Informal questionnaire for the members of the Stakeholder Expert Group on the Review of the EU Air Policy

on the Air Quality Directive 2008/50/EC and the Fourth Daughter Directive 2004/107/EC

June, 2011

The questionnaire below is aimed at collecting views and experiences relating to the Air Quality Directive 2008/50/EC and the Fourth Daughter Directive 2004/107/EC. One of the main objectives is to identify areas for improvement. This consultation is one of the first steps of a broad consultation process in the review of the EU Thematic Strategy on Air Pollution. For more details on the review process, please refer to: http://ec.europa.eu/environment/air/review_air_policy.htm

This questionnaire is one of three questionnaires, which are aimed at three target groups: interested citizens, professionals in the field of air quality and the members of the Stakeholder Expert Group on the Review of the EU Air Policy. These questionnaires are related but differ in the level of detail. The questionnaire below is intended for the members of the Stakeholder Expert Group on the Review of the EU Air Policy.

The questionnaire addresses the following themes:

- The Thematic Strategy on Air Pollution;
- The approach of the air quality directives;
- Standards;
- Assessment;
- Air quality management in Member States;
- Public information and dissemination;
- Governance;
- Scientific and technological innovation;
- The most important issues for review;
- Your involvement in the review process.

Information for completing the questionnaire:

Each theme is briefly introduced, indicating issues that you are particularly invited to address.

- ✓ *You do not need to give comments on all issues or reply to all themes/sections of the questionnaire.*

When analysing the replies, the Commission intends to identify *strengths* and *weaknesses* of the directives, as well as *opportunities* for improvement and possible *threats* that could affect their effectiveness.

- ✓ *You are therefore invited to address these "SWOT" aspects where appropriate.*

The questionnaire aims at getting feedback from the members of the Stakeholder Expert Group in their capacity representing the respective countries or organisations.

- ✓ *Please complete ONE questionnaire per Member State/country or organisation.*
- ✓ *If this is not possible, please contact us.*

The work on this informal questionnaire will be carried out in English and resources for translation could not be foreseen.

- ✓ *Preferably we would kindly ask you to reply in English.*
- ✓ *However, replies in German and/or French will also be accepted.*
- ✓ *If you are only able to ensure a reply to this informal questionnaire in time in another language than those specified above, please contact us in advance to discuss.*

Please email the completed questionnaire by 15 September 2011

- ✓ **to aqdsurvey@tno.nl and**
- ✓ **in copy to env-air@ec.europa.eu**

➢ **Please use the white cells of the tables for filling in your replies.**

Note, you do NOT need to reply to all sections or give comments on all issues mentioned in the introduction of each section.

1. Respondent (for internal use only)	
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2. The Thematic Strategy on Air Pollution

The Thematic Strategy on Air Pollution has been established under the Sixth Environmental Action Plan. Several strands of legislation are in place in order to protect health and the environment from harmful effects of air pollution, in particular the air quality directives, the national emission ceilings directive and directives that address sectoral emissions. Together, these directives have been major drivers towards clean air in Europe. However, air pollution legislation may have synergic or antagonistic relations, also with other legislation.

You are kindly requested to present your views on the place of the air quality directives in the Thematic Strategy on Air Pollution and relationships with other EU legislation. Please also provide any additional information that you consider helpful for the review or for substantiating your views.

You may consider addressing in your reply in particular (note you do not have to reply to every issue):

1. the adequacy of the air quality legislation in relation to the objectives of the Sixth Environmental Action Plan;
2. the coherence and synergy of the EU air pollution policy tools, in particular the air quality directives, the national emission ceilings directive and the sectoral directives;
3. the coherence and synergy of the air quality standards with emission standards and ceilings;
4. the coherence and synergy of EU air pollution policies with other environmental policies, such as policies on climate change, noise, biodiversity;
5. the coherence and synergy of EU air pollution policies with sectoral policies, in particular regarding transport, energy and agriculture;
6. the coherence and synergy of EU air pollution policies with international policies;
7. any other issue.

The adequacy of the Thematic Strategy on Air Pollution and of air quality legislation

Overall, the Thematic Strategy on Air Pollution and air quality legislation in the EU have much helped to minimise health risks caused by air pollution. They have supported coordination of policies at the EU level and given guidance to national, regional and local policy makers. At the local level, cities have continued their efforts to improve air quality through measures such as

- promoting the shift to more sustainable modes of transport (public and soft modes)
    a. More efficient and attractive public transport
    b. Making soft modes more attractive, e.g bike lanes, city bike sharing systems
    c. Access restrictions for (most polluting) cars and/or trucks
    d. Traffic management for better traffic flow
    e. Promotion of clean(er) vehicles, e.g. preferential access and parking, charging stations;
- speed restrictions;
- dust suppression;
- promotion of district heating and modernisation of heating installations;

- banning studded tyres on inner city streets to reduce PM;
- increasing volume of green spaces and belts especially along streets and roadsides (insulation greenery);
- local heating fuel ordinances (if national legislation permits);
- developing innovative logistics concepts for inner city delivery of goods.

The Thematic Strategy on Air Pollution has been crucial for policy coordination, even though more improvements need to be made. Additionally, not all the actions announced in the Thematic Strategy have been carried out. Most notably, the revision of the National Emissions Ceilings Directive (2001/81/EC, NECD) has been delayed repeatedly. The air quality policy review must lead to effective results in order to provide the basis for reaching the 2020 objectives stated in the 6th Environmental Action Programme (6th EAP).

Long-range and transboundary air pollution continues to have significant effects on observed background levels of air pollutants. To give just two examples, cities indicate that in the Netherlands, the share of transboundary air pollution ranges from 35% for NO_2 to 57% for SO_2 (average over the country). In the Brussels area, about 65% of the PM_{10} mass concentration and about 50% of the NO_2 concentration measured near the centre is already present in the air at the Brussels periphery. Also for deposition of substances that cause eutrophication and acidification, distant and foreign anthropogenic sources have a significant share. While this underlines the need for an effective air quality policy at EU level, it also means that assessment of compliance with limit values in revised air quality legislation should take account of transboundary air pollution. This includes pollution across borders within the EU, but also outside the EU. EUROCITIES welcomes plans to revise the UNECE Gothenburg protocol to address long range transboundary pollution more effectively. Broadening the participation of EU neighbour countries and stringent limit values are key, including standards for bunker fuels.

Need for policy coordination

The coherence and synergy of EU air pollution policies with other policies, notably on issues such as climate change, noise reduction, mobility and road safety continues to be highly important and should be addressed in the revised Thematic Strategy on Air Pollution.

The relationship between climate change and air quality policies needs particular attention. Climate policies can greatly benefit air quality, and EUROCITIES continues to strongly support the promotion of sustainable forms of energy production, such as wind, solar, geothermal and hydropower, decentralised energy production and district heating. Nevertheless, some efforts to reduce greenhouse gas emission can have adverse effects on air pollution.

For instance, increased use of biomass in energy production can increase emissions of black/elemental carbon. This constitutes a risk for air quality, and possibly also for climate change mitigation, as black/elemental carbon not only results in health risks for the local population, but can also influence the climate. Emission standards for biomass-based incineration processes should therefore be seriously considered.

Regarding emissions from road traffic, the dieselisation of the car fleet in recent years has helped to reduce CO_2 emissions, but has had a negative effect on PM emissions. In addition, emission reduction techniques for particles have increased the proportion of NO_2 in exhaust gas emissions of diesel fuelled vehicles. This has slowed down the decreasing trend in NO_2 concentrations. Therefore it may be helpful to define emission standards for NO_2 in vehicle emissions, not just for NO_X. This would also align EURO emission standards for vehicles with limit values under the Air Quality Directive. Better and stronger EURO standards must be complemented by a realistic test cycle. Currently, real-life emissions are much higher than what is measured using the New European Driving Cycle (NEDC). **Air quality standards therefore need to take into account the effectiveness of vehicle emission standards.**

In addition, EURO standards by definition only apply to a small part of the vehicle fleet, i.e. new vehicles. New vehicle emission standards can only start significantly influencing air quality once older vehicles have been replaced. This takes years (the average passenger car age in the EU is about 8 years, and about a third of the fleet is over ten years old). **The timing of air quality standards therefore needs to take into account the time it takes for vehicle emission standards to lead to real-world improvements.**

Moreover, the type approval system for road vehicles should be changed to reduce brake wear. At the same time, EUROCITIES would welcome Commission support for the development of longer wearing tyres, so that air quality could become an element of the tyre labelling scheme.

The revision of legislation on pollutant emissions from non-road mobile machinery (NRMM) should bring it line with legislation for road vehicles, i.e. with EURO VI standards for lorries.

Transport policy continues to play an important part as well, as traffic reductions have the advantage of addressing a number of environmental issues at the same time, including notably air pollution, climate change and noise, without compromising other environmental policy goals. Transport policy should be related to the NEC Directive, e.g. when it comes to transit traffic.

Pollutants

The review should address the question of which pollutants need to be covered by air quality legislation, and how. Addressing elemental/black carbon emissions may prove to be a win-win solution for both air quality and climate change. As both the UN Environment Programme (UNEP) and the Convention on Long-Range Transboundary Air Pollution (CLRTAP) recommend to address black carbon, the EU could consider giving priority to measures that reduce elemental/black carbon emissions in the context of air quality policy (also see the remarks on the air quality directives under point 3.)

Please provide any additional information (e.g. links or references to internet pages, reports, studies):

Please give your reply here…

3. The approach of the air quality directives

Directives 2008/50/EC and 2004/107/EC set standards for the air quality of specified substances in order to ensure a minimum level of protection to citizens and the environment. There are several types of standards, such as limit values and target values. The directives require Member States to assess air quality in zones and agglomerations and to inform the Commission and the public about the results. Member States must take action when standards are exceeded or at risk to be exceeded. Under special conditions certain derogations are possible.

You are kindly requested to present your views on the general approach of the directives. Please also provide any additional information that you consider helpful for the review or for substantiating your views.

You may consider addressing in your reply in particular (note you do not have to reply to every issue):

1. the overall conceptual approach of the air quality directives and the level of complexity of it;
2. the definition of a minimum level of protection for all citizens;
3. the concept of limit values for health that apply almost everywhere;
4. the role of real exposure in relation to limit values;
5. assessment through mandatory monitoring and voluntary modelling;
6. the focus of limit values on hotspots in relation to the protection of the population at large;
7. the effectiveness of target values to protect health;
8. possibilities for special protection of sensitive populations;
9. the effectiveness of the directives in triggering effective measures to protect health and the

environment;
10. the effectiveness of the derogations and flexibility provided in the directives;
11. the possibility of including protection levels for additional pollutants in the air quality directives;
12. the concept to base compliance checking limit values on single years;
13. any other issue.

Standards
While it is not possible to set limit values in all cases, the many different standards, i.e. limit values, target values, long term objectives, and critical levels make the directives rather complex and complicate informing the public and even decision makers on air quality.

Limit values
Limit values for health need to apply everywhere, excluding only some environments where people do not spend time. In principle, hot spots need to be monitored and treated like other locations, as they are often the places where many people live, work, and spend their free time, i.e. city centres. Examples include pedestrians and cyclists who are at times exposed to very high concentrations of particulate matter and/ or NO_2 during short periods.

Basing compliance on checking limit values over one year only is problematic, as all pollutant concentrations vary from year to year due to changing meteorological circumstances. A recent example for this is the drought in the first months of 2011, which resulted in high concentrations of PM_{10}. Local and regional measures cannot counteract these influences. It would be more useful to check compliance using the average values over several years in order to get the complete picture. Alternatively, attaining limit values could be mandatory under average weather conditions, or derogations could apply for rarely occurring unfavourable weather conditions. Finally, evaluation of trends of pollutant concentrations may help develop the right approach to tackling both chronic and/or acute effects of pollutants on human health and nature.

On a similar note, the concept of number of days or hours above a certain limit is complicated for the public and can be misleading in terms of health aspects. A review of the current limit values should take into account the **best available and up-to-date information** on the **health impacts** of different pollutants.

Target values
While target values can be difficult to implement due to the lack of consequences in case of non-compliance, they are in many cases useful for guiding policies and measures, including on the local level, in particular when it is clear that a limit value will apply at a later point in time, e.g in the case of $PM_{2.5}$

Monitoring and modelling
EUROCITIES members believe that both methods have a role to play and should be used accordingly.

Monitoring should remain mandatory and could be improved through more specific rules for the placement of monitoring stations. At present, the way that stations are placed can vary between member states, which can distort the findings. For instance, locating measurement stations just in streets where air quality complies with EU standards, or in hot spots, might not give the full picture.

Modelling cannot replace monitoring, as the different dispersion models in use continue to give variable results, and their accuracy is not good enough for e.g. evaluating the possible exceeding of the limit values. We believe that the use of modelling should not be made mandatory in the near future. Voluntary modelling, however, can provide useful additional information for policy development. For instance, improved air quality modelling could help forecasting when limit values/ targets will be respected without taking any measures, reducing unnecessary efforts and costs. For various purposes and situations, authorities already perform calculations and projections of air quality based on a range

of measurements and policy scenarios. Air quality is also taken into account in spatial and infrastructure planning.

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Pollutants

It could be considered to somewhat shift the focus from PM_{10} and $PM_{2.5}$ mass based limit values towards black/elemental carbon and particle number concentrations, since they appear to be better indicators for health-relevant air pollution than other components. This would be in line with recommendations from the UN Environment Programme (UNEP) and the Convention on Long-Range Transboundary Air Pollution (CLRTAP). While the measurement of black carbon may be easier than the measurement of elemental carbon, more research and discussion will be needed before defining a possible new limit value for one of them. As a first step, monitoring of these indicators could be encouraged and a comprehensive impact assessment on their health impact and possible reduction measures be performed to then discuss limit values. A similar approach may be needed for benzo(a)pyrene.

To achieve a better alignment of air quality standards and source policies, EURO standards for vehicles need to be improved, in particular on NO_2/NO_X and PM. In addition, the MARPOL Annex VI limit value for sulphur content (1.0%) should be transposed into EU law as quickly as possible (through amending Directive 1999/32/EC), and the effectiveness of emission standards such as under the Directive on Industrial Pollution Prevention and Control (IPPC) and the Volatile Organic Compounds (VOC) Solvents Emissions Directive needs to be assessed regularly, with the possibility of revisions where needed.

Real exposure and health

In addition to a revised consideration of different pollutants, improvements in monitoring (in particular better location of measuring stations) represent a feasible way of achieving more valid information about real exposure and health impacts. In addition, integrated policies at the local level, e.g. spatial planning that reduces exposure of pedestrians and cyclists to emissions from motorised road traffic, can help reducing exposure.

Derogations

The geographical location and landform of a given territory determine the tendency towards inversions, the direction and speed of air flow, and rain shadow, and thereby the amount of natural airing taking place. These factors can therefore have significant effects on the distribution of pollutants. The same is true for weather conditions. As none of these can be changed through policies, certain derogations should be possible if justified by landform and location, or by extreme, exceptional weather conditions.

In addition, it should not be forgotten that compliance with standards on some pollutants, such as PM_{10} and NO_2, is much more difficult to reach in densely populated areas and large cities than elsewhere. This should not be used as an excuse to postpone emission reduction measures that are realistic, but, the specific situation of cities should result in more support for them to improve air quality.

There is no clear view yet on the current levels of $PM_{2.5}$, and there is not enough information available on emission factors of $PM_{2.5}$ for different sources, necessary to perform large-scale dispersion calculations. It is not yet possible to determine if it will be possible to comply with the limit values for 2015 and 2020 in time. Additional derogations may thus be necessary for $PM_{2.5}$.

Please provide any additional information (e.g. links or references to internet pages, reports, studies):

Cyrys, J., Heinrich, J., Hoek,G., Meliefste, K., Lewne, M., Gehring,U., Bellander, T., Fischer, P., van Vliet, P., Brauer, M., Wichmann, H.-E. And B. Brunekreef: Comparison between different traffic-related particle indicators: Elemental carbon (EC), $PM_{2.5}$ mass, and absorbance. Journal of Exposure Analysis and Environmental Epidemiology (2003) 13,134-143.

UBA 2006: Experten -Workshop 'Verkehrsbedingte Feinstäube in der Stadt', Umweltbundesamt Texte 18
UBA 2006: Räumlich-zeitliche Verteilung, Eigenschaften und Verhalten ultrafeiner Aerosolpartikel (<100nm) in der Atmosphäre, sowie die Entwicklung von Empfehlungen zu ihrer systematischen Überwachung in Deutschland, Umweltbundesamt Texte 26
UFIPOLNET 2007: Ultrafine Particles in Urban Air, Ultrafine particle Size Distributions in Air Pollution Monitoring Networks International Conference, Dresden, 23-24/10/2007
Heinrich, J. and Wichmann, H.-E.: Traffic related pollutants in Europe and their effect on allergic disease, Current Opinion in Allergy and Clinical Immunology 2004, 4:341-348

4. Standards (1): the air quality standards set in Directives 2008/50/EC and 2004/107/EC

The air quality directives set a number of limit and target values (standards) to trigger action with the aim to protect human health and the environment. These standards were based on latest scientific evidence at the time (e.g. WHO guidelines) and considerations on the attainability. For $PM_{2.5}$ an Exposure Concentration Obligation and National Exposure Reduction Target was provided for as complementary objectives to the standards. To assess compliance with the standards, additional elements were included such as the margin of tolerance, the possibility for time extensions and the possibility to discount for certain sources such as natural sources and winter sanding.

You are kindly requested to present your views on the individual objectives and standards as well as the other elements to assess compliance. Please also provide any additional information that you consider helpful for the review or for substantiating your views.

You may consider addressing in your reply in particular (note you do not have to reply to every issue):

1. the differences of setting limit values, target values or other objectives (and whether to apply these individually or in combination as for $PM_{2.5}$);
2. the effectiveness of the derogations and flexibility provided in the directives;
3. the limit values for PM_{10} and the objectives for $PM_{2.5}$ and how they could be reviewed in order to make them more effective;
4. the effectiveness of the target values for heavy metals (including the provisions for mercury) and PAHs and its potential link to PM;
5. the effectiveness of the limit values for NO_2;
6. the effectiveness of the target values for ozone;
7. the effectiveness of the limit values set to protect the environment;
8. any other issue.

PM limit values

While cities are committed to respecting the limit values on $PM_{2.5}$ and PM_{10} and going beyond if possible, their means are often limited due to factors they cannot influence, e.g. weather conditions. Please also note our comments on limit values and different pollutants, including on black/elemental carbon, under point 3. Source policies remain key to supporting local authorities' efforts.

As stated above, pending further research, a review of the limit values should consider that elemental/black carbon is probably more harmful to citizens' health than PM_{10} and $PM_{2.5}$.

NO_2 limit values

EUROCITIES believes that NO_2 limit values should be reconsidered as

1. the NO_2 limit value has always been regarded as an indicator for combustion emissions. In recent times there are more catalytic processes which remove NO_2 or NOX from vehicle emissions, while other damaging components may remain;
2. even though road traffic is the most significant source of NO_2 in cities, EURO standards for passenger cars and commercial vehicles only address NO_X and particulate matter, which is not adequate to reduce NO_2 emissions. Moreover, there is a large gap between the emissions in

official test cycles and the actual emissions during normal use of the cars and lorries (also see the comments above on diesel vehicles and the interaction of PM and NO_X limitations in EURO standards).

Pending improvements of the vehicle fleet and a revision of limit values, further time extensions for compliance will most probably be necessary. This is due to the long lag time involved in replacing the current vehicle fleet with significant numbers of vehicles with low NO_2 emissions whilst the directive already required compliance from 1 January 2010.

Ozone

Achieving target values for ozone can be difficult or impossible for local authorities as it travels over long distances. Source policies are the most effective solution to this problem.

Please provide any additional information (e.g. links or references to internet pages, reports, studies):

Please give your reply here…

4. Standards (2): other national air quality standards

Please list any additional air quality objectives or standards set at national level other than those set in Directives 2008/50/EC and 2005/107/EC that you recommend for consideration in the review.

If appropriate, please clarify these and provide a link or reference to a full description.

Please provide any additional information (e.g. links or references to internet pages, reports, studies):

Please give your reply here…

5. Assessment (1)

The main objective of the assessment is to cost-effectively obtain robust information of air pollution levels and sources throughout the territory of Member States. Assessment under the directives is based on mandatory measurements and voluntary model computations. Station density requirements depend on the air quality levels, population and area in zones and there are provisions regarding the type of stations. In relation to ozone, also measurements of precursors need to be done. The directives give provisions on measurement techniques. They also leave a considerable freedom in designing the network and in combining the measurement results with model calculations.

You are kindly requested to present your views on the provisions on assessment in the directives.
Please also provide any additional information that you consider helpful for the review or for substantiating your views.

You may consider addressing in your reply in particular (note you do not have to reply to every issue):

1. the cost-efficiency of the general approach for assessment;
2. the provisions on station density;
3. needs to update provisions on measurement techniques;
4. the provisions on assessment by modelling;
5. possibilities to improve the assessment of air pollution levels and deposition under Directive 2004/107/EC;
6. the differences between the assessment methodologies in Member States and resulting differences in the need to take action;
7. a possible role for satellite data;
8. any other issue.

Cost-efficiency
Cities consider the general approach for assessment to be relatively cost efficient.

Monitoring stations
The definition of regions and size of regions varies between the member states, so that the density of monitoring stations differs. This aspect should be taken into account when revising rules on monitoring stations (cf comments on monitoring stations above).

Modelling
Modelling is not always performed and not always effective. However, cities think that an improvement of air quality models can provide helpful additional information for policy making and planning and lead to higher cost efficiency. (cf comments on monitoring and modelling above)

Satellite data
EUROCITIES members find that the spatial resolution, accuracy and precision of satellite data is still too low for it to be used in air quality monitoring at local level.

Particulate matter monitoring
The reference method for particles (gravimetric) is problematic given the need for real time information to the public. The variation of techniques for PM mass monitoring causes differences in data depending on the technique used. Measuring techniques and correction factors should be harmonised across the EU.

Please provide any additional information (e.g. links or references to internet pages, reports, studies):

Results of the research project ICAROS NET, e.g. see:
DA Sarigiannis, A Gotti, NI Sifakis, M Tombrou, A Dandou, K. Schäfer, S. Emeis, N.Soulakellis: High-resolution estimation of urban aerosol from fusion of satellite and ground data with numerical modeling results.

5. Assessment (2)

Please provide estimates of annual costs for a monitoring station (marginal costs of one additional station in an existing network, including personal costs and five year depreciation of investment costs).

a. Annual marginal costs of an urban background station for PM (automatic method):

The estimated annual cost is around €30,000.

b. Annual marginal costs of a remote background station for heavy metals and PAH:

The estimated annual cost is around €30,000.

6. Air quality management in Member States

The Air Quality Directive 2008/50/EC requires Member States to take action when standards are exceeded or at risk to be exceeded. Provisions for two types of actions are given: air quality plans and short term action plans. Given these provisions, it is up to Member States and the regional and local authorities to choose the appropriate and effective combination of measures.

You are kindly requested to present your views on the provisions on air quality management in the directives. Please also provide any additional information that you consider helpful for the review or for substantiating your views.

You may consider addressing in your reply in particular (note you do not have to reply to every issue):

1. the effectiveness of the provisions on air quality plans;
2. the effectiveness of provisions in relation to contributions by transboundary air pollution;
3. synergies/antagonisms in air quality plans with climate change policies;
4. the effectiveness of provisions for short term action plans (note: only relevant for third countries and organisations, for EU Member States, a specific project is underway in parallel);
5. any other issue.

Format of air quality plans

While the provisions on air quality plans are adequate overall, and these plans are very useful for long-term planning, cities would appreciate a reduction of administrative burden when it comes to reporting. The current forms for reporting air quality plans to the Commission are very complicated and do not necessarily help implementation of the plan at local level.

Effectiveness of air quality plans and governance issues

Local and regional competences are limited. Therefore, actions on these levels can only have a limited impact on air quality, and it is difficult, often even impossible for local authorities to reach compliance with air quality limit values through local measures only. National and international measures and strong source policies are essential for improvement. Nevertheless, as local authorities have the greatest experience with the results of air quality policies on the ground, they should always be closely involved in designing regional and national measures.

Long range and transboundary air pollution

Long range and transboundary air pollution contributes remarkably to concentrations of fine particles. Wildfires, one of the sources of long range pollution through particles, are expected to occur more often in the future due to climate change. Other sources include biomass burning in agricultural fields. Similar issues exist e.g. with tropospheric ozone travelling far and thereby much limiting the possibilities for effective local action. EU level action and international cooperation are needed to tackle these problems.

Air quality plans and climate change policies

Climate change policies and air quality plans complement often one another, including e.g. increasing energy efficiency, reducing transport needs and modal shift. Most renewable energy sources also have less pollutant emissions. However, unintended contradictions between air quality and climate change policies are possible. For instance, as mentioned above, increased use of biomass in energy production can increase emissions of black/elemental carbon. Increasing land use efficiency, i.e. densification of the built environment, generally increases energy efficiency. However, it may also lead to less dilution and dispersion of air pollutants, e.g. streets with more and/or higher buildings have lower air flow. These and other links between the different policies should be taken into account as much as possible when revising or designing new policies. Cities are ready to contribute to this process with their wide-ranging experience in integrating different policies.

Short term action plans

Provisions on short term action plans should be designed to complement air quality plans as elements of an overall coherent local clean air policy. In general, improvement of air quality is a medium- and long-term process. The consequences of requiring 'immediate' action should be well-assessed in advance to avoid unintended outcomes, e.g. that traffic restrictions in polluted areas would simply result in a shift of traffic to formerly less polluted areas and reduce air quality there.

Please provide any additional information (e.g. links or references to internet pages, reports, studies):

Please give your reply here…

7. Public information and dissemination

The directives require Member States to provide air quality data, information on health risks and air quality plans to the public. In several Member States, regions and cities an Air Quality Index is being used for informing the public in a very simple way about the quality of the air of the current and next few days. The index encompasses health relevant pollutants and is usually divided in ranges with colour codes or symbols. Each range is associated with a standard health advice to the public.

You are kindly requested to present your views on the provisions on public information and dissemination in the directives. Please also provide any additional information that you consider helpful for the review or for substantiating your views.

You may consider addressing in your reply in particular (note you do not have to reply to every issue):

1. the effectiveness of the provisions for public information;
2. further harmonisation of public information, e.g. introducing a common Air Quality Index;
3. any other issue.

Effectiveness of current provisions for public information

Public information is very important. The provisions for public information have been useful and guaranteed that the public gets the information they need and in real time.

Air Quality Index

Cities regard public dissemination of information on air quality as very important and find that the existing provisions for public information have been useful. While a common Air Quality Index may be a useful additional instrument for some, individual local situations differ greatly, and an index should not give the false impression of them being comparable in a simple manner. Therefore, a common Air Quality Index for public information could be developed, but its use should not be mandatory.

Please provide any additional information (e.g. links or references to internet pages, reports, studies):

Results of the CITEAIR project: http://www.citeair.eu/

http://umweltdaten.nuernberg.de/aussenluft.html (air quality information service by the city of Nuernberg)

http://www.lfu.bayern.de/luft/lueb/index.htm air quality information by the Free State of Bavaria)

http://www.env-it.de/luftdaten/pollutants.fwd (German national air quality information system)

8. Governance

The air quality directives constitute a common policy framework for EU Member States to reduce harmful effects of air pollution. It aims to establish a level playing field by setting uniform air quality standards while leaving flexibility at the national level in choosing appropriate measures where needed.

You are kindly requested to present your views on the provisions on governance related issues in the directives. Please also provide any additional information that you consider helpful for the review or for substantiating your views.

You may consider addressing in your reply in particular (note you do not have to reply to every issue):

1. any barriers to fully implement effective measures;
2. the role of the public in setting up air quality plans;
3. the administrative burden within Member States in relation to the protection provided by the directives:
   a. for air quality monitoring and assessment;
   b. for reporting;
   c. for developing air quality plans;
   d. for implementing air quality plans.
4. the distribution of obligations under EU legislation and national (and where appropriate regional and local) responsibilities (subsidiarity);
5. any other issue.

Barriers to implementation

Local authorities have limited means to improve air quality, especially since they cannot change source policies, and significant amounts of pollution come from outside their boundaries. These problems must be addressed effectively at national, EU and international level (also see the comments on source policies and transboundary air pollution above).

In addition, there are cases in which national legislation prevents local authorities from taking additional or stricter measures. For instance

- In Belgium low emission zones cannot be introduced at the local level, and federal policy promotes diesel cars. The introduction of specific parking spaces for electric vehicles has also been delayed.
- Restricting or guiding heavy duty vehicles in city areas remains difficult under German traffic regulations.
- The introduction of road pricing has been significantly delayed in the Netherlands.
- Finnish national legislation makes it difficult to restrict traffic on major highways in the city.
- Danish legislation currently prevents the City of Copenhagen from introducing a congestion charge and from extending the application of its low emission zone from heavy vehicles over 3.5 tonnes to passenger cars and vans.

The costs of air quality measures can be a major barrier as well. While member states have signed up to limit values and are in principle responsible for achieving them, it is mostly cities that have to take action and pay for it.

Moreover, while road traffic is the most significant source of air pollution in many cities, local authorities often find it difficult to implement access restrictions, such as low emission zones or congestion charges, due to opposition by the public and businesses.

The role of the public

Cities inform their citizens about air quality plans, and value their input on the best solutions. However, as mentioned above, public acceptance for some measures is rather low.

Reports on air quality, while in principle a useful tool for public information, should be very clear with regards to the influence of weather conditions on air quality to avoid giving false impressions and signals to politicians and inhabitants on the effectiveness of air quality measures.

Monitoring and assessment

For air quality monitoring and assessment, in general the administrative burden is acceptable for cities. However,

- regarding particulate matter monitoring, reference methods are not suited for informing the public in real time, so that continuous methods are widely used. Equivalency testing of these methods is expensive and demanding, and the lack of testing limits the use of continuous methods. The monitoring standards were published after the methods had already been implemented. For PM_{10} the monitoring standard could be improved, e.g. to allow for determination of uncertainty;
- as previously mentioned, cities would appreciate a reduction of administrative burden when it comes to reporting. The current forms for reporting air quality plans to the Commission are very complicated and do not necessarily help implementation of the plans at the local level.

Non-compliance

Cities are committed to support the achievement of limit values with the means at their disposal. However, these means are limited as they exclude for example measures on emission sources and they cannot influence longer range pollution or weather conditions. Therefore, in cases where limit values are not respected and derogations are deemed to be unfounded, member states should remain responsible for paying the respective fines. EUROCITIES opposes any 'handing down' of fines to local authorities.

Please provide any additional information (e.g. links or references to internet pages, reports, studies):

Please give your reply here…

9. Scientific and technological innovations

New scientific and technological developments may open possibilities for improving legislation on air quality. These developments may occur in various fields, e.g. better measurement techniques and modelling methods, new insight in harmful effects to health and environment, new technologies in air pollution abatement, better prognoses of air pollution.

You are kindly requested to present your views on scientific and technological developments relevant for the review of the directives and your ideas on how they could be taken into account. Please also provide any additional information that you consider helpful for the review or for substantiating your views.

You may consider addressing in your reply in particular (note you do not have to reply for every field):

1. air quality assessment technology (measurement, modelling);
2. health impacts of air pollution;
3. harmful effects of air pollution on vegetation and ecosystems;
4. innovation potential of abatement measures for air pollution sources;
5. expected trends in future air pollution;
6. any other field.

Health effects

More information on the health effects of already regulated pollutants and of pollutants not yet covered by the directives would make it possible to improve the legislation. This concerns in particular black/elemental carbon, but also particle number concentration and benzo(a)pyrene. More research is needed not only on health effects but also on measurement methods and possible abatement policies.

Assessment technology
Improvement of air quality modelling would be helpful to assess the benefit of measures to reduce pollution. One way of achieving this would be to enhance the reliability of source information, such as on traffic density. Modelling should however not become mandatory or replace monitoring (also see the remarks on monitoring and modelling above)

Please provide any additional information (e.g. links or references to internet pages, reports, studies):
Please give your reply here…

10. Your most important issues

Article 32 of 2008/50/EC and Article 8 of 2004/107/EC give a minimum list of issues for the Commission to consider in the review of these directives. Other issues may also be important for the review.

You are kindly requested to present your views – based on your views expressed above or other considerations – on the most important issues for the review of the directives.

For the Air Quality Directive 2008/50/EC:

Strong and timely source policies
The best solution to improve air quality is to limit emissions at the source. This includes notably road vehicles, ships and industry. Source policies will have to be strengthened considerably to achieve the EU goals on air quality and respect existing limit values. **Air quality standards**, such as the ones in the NEC Directive, **should be clearly linked to source policies and take into account their effectiveness.**

In particular, EURO standards need to be improved, including through timely design and entry into force of better test cycles that yield results as close as possible to real-life emissions.

The timing of air quality standards therefore needs to take into account the time it takes for source policies, e.g. vehicle emission standards**, to lead to real-world improvements.**

Derogations/time extensions
As mentioned above, a number of factors that influence air quality cannot be changed through policies, such as the geographical location of a city or weather conditions. In addition, member states and their cities cannot influence air quality in neighbouring countries, despite its influence on air quality in other national/local territories. Certain derogations or additional time extensions should therefore be possible if justified by landform and location or transboundary pollution, or by extreme, exceptional weather conditions.

Moreover, due to lack of reliable information, it is not yet possible to determine if it will be possible to comply with the $PM_{2.5}$ limit values for 2015 and 2020. Additional time extensions or derogations may thus be necessary for this pollutant as well.

A general solution to the problems surrounding NO_2 should be found, including notably the gap between EURO emission standards for vehicles on NO_x and PM and air quality standards on NO_2 and PM.

Health effects
More research on the health effects of already regulated pollutants and of pollutants not yet covered by the directives is needed to improve the legislation. This concerns in particular **black/elemental**

carbon, but also particle number concentration and benzo(a)pyrene. More research is needed not only on health effects but also on measurement methods and possible abatement policies.

Resources
Cities are already taking a great deal of action on issues like improving public transport and increasing the attractiveness of soft modes (walking and cycling), on promoting cleaner and more energy-efficient propulsion technologies and more. However, budget cuts at the national, regional and local level make it increasingly difficult to achieve progress. In addition to member state and regional funding, EU support is a vital element as well. The upcoming Multi-Annual Financial Framework should strive to ensure that available funding gets to the local level.

For the Fourth Daughter Directive 2004/107/EC:

Please give your reply here…

Please provide any additional information (e.g. links or references to internet pages, reports, studies):

Please give your reply here…

11. Your own involvement in the review process

For an effective review of the air quality directives intensive stakeholder involvement is indispensible. The Commission has established the *Stakeholder Expert Group on the Review of the EU Air Policy* to provide direct support in the review process. Your country / organisation has been invited to become a member of this group.

You are kindly requested to present any further views on the possible involvement of your country / organisation in the review of the directives or any ideas on how you or others could contribute to the review process.

EUROCITIES welcomes its involvement in the Stakeholder Expert Group and is ready to actively contribute to the air policy review, by means of this group and other means that are seen as useful.

Please provide any additional information (e.g. links or references to internet pages, reports, studies):