings of “4” to “2”. One of the responses which was graded “4” was particularly full and contained emission reports from the national public register. The information that was requested is the sort of information that is now available on the EPER database.

The EPER database was launched in February of 2004 by the European Environmental Agency – and is still very much in its infancy. At present, it only holds data on installations in the EU-15 Member States and Hungary and Norway. Also, it only contains emissions data from 2001, and our sample letters requested data from 2002 and 2003. Perhaps this explains why none of the responses from the five Environmental Protection Agencies made reference to EPER.

Two of the five case study countries whose authorities responded to letter 3 are not yet covered by EPER. Out of the three remaining countries, we checked to see whether the concerned installations were on EPER and found that the installations in two of the countries are listed on EPER.

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7. Public participation

This section presents the information obtained from interviews with two persons who were significantly involved in a public consultation on an air quality plan or strategy. The legal obligations to involve the public in air quality management plans were already mentioned at section 2.

The first legal obligation, from a historical point of view, concerning public participation in the field of air quality is that of Article 8(3) of the Framework Directive on ambient air quality assessment and management.

Under Article 8(3) of this Directive, Member States must prepare plans for zones and agglomerations where pollutant levels are higher than the limit value plus the margin of tolerance as set out in the daughter directives. These plans are to set out measures which will result in the reduction of pollution levels. The public participation obligation was simply that these plans have to be made available to the public. The directive also specifies the information that must be included in these local, regional or national plans and programmes for improvement of ambient air quality.

The reality of this means that pollution reduction plans made under any of the three Daughter Directives must be made available to the public and also to appropriate organisations. Appropriate organisations are defined as “environmental organisations, consumer organisations, organisations representing the interests of sensitive populations and other relevant health-care bodies”.

This very basic obligation has now been considerably strengthened and elaborated upon in the more recent Directive 2003/35/EC on public participation in respect to the drawing up of certain plans and programmes relating to environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC.

By 25 June 2005⁴¹, Member States will have to ensure that the public is given early and effective opportunities to participate in the preparation, modification or review of air pollution reduction plans drawn up under Article 8(3) of the Framework Directive. More concretely, this obligation is broken down into:

- Informing the public about any new proposals for plans or programmes or revisions to existing plans, including information on their right to participate
- Enabling the public to express their comments and opinions when all options are open and before decisions are made
- Ensuring that due account is taken of results of the public participation
- Taking care to inform the public about the decision taken

Another public participation provision can be found in Directive 2001/81/EC on national emissions ceilings for certain atmospheric pollutants. Article 6(4) requires Member States to make their national programmes for progressive reduction of the four concerned pollutants available to the public.

The two following case studies provide examples of how the public has participated in certain air quality plans in the Walloon region of Belgium and in Ireland. It has to be stressed that the following two examples of public consultations had very different purposes. The Wallonian Air Plan was a plan designed to improve regional air quality and the consultation had the aim of reaching as many members of that region as possible. In contrast, the second case study focuses on a consultation held in Ireland on the four pollutants covered by the EU’s National Emissions Ceilings Directive 2001/81/EC. The aim of this consultation was much more to target the opinions of the main industry players and NGOs. Due to its very technical and global natures, it was never anticipated that this consultation would result in a large response from ordinary members of the public.

⁴¹ Date by which Member States must have implemented this Directive.

7.1 – Public enquiry organised by the Government of Wallonia on the Global Air Plan

The Walloon Plan on Air was drafted in 2002 by the Walloon Region's Ministry of Territorial Management, Urbanism and the Environment⁴². It is a sectoral action programme, consisting of seven sections, governed by the Walloon Decree of 21 April 1994 relating to plans in the field of the environment in the frame of sustainable development⁴³.

The Walloon Plan on Air

1. Section one describes and explains all the effects and causes of air pollution (acidification, ozone, greenhouse effect, dust, indoor pollution)
2. This section defines the field of action of the Walloon Region, the international context, its competences, and the legal context.
3. Section three explains the relation between air pollution and health.
4. The heart of the Plan presents the actions which the Walloon Region are going to undertake: it establishes objectives and guidelines for regional policies in the field of improvement of air quality for each relevant sector (industry, residential, production/distribution, transport, agriculture and waste), based on principles of sustainable development.
5. This section describes the basics of the programme's efforts to reduce progressively emissions of SO₂, NO_x, COV & NH₃, in other words those pollutants which are the subject of the NEC directive.
6. Section six sets out steps that will be taken in the field of tropospheric ozone.
7. The final section concerns reductions of emissions of dust, persistent organic pollutants, heavy metals etc.

The plan was subject to the rules established by the Walloon Government on public consultation. These rules state that a draft plan must be subject to a public consultation for a period of 45 days. The communal authorities must inform the population, collect the remarks and/or reasoned opinion of the population and transmit them to the Government. In the same period, the Government must consult other entities such as the province, the communes, the associations of communes, the 'organisme d'épuration', the Walloon Council on Sustainable Development, the Walloon Economic and Social Council, and any other organisation which they consider it useful to consult.

The public consultation on the Walloon Plan on Air was originally intended to run from 15 May 2002 to 28 June 2002. However, on 13 June 2002, the Walloon Government decided to extend it and consultees eventually had until 30 September 2002 to provide their opinions. This extension was given due to concern that the summer holiday period might mean that some of the communes would not be able to attend properly to their duties, such as collecting remarks from citizens.

⁴² To download the entire plan, see http://air.wallonie.be/pwa_intro.htm.

⁴³ Arrêté du gouvernement wallon du 21 avril 1991 établissant les règles de l'enquête publique et de la consultation relatives à la planification d'environnement dans la cadre du développement durable.

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In practice, the public survey was carried out by sending each household in the region an 8 page information brochure which contained a reply form. Citizens had then the possibility to either:

- order the full 70 page version of the plan and then draft their remarks, ideas, suggestions into a letter or email and send it to the government or the communes who were obliged to collect the opinions, or
- to answer directly after having read the information brochure only, and write down their concerns or opinions directly in the reply form and send it back.

The public were not asked specific questions in the information brochure on the Plan. Rather, they were free to express their opinions on any point.

Citizens were welcome to express their opinion in a variety of ways: petitions signed by several citizens, the standard reply form, or own formulated opinion, and these could be sent either by email or post. All opinions were taken into account for the review of the action plan. Attempts were also made to take into account opinions received after the deadline.

The Walloon Government engaged an external company to examine the received reactions. Various techniques were adopted to examine the opinions:

- opinions were classified according to the different sections & chapters of the plan to which they referred,
- opinions were classified according to the themes to which they referred,
- opinions were classified according to keywords.

After classification of the various opinions, the company synthesised all relevant and substantial remarks. The responsible officials from the Walloon Government also read and analysed all the ideas, opinions and remarks received and they drafted their own synthesis per section. Then, according to a Walloon government official, they proceeded to revise the plan, taking into consideration the comments.

The Walloon Government consider that a plan is an instrument of participation and information and that public consultations are only carried out properly if the public is sufficiently informed, e.g. on when and how they can participate, and on the content and the stakes of the consultation. The Walloon region timed the public consultation on the Walloon Air Plan to take place during their promotional “Year of Air” in the Walloon region. This meant that various events and efforts were made to promote the public participation.

Actions taken to promote the public consultation

- The 70 page Plan on Air was written in a clear, synthetic way in order to be reader-friendly. The parts where the public was invited to give their opinion and remarks were clearly identified.
- Each Plan was issued along with a “User’s guide for citizens” which explained in a clear way what was expected from them, how they had to give their opinion, to whom to transmit their comments, and how their opinion would be treated after the public consultation.
- The Plan on Air was translated into Dutch and German (the other official languages of Belgium).

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- The Plan on Air was backed up by a communication campaign via written press, radio and television.
- Posters advertised the Plan on Air.
- The above-mentioned 8 page leaflet (complete with reply form) on the Plan on Air was sent to all Walloon households.
- The communes had the opportunity to participate to 'information days on air pollution'.
- A call for projects was published in order to finance projects having as their objective the promotion of the public consultation.
- On 9 June 2002, a party around the theme of the Air was organised at the Chateau de la Hulpe, during the public consultation period. 25 000 persons participated to this event where several stands provided educational information.

In parallel to the public consultation, 77 entities were consulted by the government. The public participation and the consultation of various entities resulted in the following number of responses:

- **3186 reply forms** (excluding the ones which only ordered the full text of the action plan) were received consisting of 7646 remarks.
- **1008 opinions** were sent by the consulted entities (corresponding to 9025 remarks)
- **736 opinions** were received from the public (corresponding to 7100 remarks and 1569 persons): 24 petitions + 272 opinions from associations, communes, universities, companies etc.

The Walloon regional government provided the following general figures about the overall participation:

- ⇒ More than 5000 persons participated on an individual basis + 272 organisations and other entities.
- ⇒ 14,766 remarks were received
- ⇒ 500 children's drawings were sent in

In terms of whether this public consultation was successful, the Walloon Government admit that a consultation in the waste sector would certainly have prompted a higher response rate since the effects of waste on the public's every day life is much more visible. However, the government were generally pleased with the results of the consultation especially considering that the air sector and the plan itself was very technical.

The analysis of the reply forms which were sent 'spontaneously' (without reading the Plan) heightened the Government's awareness of the public's concerns in relation to air. It also helped the government understand what factors lead citizens to judge whether air quality is good or bad.

The exact cost of this public participation was not available since it took place as part of the Year of Air, and was surrounded by several activities around this theme.

7.2 – Consultation on the Irish Strategy to Reduce Emissions of Transboundary Air Pollution by 2010

On 9th July 2003, the Irish Minister for Environment, Heritage and Local Government launched a public consultation on a Strategy to Reduce Emissions of the Four Transboundary Pollutants (sulphur dioxide, nitrogen oxides, volatile organic compounds and ammonia) covered by the EU's National Emissions Ceilings Directive 2001/81/EC.

To achieve Ireland's targets for 2010 a reduction of 67% is required in its current emissions of sulphur dioxide; 52% in its emissions of nitrogen oxides; 37% in volatile organic compounds and 6% in ammonia. Achievement of these targets will require considerable effort on the part of government and industry. Given that the steps needed to meet the targets would have a impact on many sectors, the Irish Government considered it imperative to hold a public consultation during the early stages of development of the strategy.

The main document for the public consultation was a 73-page Discussion Paper⁴⁴. The Discussion Paper sets out Ireland's obligations, identifies and quantifies potential for reductions of the relevant pollutants and the measures necessary for achieving these, and develops a basis for economic analysis of the impacts and benefits of these reductions.

The purpose of this particular consultation process was to hear all the views of the concerned players (industry, transport, agriculture) and of the public, in order that the Strategy could be further developed. This has meant that the public consultation took a very general and informative nature. It did however contain a few assumptions designed to provoke responses from the large industry players. Members of the public and organisations were not asked specifically whether they agreed with aspects of the strategy, but rather were given a general opportunity to comment.

The public consultation was publicised by advertisements in the main national newspapers and explanations as to where hard copies of the Discussion Paper could be obtained. The Discussion Paper could also be downloaded from the Department of Environment, Heritage and Local Government's website. The Department of Environment wrote personally to all other governmental departments and to the major industry players to inform them about the participation.

The public had three months during which to comment on the discussion paper as the consultation ran from 9th July 2003 to 15th September 2003. However, even submissions which came after the deadline were taken into account.

In terms of results to the consultation, no individual member of the public sent in a comment on the Strategy, but eleven organisations lodged submissions.

Organisations responding to the consultation:

- ⇒ Electricity Supply Board
- ⇒ Friends of the Irish Environment
- ⇒ Greenhouse Ireland Action Network
- ⇒ Irish Business and Employers Federation
- ⇒ Viridian Power and Energy
- ⇒ United Portmarnock Residents Opposed to Another Runway
- ⇒ Commission for Energy Regulation
- ⇒ Department of Communications, Marine and Natural Resources
- ⇒ Department of Agriculture and Food
- ⇒ Solid Fuel Trade Group Limited

⁴⁴ A full copy of the Discussion Paper is found at:

<[http://www.environ.ie/DOEI/doiipub.nsf/0/cf543b60b053080380256d5e003c1a6f/\\$FILE/discussionpaperNECs.pdf](http://www.environ.ie/DOEI/doiipub.nsf/0/cf543b60b053080380256d5e003c1a6f/$FILE/discussionpaperNECs.pdf)>

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⇒ Sustainable Energy Ireland

All of the submissions have been put onto the Department of Environment's website. It was originally intended to invite the organisations and members of the public who responded to a roundtable discussion, but given the low response rate, such a debate was considered not necessary.

All of the responses were acknowledged by the Department. An internal team then set about reading all of the submissions and extrapolating and analysing the views.

Despite the fact that there was a low response rate to this consultation, the Department of Environment consider that it has been a useful exercise. The Department admits that there were not nearly as many responses received on this consultation compared to either the consultation on Climate Change or on Potential National Ban on Bituminous (i.e. smoky) Coal and Petcoke. The consultation on banning smoky coal posed seven specific questions, and prompted approximately 15,000 replies. In fact, the Department is not surprised at the low response rate from the public, given that the topic is very technical and is not one that the public are familiar with, in comparison to climate change which is very much a hot topic.

The Department was not disappointed with the response rate largely because they consider that all of the major players have provided comments, and because the public were provided the opportunity to comment (irrespective of the fact that they did not chose to exercise this right).

In terms of the utility of the comments received, the Department was again not surprised to find considerable sectoral defensiveness, and comments aimed at minimising the impact of the proposed measures on the business affected. The Department was also particularly interested to read the opinions of the environmental groups that responded. The consultation process has risen awareness on this rather un-exotic topic, by placing it on the political agenda and several questions on the strategy have been asked in Parliament by the Green party.

The exact cost of this public consultation is not known, but it was most costly in terms of manpower. Four policy staff in the Department of Environment have put considerable amounts of time into the entire process, particularly the drafting of the Discussion Paper.

The process is still not complete. As at the time of writing, the Department of Environment was working on a revised draft of the National Emissions Reduction Strategy which, following the public consultation process and in the light of inputs from sectoral and other interests, Minister Cullen intends to bring to Government for approval in September or October of 2004.

8. Conclusions and recommendations

8.1 Conclusions on current provision of information to the public

The overview table on the case studies presented at page 31 assists comparison of the various case study countries and evaluation of the transparency of their systems of information provision. The final row of this table presents a grading of transparency on a level of high, medium and low. It has to be emphasised that this is a rather crude and subjective grading which we have come to after considering the national contacts experience when trying to find information for this report.

The results of this crude grading were:

High Transparency	Medium Transparency	Low Transparency
Czech Republic	France	Greece
Denmark	Lithuania	Italy
Belgium		Spain
United Kingdom		

Interestingly, and perhaps contrary to what may have been expected, the two new Member States which we analysed were not found to lag behind the existing Member States – in fact, they were even more transparent than some of the old Member States. In fact, our findings would appear to support the traditionally held belief that environmental laws are better enforced in northern Europe than in southern Europe.

Centralised v. decentralised?

The case studies presented the reality of the different ways in which Member States have opted to provide information to the public. The first way is to provide information through a completely centralised system, i.e. where one body is appointed with responsibility for providing and disseminating air quality information for the entire country. This is the case in the UK, the Czech Republic, Denmark, Greece and Lithuania.

Then there are the Member States who have opted to provide information on a decentralised basis – i.e. responsibility for information provision and dissemination is delegated to each region. We have seen how Spain's 17 Autonomous Communities, Italy's regional Agencies for Environmental Protection and France's départements each have responsibility for providing information on air quality.

Lastly, some Member States have a mixed approach, such as in Belgium, where the majority of information is provided regionally, but responsibility for ozone information is shared between the regions and central government.

Whilst it cannot be said that one of these options is better than others since the proficiency of each system will depend on the skill of the bodies appointed and the amount of funding provided, it can safely be said that the decentralised system contains the most pitfalls.

The main difficulty with decentralised systems is that of ensuring consistency – i.e. that the same range of pollutants are monitored and the same depth of information is made available to the public in each of the regions. From the three countries analysed in this study, this was not found to be the case. The capital regions of each country benefited from very in-depth, sophisticated and clearly well-funded information services, whereas it was considerably more difficult to find precise information in some of the other regions, especially those that do not operate active dissemination policies. Whilst it is true that the bulk of a country's population will usually be found in the capital region, hence

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justifying a very thorough information service, the decentralised systems need to ensure that the baseline of information required to be disseminated by law can be found in each region.

Recommendation: Member States operating a decentralised system need to ensure that the baseline of information required to be disseminated by law can be found consistently in each region. This could be achieved by the introduction of a common pollution index that will be used by each region.

Pollutant information as required by the Daughter Directives

Generally, the case studies revealed that information was being provided on the various pollutants in-line with the Daughter Directive requirements. The only exception was that many Member States were not providing information on lead on a three-monthly basis. Of course, the issue of lead is now of less importance since leaded petrol has been phased out. However, strictly speaking, Member States ought still to be making this information available to the public more frequently.

Clear and comprehensive

The survey of stakeholder opinion carried out for Task 3.3 revealed great concern that information is not only made available, but is made available in a way (or with descriptions) that allows the public to understand it. As the Swedish NGO commented, even if the information is perfectly correct, it can be very difficult for the ordinary citizen to evaluate it.

All of the Daughter Directives require that information on pollutants is provided to the public in a clear and comprehensive manner⁴⁵. In order to comply with these requirements, many of the countries have introduced colour-coded systems of indicating where the level of a *specific* pollutant is extremely high, normal or very low.

Three of the countries analysed, Belgium, France and the UK, have introduced *composite* indexes in which they roll together several of the main pollutants and then provide a colour-coded indication of pollution levels. This may seem to provide oversimplified information, but generally the public seem to like this kind of approach. Certainly when the UK's Department for Environment, Food and Rural Affairs conducted a survey on their Air Pollution Forecast, the results showed that generally the public did not understand pollutant specific figures.

Recommendation: for those Member States who have not already done so, to introduce a colour-coded composite index of air pollution levels. Ideally, Member States should provide both a simplified pollution grading as well as pollutant specific information.

Is the trend towards online dissemination a productive one?

Increasingly, the case studies showed that information on air quality is being provided to the public on-line. This is indeed in line with Article 7 of Directive 2003/4 which states that "Member States shall take the necessary measures to ensure that public authorities organise the environmental information... with a view to its active and systematic dissemination to the public, in particular by means of computer telecommunication and/or electronic technology".

The only concern with this trend is of course for members of the public who do not have Internet access, perhaps particularly the elderly. This concern was picked up on in the survey of stakeholder opinion carried out for Task 3.3, where stakeholders made the point that not all persons take the time or have the ability to visit websites in order to check pollution information.

⁴⁵ We have taken the word clear to mean "not obscurely presented" and comprehensive as meaning "capable of being understood".

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Recommendation: for Member States not to rely on the Internet as the sole media for disseminating information. It is preferable to have a range of information media, such as bulletins on television weather reports, a free phone service and on teletext.

Information officers in place & increased public awareness of the availability of information

The information in this report was gathered on the basis of national experts who had been charged with the specific task of retrieving and analysing information for this project. However, the authors of this report are aware that our national experts adopted a more persistent approach to finding information than the average lay person might adopt.

In several cases (notably France, Italy and Spain) our national experts complained that when they contacted the authorities they were passed from department to department and/or were told to contact persons whom they found very difficult to get hold of. It is possible that the average member of the public would have given up when faced with these difficulties.

This points to two conclusions. First of all, it is recommended that the authorities put in place dedicated information officers to help the public find the information they need, and secondly, that the availability of the information officer or information is well-publicised.

Member States need to be actively making the public aware of the air quality information which exists and promoting their use of it, as there is little point in having information when no-one knows about it. The UK's brochure published by the Department for Environment, Food & Rural Affairs⁴⁶, "Air Pollution: What it means for your health" is an excellent example of what is needed. It explains the methods of information available to the public on air pollution.

Recommendation: for Member States to ensure that information officers are in place in each authority responsible for providing information to the public on air quality, and that concrete steps are taken to inform the public about the existence of the information officer and the availability of the information.

Recommendation: take measures to secure mentions of air pollution levels on national weather forecasts on television, given the popularity of this medium. It is acknowledged that this already happens in certain Member States. In times of high air pollution levels, it would be useful at the end of national weather forecasts to mention the high air pollution levels, and make a reference to where further information can be found.

Innovative methods of providing information

Generally, the Member States analysed were found to be using the normal methods of information provision, whether that be on-line bulletins or free phone recorded bulletins. The case studies only revealed a couple of very innovative methods of information provision.

The first was the video presentation explanation of ozone on the website of the Madrid Autonomous Community. The video presentation is very attractive as one is drawn to listen to what the speaker is saying, rather than simply reading text.

Secondly, the recently devised "Le Pollumètre" of Brussels capital that shows pollution levels on two indexes – a global index measuring the general quality of air for the entire region and a traffic index which measures pollution in zones close to roads. Not only does the *Pollumètre* provide information to the public, but its positioning at strategic places, such as on entry to the Brussels ring, will at least demonstrate to drivers the effect of driving on air quality.

⁴⁶ In conjunction with the Department of Health, Scottish Executive and the Department of the Environment in Northern Ireland.

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Recommendation: Whilst it is acknowledged that provision of information via the normal channels is very important, Member States are encouraged to consider also using some more innovative ways of providing information to the public; as the extra care in devising these may pay off with regard to the impact they have.

Recommendation: More use of information screens in cities and on motorways as this would make information more accessible and visible in the most polluted areas and to the drivers of the motor vehicles emitting many of the pollutants.

8.2 Conclusions on test of transparency and responses to sample letters

Our test of the transparency systems in place to provide responses to requests for information in the nine case study countries revealed that only three countries have very effective systems in place, two out of nine have adequate (but not perfect) systems in place and the remaining four Member States did not appear to be complying at all with the obligation to provide information to the public.

The test did not reveal any substantial problem with the amount of time taken to respond to those letters – all responses (of the countries who did respond) were provided within one month of receipt of the request.

The main finding was that whilst three of the nine Member States analysed have extremely good systems in place and are consistently and quickly responding to requests for information and, two other Member States have satisfactory systems in place, the remaining four Member States do not seem to have systems in place at all.

Therefore, there is a huge gulf between on the one hand, those Member States who have systems that work effectively in every regard (i.e. they respond to all requests, respond very quickly and give high quality content responses) and those Member States, on the other hand, whose competent authorities appear to fail to give responses at all. There were only a couple of Member States who appeared to fit somewhere in between these two extremes.

The recent European legislation, Directive 2003/4, is sufficiently detailed in terms of how Member State authorities should be responding to information requests. One of the most useful provisions, will be implementation of Article 3(5)(c) which requires that Member States ensure the practical arrangements are defined to ensure that the right of access to environmental information can be effectively exercised, such as:

- designation of information officers
- the establishment and maintenance of facilities where the public may examine the information required
- registers or lists of environmental information held by public authorities or information points, with clear indications of where this information can be found.

Recommendation: We do not consider that any new guidelines are required at EU level on the topic, but rather that compliance will be achieved by periodic checks on Member States' implementation of Directive 2003/4 and infringement actions, where these are required.

8.3 Conclusions on public participation

The research and case studies have enabled the following conclusions to be drawn. In order to achieve maximum success (with success being measured in terms of large public involvement and good quality of responses), three elements are indispensable for public consultations:

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Broad publication: This may sound obvious, but the public have to know that a consultation is taking place, before they can participate! Simply announcing a consultation on a Ministry webpage will not be sufficient. Other efforts, like advertisements in national papers and flyers, are essential. The Walloon consultation was particularly well advertised since each household received the information brochure, but clearly this has a cost implication.

Flexibility and timeliness: Timing is often crucial – consultations that fall over holiday periods are unlikely to be as successful and so extensions to the consultation period may be needed.

Ease of participation: This applies to various aspects of the consultation. Firstly, if possible, the consultation documents should be sent directly to the public – so that they do not have to go to too much trouble to obtain them. Next, if the topic is a complex one, the most important points must be distilled in some way (brochure or summary) that makes them easy for the public to understand, even if that means oversimplification. Perhaps this might explain why the Irish government did not receive any responses from individuals on the Discussion Paper on the National Emissions Reduction Strategy. The discussion paper that they drafted was, although extremely full and comprehensive, not accompanied with a short simplified summary of the most salient points. Lastly, use of standard reply-forms and postage-paid envelopes is also likely to increase the number of persons responding. Again, it is acknowledged that all of the above suggestions have cost implications.

Having said this, even where consultation organisers incorporate these three elements in their consultations, certain consultation topics will always be more interesting to the public than others, and it does appear the technical nature of air quality and pollution can act as a barrier to the engagement of the public.

Recommendation: When the aim of the consultation is to hear the opinions of as many members of the public as possible, consultation organisers should take steps to ensure that the consultation is well publicised. More than one media should be used to make the public aware of forthcoming consultations.

Recommendation: To ensure maximum success, consultation organisers should spend time designing consultation documents that are user-friendly – they should explain difficult topics in simple language and – if possible – contain standard reply-forms to facilitate responses.

To conclude overall, some of the countries analysed have already created very transparent and well-functioning information provision systems, others are considerably less well developed. However, in light of increased focus on active dissemination of information to the public under the new Access to Information Directive 2003/4 and the new Public Participation Directive 2003/35/EC, this is certainly an area in which Member States must continue to devote considerable attention and funding.

APPENDIX 1

STRUCTURED QUESTIONNAIRE

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Questionnaire for national contacts on Transparency

Country:	
Person answering questionnaire:	
Position:	
Daytime telephone number:	

N.B. Please provide your answers to the questions in italics to distinguish them from the questions

Questions on Sources

Question 1: General Sources of Information for Public (Active dissemination)⁴⁷

- 1.1** Please indicate below the main methods used in your country to provide information actively to the public on air quality and on emissions, and in the corresponding box, please give details of these sources in the table below. You are encouraged to try out as many of the information sources as possible, and will probably need to, in order to answer the remaining questions.

Information Source	Tick if used <input type="checkbox"/>	Please give short description and evaluation of source(s) (e.g. website address, telephone number, whether the source is pollutant specific or general etc).
Internet pages (please indicate only official website pages giving air quality information that are linked to Ministry of Environment or Environment Protection Agency)		
Phone numbers (free or paying)		
Teletext ⁴⁸		
National forecasts (on television or radio)		
Regional forecasts (on television or radio)		
Alert messages (on radio, television and in the press)		
Any other forms of active dissemination (please list):		

- 1.2** Please call an official responsible for air quality at your Environment Ministry or at your Environmental Protection Agency to check that you have given at Question 1.1 all of the main sources of information to the public on air quality and emissions. Please do not explain that you are working on a European Commission project as you are not required to and the aim is to see how the ordinary person is treated.

Did you find the official you spoke to was helpful and supported you in accessing the information you sought?

YES / NO

Please comment:

⁴⁷ Active dissemination is when the authorities make information available to the public whether on the internet, television information pages, freephone numbers etc. The contrasting situation is where the authorities only provide information after receiving a request from a member of the public.

⁴⁸ Teletext pages are information pages on TV.

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Did the official you spoke to ask why you required the information?

Please comment:

- 1.3 Please give your evaluation of whether information is generally provided to the public on air quality in a way that is easily digestible and straightforward manner? You may like to answer this question last. Please provide a few paragraphs in your evaluation.

Please comment:

- 1.4 Do you think that generally sufficient explanation is given in the information sources in your country about the link between high levels of pollutants in the air and the resulting effects on health?

Please comment:

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Questions on 1st Air Quality Daughter Directive (1999/30/EC)

Question 2: Public information on ambient concentrations of sulphur dioxide, nitrogen dioxide, particulate matter and lead in the air

2.1 Is information on ambient concentrations of sulphur dioxide, nitrogen dioxide, particulate matter and lead in the air routinely made available to the public?

YES / NO

2.2 How is this information made available to the public? Actively (via some of the following information sources) or only available on request?

Active Information Source	Tick if used <input checked="" type="checkbox"/>
Broadcast media (i.e. TV)	
Press (i.e. written newspapers)	
Information screens	
Internet pages	
Teletext	
Telephone (free or paying)	
Fax	

2.3 Is information on ambient concentrations of sulphur dioxide, nitrogen dioxide and particulate matter updated on at least a daily basis?

YES / NO

2.4 Is information on ambient concentrations of lead updated on a three-monthly basis?

YES / NO

2.5 For a lay person, do you think the information provided on ambient concentrations of sulphur dioxide, nitrogen dioxide, particulate matter and lead in the air is clear (*i.e. not obscurely presented*)? Please grade on scale of 1 – 4 (see below for grading system).

If you grade level 1 or 2, please explain why the information is unclear or sometimes unclear:

For a lay person, do you think the information provided on ambient concentrations of sulphur dioxide, nitrogen dioxide, particulate matter and lead in the air is comprehensible (*i.e. capable of being understood*)? Please grade on scale of 1 – 4.

If you grade level 1 or 2, please explain why the information is incomprehensible or sometimes incomprehensible:

For a lay person, do you think the information provided on ambient concentrations of sulphur dioxide, nitrogen dioxide, particulate matter and lead in the air is accessible (*i.e. easy to locate and/or retrieve information*)? Please grade on scale of 1 – 4.

If you grade level 1 or 2, please explain why the information is inaccessible or sometimes inaccessible:

Scale for rating **clearness, comprehensibility and accessibility** of information provided:

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1. Unclear / incomprehensible / inaccessible
2. Sometimes unclear / sometimes incomprehensible / sometimes inaccessible
3. Clear / comprehensible / accessible
4. Extremely clear / extremely comprehensible / easily accessible

Question 3: Alert messages

- 3.1 When an alert threshold is exceeded for sulphur dioxide, nitrogen dioxide, particulate matter or lead, how is the public informed?

Information Source	Tick if used <input checked="" type="checkbox"/>
Radio	
Television	
Press	
If other, please state:	

- 3.2 Please study one particular alert message for an exceedence of sulphur dioxide or nitrogen dioxide (you may need to request a sample message from your Environmental Protection Agency or Ministry). Does the alert message contain the following minimum details?

Minimum details (according to Directive 1999/30)	Tick if contained in alert message <input checked="" type="checkbox"/>
The date, hour and place of the occurrence and the reasons for the occurrence, where known.	
Any forecasts of changes in concentrations (improvement, stabilisation, or deterioration), together with the reasons for those changes.	
Any forecasts of the geographical area concerned.	
Any forecasts of the duration of the occurrence.	
The type of population potentially sensitive to the occurrence.	
The precautions to be taken by the sensitive population concerned.	

- 3.3 Did the alert message you looked at give any information over and above the minimum requirements? For example, any explanation of measures that will be taken to reduce levels.

If yes, please explain what sort of extra information was provided (e.g. the nature of health concerns):

- 3.4 For a lay person, do you think the alert message you looked at was:

(a) clear (*i.e. not obscurely presented*)? YES / NO

(b) comprehensive (*i.e. capable of being understood*)? YES / NO

(c) accessible (*i.e. easy to locate and/or retrieve information*)? YES / NO

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Questions on 2nd Air Quality Daughter Directive (2000/69/EC)

Question 4: Public information on ambient concentrations of benzene and carbon monoxide in the air

- 4.1 Is information on ambient concentrations of benzene and carbon monoxide in the air routinely made available to the public?

YES / NO

- 4.2 How is this information made available to the public? Actively (via some of the following information sources) or only available on request?

Active Information Source	Tick if used <input type="checkbox"/>
Broadcast media (i.e. TV)	
Press (i.e. written newspapers)	
Information screens	
Internet pages	
Teletext	
Telephone (free or paying)	
Fax	

- 4.3 Is information on ambient concentrations of benzene (as an average value over the last 12 months) updated on at least a three-monthly basis?

YES / NO

- 4.4 Is information on ambient concentrations of carbon monoxide (as a maximum running average over eight hours) updated on at least a daily basis?

YES / NO

- 4.5 For a lay person, do you think the information provided on ambient concentrations of benzene and carbon monoxide in the air is clear (*i.e. not obscurely presented*)? Please grade on scale of 1 – 4 on the page 3 scale.

If you grade level 1 or 2, please explain why the information is unclear or sometimes unclear:

For a lay person, do you think the information provided on ambient concentrations of benzene and carbon monoxide in the air is comprehensible (*i.e. capable of being understood*)? Please grade on scale of 1 – 4.

If you grade level 1 or 2, please explain why the information is incomprehensible or sometimes incomprehensible:

For a lay person, do you think the information provided on ambient concentrations of benzene and carbon monoxide in the air is accessible (*i.e. easy to locate and/or retrieve information*)? Please grade on scale of 1 – 4.

If you grade level 1 or 2, please explain why the information is inaccessible or sometimes inaccessible:

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Questions on 3rd Air Quality Daughter Directive (2002/3/EC)

Question 5: Public information on ambient concentrations of ozone in the air

5.1 Is information on concentrations of ozone in ambient air routinely made available to the public?

YES/NO

5.2 How is this information made available to the public? Actively (via some of the following information sources) or only available on request?

Active Information Source	Tick if used <input type="checkbox"/>
Broadcast media (i.e. TV)	
Press (i.e. written newspapers)	
Information screens	
Internet pages	
Teletext	
Telephone (free or paying)	
Fax	

5.3 Is information on concentrations of ozone in ambient air updated on at least a daily basis?

YES/NO

5.4 For a lay person, do you think the information provided on concentrations of ozone in ambient air is clear (i.e. not obscurely presented)? Please grade on scale of 1 – 4, using same scale as given on page 3.

If you grade level 1 or 2, please explain why the information is unclear or sometimes unclear:

For a lay person, do you think the information provided on concentrations of ozone in ambient air is comprehensible (i.e. capable of being understood)? Please grade on scale of 1 – 4.

If you grade level 1 or 2, please explain why the information is incomprehensible or sometimes incomprehensible:

For a lay person, do you think the information provided on ambient concentrations of benzene and carbon monoxide in the air is accessible (i.e. easy to locate and/or retrieve information)? Please grade on scale of 1 – 4.

If you grade level 1 or 2, please explain why the information is inaccessible or sometimes inaccessible:

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Ozone Alert messages

The heatwave throughout Europe in the summer of last year caused dramatic deterioration in air quality in many European cities. High levels of ozone were caused by the unusually hot and sunny summer. The summer smog in cities had a very serious effect on public health with mortality rates increasing above the average for this time of year. Many ozone alert messages would have been published and therefore, please can you find an example of an ozone alert message in your country to answer the following questions:

5.5 When an alert threshold is exceeded for ozone, how is the public informed?

Information Source	Tick if used <input checked="" type="checkbox"/>
Radio	
Television	
Press	
If other, please state:	

5.6 Please study one particular alert message for an exceedance of ozone (you may need to request a sample message from your Environmental Protection Agency or Ministry). Does the alert message contain the following minimum details?

Minimum details (according to Directive 2002/3)	Tick if contained in alert message <input checked="" type="checkbox"/>
The location or area of exceedance	
Type of threshold exceeded (information or alert)	
Start time and duration of exceedance	
Highest 1 hour and 8 hour mean concentration	
Forecasts for following day on: <ul style="list-style-type: none"> geographical area of expected exceedance of alert or information threshold; expected changes in pollution (improvement, stabilisation, or deterioration) 	
<ul style="list-style-type: none"> Information on population groups at risk Description of likely symptoms Recommended precautions to be taken Where to find further information 	
Information on preventative action to reduce pollution and/or exposure to it.	

5.7 Did the alert message you looked at give any information over and above the minimum requirements?

If yes, please explain what sort of extra information was provided:

5.8 For a lay person, do you think the alert message you looked at was:

(a) clear (*i.e. not obscurely presented*)? YES / NO

(b) comprehensible (*i.e. capable of being understood*)? YES / NO

(c) accessible (*i.e. easy to locate and/or retrieve information*)? YES / NO

5.9 Have any comprehensive annual reports been made available to the public yet on all exceedances of ozone concentrations in the target value and the long term objective, the information threshold and the alert threshold as result of Article 6(1) (b) of Directive 2002/3/EC? (N.B. this may not have been done yet, as the directive was only due to be implemented in September 2003.

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- 5.10 Has a system been set up yet under which timely information is provided about actual or predicted ozone exceedances of the alert threshold to health care institutions and the public?

How is this information provided?

Final general questions

- 6.1 In your research to answer this questionnaire, did you come across any information that was only accessible if one paid a charge?

If yes, please give details:

- 6.2 Did you find that increasingly information on air quality and emissions is being provided by way of electronic databases which are easily accessible to the public?

Please comment:

If you did not find this to be the case, do you find that the traditional sources of information are rather difficult to use?

Please comment:

- 6.3 Did you come across any information which you found was **NOT**:

- (a) up to date
- (b) accurate
- (c) comparable

If you did, please give examples

- 6.5 During your research, did you come across any information that was available in any languages other than the national one?

YES / NO

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Checklists on Sample Letters requesting information

LETTER 1 <i>This letter should be sent to a responsible official for air quality at a local level (e.g. municipality)</i>	
Date letter posted	
Person & institution & address letter sent to	
Date response provided	
Time taken to respond to request for information (1 week, 2 weeks... 1 month, 1 month & 1 week, etc)	
Translation of response done and forwarded to Milieu?	
Your rating of <i>adequacy of content of information</i> provided as response to request (on Scale of 1 – 4)	
Any comments on adequacy of content information provided as response to request?	

LETTER 2 <i>This letter should be sent to a responsible official for air quality at your Ministry of Environment</i>	
Date letter posted	
Person & institution & address letter sent to	
Date response provided	
Time taken to respond to request for information (1 week, 2 weeks... 1 month, 1 month & 1 week, etc)	
Translation of response done and forwarded to Milieu?	
Your rating of <i>adequacy of content of information</i> provided as response to request (on Scale of 1 – 4)	
Any comments on adequacy of content information provided as response to request?	

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LETTER 3	
<i>This letter should be sent to a responsible official for air quality at your Environmental Protection Agency</i>	
Date letter posted	
Person & institution & address letter sent to	
Date response provided	
Time taken to respond to request for information (1 week, 2 weeks... 1 month, 1 month & 1 week, etc)	
Translation of response done and forwarded to Milieu?	
Your rating of <i>adequacy of content of information</i> provided as response to request (on Scale of 1 – 4)	
Any comments on adequacy of content information provided as response to request?	

Scale on **adequacy** of content of information provided:

1. Totally inadequate, no response received
2. Less than adequate, some questions answered but some left unanswered
3. Information provided adequate, answered all questions
4. More than adequate, very full & comprehensive, went beyond information requested

APPENDIX 2

**SAMPLE LETTERS REQUESTING INFORMATION ON AIR QUALITY AND
EMISSIONS**

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LETTER 1 ON AIR QUALITY

This letter should be sent to a responsible official for air quality at a local level (e.g. municipality)

Dear Sir or Madam,

I would like you to provide me with information on air quality in my locality of [*insert name of city*].

I have a seven year old daughter. Every day I take her to and back from school by foot. The route that we follow means that for ten minutes we walk along the [*insert name of major road*]. In the morning, this road is heavily congested with traffic. In the afternoon, when we walk back the traffic is usually lighter, but it is still busy. I cannot help worrying about the effect that the traffic fumes will be having on my daughter.

I would be grateful if you could tell me what are the levels of air pollution along this road last month (February 2004)? What would be the health concerns from regularly being exposed to this level of pollution? And lastly, can you tell me what steps are being taken to reduce the air pollution in this area?

Thank you in anticipation of your answer.

Yours faithfully,

[*insert name*]

LETTER 2 ON AIR QUALITY

This letter should be sent to a responsible official for air quality at your Ministry of Environment

Dear Sir or Madam,

I am working on my college environmental science project and I need some information on air quality. Can you provide me with these, or pass my letter on to the relevant department? I would be grateful if you could provide this information by the end of March.

I need to know what were the levels of the following pollutants in the air in [*insert a particular area of a city e.g St Leonards, Edinburgh*] in July of 2001, 2002 and 2003:

Sulphur dioxide
Nitrogen dioxide
Ozone
Carbon Monoxide
Particulate Matter₁₀
Particulate Matter_{2.5}

Thank you very much.

Yours faithfully,

[*insert name*]

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LETTER 3 ON EMISSIONS

This letter should be sent to a responsible official for air quality at your Environmental Protection Agency

Dear Sir or Madam,

I am working on my college environmental science project and I need some information on emissions from the [*insert name of well-known, local industrial installation e.g. combustion plant, incinerator or chemical plant*]. Can you provide me with these, or pass my letter on to the relevant department?

I need to know what pollutants were emitted to the atmosphere from this installation and at what levels in July of 2002 and 2003.

I look forward to your answer.

Thank you very much.

Yours faithfully,

[*insert name*]

APPENDIX 3

LISTING OF LEGAL OBLIGATIONS

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Selective listing of EU Legal Obligations to (a) provide information and (b) to enable public to participate in the field of air quality and emissions

Air Quality legislation		Legal Obligation on access to information or public participation
EU Directive	Article Number	
Council Directive 96/62/EC of 27 September 1996 on ambient air quality assessment & management (Framework directive)	Article 1	One of the objectives is to obtain adequate information on ambient air quality and ensure that it is made available to the public, <i>inter alia</i> by means of alert thresholds.
Directive is in force		
Implementation deadline: February 1998 for most provisions		
	Article 3	Information on the Competent authorities should be made available to the public.
	Article 8(3)	For zones & agglomerations where pollutant levels are higher than the limit value plus the margin of tolerance, MS must prepare plans or programmes to attain the limit value within the specific time limit. The plan or programme must be made available to the public and must incorporate at least the information listed in Annex IV.
	Article 10	When alert thresholds are exceeded, MS must inform the public (by means of radio, television and the press). MS must forward the Commission on a provisional basis information concerning levels recorded and duration of episode of pollution no later than 3 months following their occurrence. A list of minimum details to be supplied to the public shall be drawn up together with the alert thresholds.
	Annex IV	INFORMATION TO BE INCLUDED IN THE LOCAL, REGIONAL OR NATIONAL PROGRAMMES FOR IMPROVEMENT IN THE AMBIENT AIR QUALITY
		Information to be provided under Article 8 (3)
		1. Localization of excess pollution
		- region
		- city (map)
		- measuring station (map, geographical coordinates).
		2. General information
		- type of zone (city, industrial or rural area)
		- estimate of the polluted area (km ²) and of the population exposed to the pollution

Assessment of the Effectiveness of European Air Quality Policies and Measures

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<p>Council Directive 1999/30/EC of 22 April 1999 relating to limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air (first Daughter Directive)</p> <p>Directive is in force</p> <p>Implementation deadline: 19 July 2001</p>	<p>Article 1</p>	<ul style="list-style-type: none"> - useful climatic data - relevant data on topography - sufficient information on the type of targets requiring protection in the zone. <p>3. Responsible authorities</p> <p>Names and addresses of persons responsible for the development and implementation of improvement plans.</p> <p>4. Nature and assessment of pollution</p> <ul style="list-style-type: none"> - concentrations observed over previous years (before the implementation of the improvement measures) - concentrations measured since the beginning of the project - techniques used for the assessment. <p>5. Origin of pollution</p> <ul style="list-style-type: none"> - list of the main emission sources responsible for pollution (map) - total quantity of emissions from these sources (tonnes/year) - information on pollution imported from other regions. <p>6. Analysis of the situation</p> <ul style="list-style-type: none"> - details of those factors responsible for the excess (transport, including cross-border transport, formation) - details of possible measures for improvement of air quality. <p>7. Details of those measures or projects for improvement which existed prior to the entry into force of this Directive i.e.</p> <ul style="list-style-type: none"> - local, regional, national, international measures - observed effects of these measures. <p>8. Details of those measures or projects adopted with a view to reducing pollution following the entry into force of this Directive</p> <ul style="list-style-type: none"> - listing and description of all the measures set out in the project - timetable for implementation - estimate of the improvement of air quality planned and of the expected time required to attain these objectives. <p>9. Details of the measures or projects planned or being researched for the long term.</p> <p>10. List of the publications, documents, work, etc., used to supplement information requested in this Annex.</p> <p>One of the objectives is to provide the public with adequate information on concentrations of sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient.</p>
	<p>Article 8</p>	<p>1. Member States shall ensure that up-to-date information on ambient concentrations of sulphur dioxide, nitrogen dioxide</p>

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	<p>and oxides of nitrogen, particulate matter and lead is routinely made available to the public as well as to appropriate organisations such as environmental organisations, consumer organisations, organisations representing the interests of sensitive populations and other relevant health-care bodies by means, for example, of broadcast media, press, information screens or computer-network services.</p> <p>Information on ambient concentrations of sulphur dioxide, nitrogen dioxide and particulate matter shall be updated on at least a daily basis, and, in the case of hourly values for sulphur dioxide and nitrogen dioxide, wherever practicable, information shall be updated on an hourly basis. Information on ambient concentrations of lead shall be updated on a three-monthly basis.</p> <p>Such information shall at least indicate any exceeding of the concentrations in the limit values and alert thresholds over the averaging periods laid down in Annexes I to IV. It shall also provide a short assessment in relation to limit values and alert thresholds and appropriate information regarding effects on health.</p> <p>2. When making plans or programmes available to the public under Article 8(3) of Directive 96/62/EC, including plans or programmes referred to under Articles 3(4), 5(4) and 5(5) of this Directive, Member States shall also make them available to the organisations referred to in paragraph 1.</p> <p>3. When an alert threshold laid down in Annex I or II is exceeded, details made available to the public in accordance with Article 10 of Directive 96/62/EC shall at least include the items listed in Section III of the Annex in question.</p> <p>4. Information made available to the public and to organisations under paragraphs 1 and 3 shall be clear, comprehensible and accessible.</p>
Section 3 of Annex I	<p>III. Minimum details to be made available to the public when the alert threshold for sulphur dioxide is exceeded Details to be made available to the public should include at least:</p> <ul style="list-style-type: none"> - the date, hour and place of the occurrence and the reasons for the occurrence, where known; - any forecasts of: <ul style="list-style-type: none"> - changes in concentrations (improvement, stabilisation, or deterioration), together with the reasons for those changes, - the geographical area concerned, - the duration of the occurrence; - the type of population potentially sensitive to the occurrence; - the precautions to be taken by the sensitive population concerned.
Section 3 of Annex II	<p>III. Minimum details to be made available to the public when the alert threshold for nitrogen dioxide is exceeded Details to be made available to the public should include at least:</p> <ul style="list-style-type: none"> - the date, hour and place of the occurrence and the reasons for the occurrence, where known; - any forecasts of: <ul style="list-style-type: none"> - changes in concentrations (improvement, stabilisation, or deterioration), together with the reasons for those changes, - the geographical area concerned, - the duration of the occurrence; - the type of population potentially sensitive to the occurrence; - the precautions to be taken by the sensitive population concerned.

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<p>Council Directive 2000/69/EC of 16 November 2000 on limit values for benzene and carbon monoxide in ambient air. (second Daughter Directive)</p> <p>Directive is in force</p> <p>Implementation deadline: 13 December 2002</p>	<p>Article 7</p>	<p>Public information</p> <p>1. Member States shall ensure that up-to-date information on ambient concentrations of benzene and carbon monoxide is routinely made available to the public as well as to appropriate organisations, such as environmental organisations, consumer organisations, organisations representing the interests of sensitive populations and other relevant health-care bodies, by means, for example, of broadcast media, press, information screens or computer-network services, teletext, telephone or fax.</p> <p>Information on ambient concentrations of benzene, as an average value over the last 12 months, shall be updated on at least a three-monthly basis and, wherever practicable, information shall be updated on a monthly basis. Information on ambient concentrations of carbon monoxide, as a maximum running average over eight hours, shall be updated on at least a daily basis and, wherever practicable, information shall be updated on an hourly basis.</p> <p>The information referred to in the second subparagraph shall at least indicate any exceedances of the concentrations stated in the limit values over the averaging periods laid down in Annexes I and II. It shall also provide a short assessment in relation to limit values and appropriate information regarding effects on health.</p> <p>2. When making plans or programmes available to the public under Article 8(3) of Directive 96/62/EC, Member States shall also make them available to the organisations referred to in paragraph 1 of this Article. This also includes the documentation required by Annex VI(II) of this Directive.</p> <p>3. Information made available to the public and to organisations under paragraphs 1 and 2 shall be clear, comprehensible and accessible.</p>
<p>Directive 2002/3/EC of 12 February 2002 relating to ozone in ambient air. (third Daughter Directive)</p> <p>Directive is in force</p> <p>Implementation deadline: 9 September 2003</p>	<p>Article 6</p>	<p>Information to the public</p> <p>1. Member States shall take appropriate steps to:</p> <p>(a) ensure that up-to-date information on concentrations of ozone in ambient air is routinely made available to the public as well as to appropriate organisations such as environmental organisations, consumer organisations, organisations representing the interests of sensitive population groups and other relevant health care bodies.</p> <p>This information shall be updated on at least a daily basis and, wherever appropriate and practicable, on an hourly basis.</p> <p>Such information shall at least indicate all exceedances of the concentrations in the long-term objective for the protection of health, the information threshold and the alert threshold for the relevant averaging period. It should also provide a short assessment in relation to effects on health.</p> <p>The information threshold and the alert threshold for concentrations of ozone in ambient air are given in Section I of Annex II;</p> <p>(b) make available to the public and to appropriate organisations such as environmental organisations, consumer organisations, organisations representing the interests of sensitive population groups and other relevant health care bodies comprehensive annual reports which shall at least indicate, in the case of human health, all exceedances of concentrations in the target value and the long-term objective, the information threshold and the alert threshold, for the relevant averaging period, and in the case of vegetation, any exceedance of the target value and the long-term objective, combined with, as appropriate, a short assessment of the effects of these exceedances. They may include, where appropriate, further information and assessments on forest protection, as specified in section I of Annex III. They may also include information on relevant precursor substances, in so far as these are not covered by existing Community legislation;</p> <p>(c) ensure that timely information about actual or predicted exceedances of the alert threshold is provided to health care</p>

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		<p>institutions and the population. The information and reports referred to above shall be published by appropriate means, depending on the case, for example the broadcasting media, the press or publications, information screens or computer network services, such as the internet.</p> <p>2. Details supplied to the public in accordance with Article 10 of Directive 96/62/EC when either threshold is exceeded shall include the items listed in Section II of Annex II. Member States shall, where practicable, also take steps to supply such information when an exceedance of the information threshold or alert threshold is predicted.</p> <p>3. Information supplied under paragraphs 1 and 2 shall be clear, comprehensible and accessible.</p>
<p>General Access to information legislation</p>		
<p>Directive 2003/4/EC of European Parliament and of the Council of 28 January 2003 on public access to environmental information and repealing Council Directive 90/313/EEC</p> <p>Directive is in force</p> <p>Implementation deadline: 14 February 2005</p>	<p>Article 1</p>	<p>The objectives are:</p> <p>a) to guarantee the right of access to environmental information held by or for public authorities and to set out the basic terms and conditions of, and practical arrangements for, its exercise; and</p> <p>(b) to ensure that, as a matter of course, environmental information is progressively made available and disseminated to the public in order to achieve the widest possible systematic availability and dissemination to the public of environmental information. To this end the use, in particular, of computer telecommunication and/or electronic technology, where available, shall be promoted.</p>
	<p>Article 2</p>	<p>Definition of environmental information includes information on:</p> <p>1(a) air and environment (b) emissions</p> <p>Definition of public authority</p> <p>Access to environmental information upon request</p> <ol style="list-style-type: none"> 1. Member States to ensure public authorities make available environmental information to any applicant at his request and without having to state an interest 2. Having regard to any timescale specified by the applicant (!), environmental information shall be made available (a) as soon as possible, or at latest, within one month after receipt by public authority of request OR (b) within two months if the volume and the complexity of information is such that the one month period cannot be complied with. In such cases, the applicant must be informed as soon as possible and at latest within one month, of such extension and reasons for it. 3. If request is too general, public authority has to go back and ask applicant to specify request. 4. Requests for information in a certain format. 5. Member States to ensure that: <ol style="list-style-type: none"> (a) officials support the public in seeking access to information (b) lists of public authorities are publicly accessible and (c) the practical arrangements are defined to ensure that the right to access to environmental information can be effectively exercised, such as designation of information officers ... Lists of the environmental information held by
	<p>Article 3</p>	

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	Article 4	<p>public authorities, with clear indications of where such information can be found. Member States shall ensure that public authorities inform the public adequately of the rights they enjoy as a result of this Directive and provide information, guidance and advice to this end.</p>
		<p>(1) Member States can refuse requests if:</p> <ul style="list-style-type: none"> (a) they do not hold the information <i>BUT if this happens the authority must transfer the request to an authority that does hold the info, and tell the applicant that it is doing this.</i> (b) It is manifestly unreasonable (c) It is too general (d) concerns uncomplete/unfinished data (e) concerns internal communications <p>(2) Member States can refuse requests if disclosure would adversely affect:</p> <ul style="list-style-type: none"> (a) confidentiality of public authority proceedings (b) international relations public security or national defence; (c) the course of justice, the ability of any person to receive a fair.... (d) the confidentiality of commercial or industrial information where such confidentiality is provided for by national or Community law to protect a legitimate economic interest, including the public interest in maintaining statistical confidentiality and tax secrecy; (e) intellectual property rights; (f) the confidentiality of personal data and/or files relating to a natural person where that person has not consented to the disclosure of the information to the public, where such confidentiality is provided for by national or Community law; (g) the interests or protection of any person who supplied the information requested on a voluntary basis without being under, or capable of being put under, a legal obligation to do so, unless that person has consented to the release of the information concerned; (h) protection of the environment to which such information relates, such as the location of rare species. <p>The grounds for refusal mentioned in paragraphs 1 and 2 shall be interpreted in a restrictive way.</p> <p>Where a Member State provides for exceptions, it may draw up a publicly accessible list of criteria on the basis of which the authority concerned may decide how to handle requests.</p> <p>(4). Environmental information held by or for public authorities which has been requested by an applicant shall be made available in part where it is possible to separate out any information falling within the scope of paragraphs 1(d) and (e) or 2 from the rest of the information requested.</p> <p>(5). A refusal to make available all or part of the information requested shall be notified to the applicant in writing or electronically, if the request was in writing or if the applicant so requests, within the time limits referred to in Article 3(2)(a)</p>

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		or, as the case may be, (b). The notification shall state the reasons for the refusal and include information on the review procedure provided for in accordance with Article 6.
	Article 5	<p>1. Access to any public registers or lists established and maintained as mentioned in Article 3(5) and examination in situ of the information requested shall be free of charge.</p> <p>2. Public authorities may make a charge for supplying any environmental information but such charge shall not exceed a reasonable amount.</p> <p>3. Where charges are made, public authorities shall publish and make available to applicants a schedule of such charges as well as information on the circumstances in which a charge may be levied or waived.</p>
	Article 7	<p>1. Member States to ensure that public authorities organise the environmental information they hold with a view to active dissemination to the public, especially by computer and/or electronic technology.</p> <p>Member States shall ensure that environmental information progressively becomes available in electronic databases which are easily accessible to the public through public telecommunication networks.</p> <p>The information to be made available and disseminated shall be updated as appropriate and shall include at least:</p> <p>(e) data or summaries of data derived from the monitoring of activities affecting, or likely to affect, the environment;</p> <p>6. Member States may satisfy the requirements of this Article by creating links to Internet sites where the information can be found.</p>
	Article 8	<p>Member States shall, <i>so far as is within their power</i>, ensure that any information that is compiled by them or on their behalf is up to date, accurate and comparable.</p>
Directive 2003/35/EC of European Parliament and of the Council of 26 May 2003 providing for public participation in respect of drawing up certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC	Article 2	<p>Public participation concerning plans and programmes</p> <p>1. For the purposes of this Article, "the public" shall mean one or more natural or legal persons and, in accordance with national legislation or practice, their associations, organisations or groups.</p> <p>2. Member States shall ensure that the public is given early and effective opportunities to participate in the preparation and modification or review of the plans or programmes required to be drawn up under the provisions listed in Annex I.</p> <p>To that end, Member States shall ensure that:</p> <p>(a) the public is informed, whether by public notices or other appropriate means such as electronic media where available, about any proposals for such plans or programmes or for their modification or review and that relevant information about such proposals is made available to the public including inter alia information about the right to participate in decision-making and about the competent authority to which comments or questions may be submitted;</p> <p>(b) the public is entitled to express comments and opinions when all options are open before decisions on the plans and programmes are made;</p> <p>(c) in making those decisions, due account shall be taken of the results of the public participation;</p> <p>(d) having examined the comments and opinions expressed by the public, the competent authority makes reasonable efforts to inform the public about the decisions taken and the reasons and considerations upon which those decisions are based, including information about the public participation process.</p> <p>3. Member States shall identify the public entitled to participate for the purposes of paragraph 2, including relevant non-governmental organisations meeting any requirements imposed under national law, such as those promoting environmental protection.</p> <p>The detailed arrangements for public participation under this Article shall be determined by the Member States so as to enable</p>
Directive is in force Implementation deadline: 25 June 2005		

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		<p>the public to prepare and participate effectively. Reasonable time-frames shall be provided allowing sufficient time for each of the different stages of public participation required by this Article.</p> <p>4. This Article shall not apply to plans and programmes designed for the sole purpose of serving national defence or taken in case of civil emergencies.</p> <p>5. This Article shall not apply to plans and programmes set out in Annex I for which a public participation procedure is carried out under Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment(7) or under Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy(8).</p>
	Annex I	<p>PROVISIONS FOR PLANS AND PROGRAMMES REFERRED TO IN ARTICLE 2.....</p> <p>(f) Article 8(3) of Council Directive 96/62/EC of 27 September 1996 on ambient air quality assessment and management(6).</p>