Consultation on options for revision of the EU Thematic Strategy on Air Pollution and related policies

Welcome to the Consultation on the review of the EU Thematic Strategy on Air Pollution and related policies.

This questionnaire is intended to inform the current review of the Thematic Strategy on Air Pollution of the EU. The review evaluates the progress made towards both the interim and long-term objectives as well as the overall fitness of the EU Air Quality policy framework, with a view of confirming, updating and strengthening the existing objectives.More information on the current review process can be found in the **explanatory notes accompanying the public consultation**.

The questionnaire consists of six sections and asks your opinion about the following issues and drivers: ensuring compliance with EU air quality requirements and coherence with international commitments; reducing exposure to damaging air pollution in the long term; revising the Ambient Air Quality Directive (AAQD); revising the National Emission Ceilings Directive (NECD); and addressing major air pollution sources, such as road and off-road transport, agriculture, small/medium combustion sector, and the shipping sector. The questions included in the survey are a mix of multiple-choice and free answer questions.

The questionnaire should take approximately 20-40 minutes of your time. Your answers are saved as long as a network connection is established. If your browser is closed it might be possible to recover answers, but this however cannot be guaranteed. For this reason, we encourage you not to interrupt the session once you have started the questionnaire. You may wish to download the text of the questionnaire from the main consultation page in order to examine the questions and elaborate on your replies before starting an on-line session.

Once you have submitted your answers, you will have the option to download a copy of your answers.

Unless you specify otherwise, your contribution will be published on the Commission's website. In the introductory section, you will be given the opportunity to indicate whether you wish your contribution to be anonymous.

This document does not represent an official position of the European Commission. It is a tool to explore the views of interested parties. The suggestions contained in this document do not prejudge the form or content of any future proposal by the European Commission.

Questions marked with an asterisk * require an answer to be given.

Section 1/6: Introductory Questions

A. Are you responding to this consultation as an individual or on behalf of an organisation?
*

- ○ As an individual
- ○ On behalf of an organisation

A1. What type of organisation do you represent?

*

- government (national)
- government (regional)
- government (local)
- government: international organisation
- business: industrial interest group, business association, sectoral association
- business: enterprise/company (large): more than 250 employees
- business: enterprise/company (medium): 50 to 250 employees
- business: enterprise/company (small): 10 to 50 employees
- business: enterprise/company (micro): up to 10 employees
- business: self-employed
- NGO, civil society, environmental group or charity, consumer group
- research: university
- research: public institution
- research: private institution
- other

A1a. Please specify the sector of your activity (e.g. health, environment, transport, energy, multi-sector):

(maximum 200 characters)

A2. Does your organisation work mainly on an EU-wide basis or in a single country?

*

- EU-wide
- Focus on a single country
- Other (please elaborate below in question D)

A3. Please indicate the country where your organisation is located: *

- Austria
- Belgium
- Bulgaria
- Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Poland
- Portugal
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
- United Kingdom
- Rest of Europe
- Outside Europe

A4. Please indicate the name of your organisation: * (maximum 150 characters)

A5. Please indicate your name and title: * (maximum 150 characters)

Aa1. Please indicate the country of your residence: *

- Austria
- Belgium
- Bulgaria
- Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Poland
- Portugal
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
- United Kingdom
- Rest of Europe
- Outside Europe

Aa2. Please indicate your title and name: * (maximum 150 characters)

B. Do you now work on air pollution issues, or have you done so in the past?
*

- Yes, air pollution has been the main focus of my professional work
- Yes, air pollution has been one issue in my professional work
- No

C. What type of area do you live in?
*

- Rural area
- Suburban area
- Urban area: town/small city
- Urban area: large city

D. Please feel free to provide any further details regarding your answers to the introductory questions:
(maximum 800 characters)

Unless you specify otherwise, your contribution will be published on the Commission's website. Please indicate here if you wish your contribution to be anonymous.(For full information please refer to the Specific Privacy Statement point 3) *

- ( ) You can publish this contribution as it is.
- ( ) Please make this contribution anonymous.

Section 2/6: Ensuring compliance with EU air quality requirements and coherence with international commitments in the short term

The current EU-wide framework for air pollution control consists of three main elements: (1) a legal regime for air quality management in zones and agglomerations; (2) caps on emissions at a national level; (3) source specific emission legislation established at Union level.

Current compliance situation:
EU air quality limit values must be achieved everywhere, but many EU Member States do not comply with those set in the Ambient Air Quality Directive 2008/50/EC (AAQD) for several pollutants. As a consequence, the European Commission is currently pursuing infringement cases with a number of Member States, whilst also supporting exchange of information on best practices to achieve compliance. However, other options to ensure widespread compliance in the short term should also be considered.

The implementation of the National Emissions Ceilings Directive 2001/81/EC (NECD) generally gives a more encouraging picture. Most of the 2010 ceilings should be complied with, with the notable exception of the NOx (nitrogen oxides) ceilings, which are exceeded in many Member States.

Reasons for non-compliance include the transboundary fluxes of pollutants across national borders, lack or limited efficacy of emission controls in certain sectors (for instance road transport and residential heating), and the lack of coordination between national and local levels on air quality management.

Coherence between EU and international commitments:
Transport of air pollution from outside the EU has a significant effect on Europe's air quality, and the EU works to regulate this in several international conventions, the main one being the Gothenburg Protocol to the UNECE Convention on Long-Range Transboundary Air Pollution. EU legislation was in line with the Gothenburg requirements, but the international situation has now moved on. New Gothenburg ceilings have recently been set for 2020, including a new ceiling for primary PM emissions, as well as certain flexibility mechanisms.

The Commission intends to review the NECD to re-establish alignment, including a ceiling for primary PM emissions and tighter requirements for other pollutants to comply with the new Gothenburg ceilings for those. The Gothenburg ceilings are, however, less ambitious than the emission reductions necessary to achieve the 2020 objectives set in the EU's Thematic Strategy on Air Pollution. The issue of emission ceilings for beyond 2020 is taken up later in the questionnaire.

For further information on compliance with EU air quality requirements and coherence with international commitments in the short term, please see the **explanatory notes accompanying the public consultation**, particularly Sections 4.1, 4.2 and 6.1.

1. How should the EU modify or supplement its approach to ensure compliance with current air quality legislation? (Please choose one or more responses) * (at least 1 answers)

- [ ] No adjustment of the approach described above is needed.
- [ ] Additional non-legislative options: for example by establishing partnership agreements with MS that focus Member State efforts to address non-compliance with air quality objectives
- [ ] Relaxing the obligations under Ambient Air Quality Directive
- [ ] Strengthening emissions controls: for example more stringent emissions ceilings or source controls that support the attainment of air quality limit values
- [ ] Don't know

1a. Which options should be considered as additional non-legislative measures? (Please choose one or more responses) * (at least 1 answers)

- [ ] Governance support, for example through competence building programmes and guidance on increased and more effective use of existing EU funding sources
- [ ] Partnership implementation agreements negotiated between the Commission and Member States in infringement, where further legal action would be suspended subject to proper implementation of agreed transparent and binding programmes to address air pollution
- [ ] Other (please describe below in question 2)
- [ ] Don't know

1b. Which options should be considered to relax obligations under the AAQD? (Please choose one response) *

- ( ) Weaken those air quality limit values for which there is currently widespread non-compliance (in particular PM and NO2)
- ( ) Postpone the date for attainment of the existing limit values.
- ( ) Other (please describe below in question 2)
- ( ) Don't know

1c. Which options should be considered to set more stringent obligations on air pollution emissions? (Please choose one response)*

- Set more stringent emission ceilings for 2020 in a revised EU National Emissions Ceilings (NEC) Directive. This option would set the priority on air pollution measures taken by national authorities to meet the ceilings.
- Set more stringent emission source controls at an EU level (e.g. on combustion plants, motor vehicles and other sources), focusing on the sectors where measures to reduce emissions will be most cost-effective in terms of improving air quality
- Combine, in a matched approach, more stringent national ceilings under the NEC Directive with more stringent source controls at EU level
- Other (Please describe below in question 2)
- Don't know

1d. What further level of ambition (if any) should the revised NEC Directive aim for in 2020? (Please choose one response)

- The NEC Directive should only match the recently-agreed 2020 ceilings in the so called Gothenburg Protocol under the UNECE Convention on Long Range Transboundary Air Pollution
- The NEC Directive ceilings for 2020 should go beyond the 2020 Gothenburg ceilings in order to achieve the objectives in the Thematic Strategy on Air Pollution
- The NEC Directive ceilings for 2020 should go beyond the 2020 Gothenburg ceilings and the Thematic Strategy on Air Pollution in order to support further objectives for air pollution reduction, including supporting the attainment of air quality limit values
- Other (Please describe below in question 2)
- Don't know

2. Please feel free to provide written comments on the course of action to ensure compliance with the current air quality legislation: (maximum 1200 characters)

Section 3/6: Further reducing exposure to damaging air pollution in the medium to long term

The EU 's long-term objective for air policy is the attainment of '*levels of air quality that do not give rise to significant negative impacts on, and risks to human health and the environment*', and successive phases of air policy are designed to move towards this by setting interim standards and objectives designed to tap as much as possible the medium term improvement potential. The World Health Organisation advises that the present air quality standards are insufficient to protect human health and the environment, notably for PM and O_3, and so the revision of the Thematic Strategy will consider the possibility of setting further, more ambitious objectives.

For further information regarding reducing exposure to damaging air pollution in the medium to long term, please see section 6.3 of the **explanatory notes accompanying the public consultation**.

Sub-section 3.1: Ensuring coherence between air pollution and climate change policies

The Commission's work programme for 2013 foresees a new climate and energy framework for the 2030 time horizon. This will, in all likelihood, also inform ongoing international negotiations on a new legally binding climate agreement that is expected to be agreed before the end of 2015. The relation between the forthcoming air and climate policies, which address many of the same substances and sources, is a important strategic issue.

There are both synergies and trade-offs to consider. Improved energy efficiency and renewable energy sources mostly reduces air pollution as well as climate pollution. (An exception is biomass, which can result in increased emissions of particulate matter and poly-aromatic hydrocarbons (PAHs).) Some air pollutants also act as short-lived climate pollutants (SLCP): potent climate forcers over their shorter lifetimes in the atmosphere compared to other climate gases such as CO_2. The main ones are a fraction of particulate matter known as black carbon, and ground level ozone. For further information on synergies between air pollution and other policies, please refer to Section 5.5 of the **explanatory notes accompanying the public consultation**.

3. How should future EU air pollution policy interact with a new climate and energy framework for 2030? (Please choose one response) *

- ( ) It should maximise the synergies between the policies, but with no new air pollutant emissions reductions except those delivered by the climate and energy policy
- ( ) It should maximise the synergies between the policies, and set out additional measures to reduce air pollutant emissions and improvements to air quality
- ( ) Other (please describe below in question 5)
- ( ) Don't know

4. Should specific complementary action in the EU be pursued to curb emission of short-lived climate pollutants (SLCP) and their precursors, to improve both air quality impacts on health but also to boost climate mitigation in the short term? *

- ( ) Yes
- ( ) No
- ( ) Don't know

4a. Should specific complementary action be pursued to curb black carbon emissions? (Please choose one response)

- ( ) Yes (please decribe below in question 5)
- ( ) No
- ( ) Don't know

4b. Should specific action to address ozone precursors that are short-lived climate pollutants, such as methane, be reinforced? (Please choose one response)

- Yes (please describe below in question 5)
- No
- Don't know

5. Please feel free to provide comments on the interaction between air pollution and climate change policies: (maximum 1200 characters)

Sub-section 3.2a: Strategic approach and target year of future air pollution policy

The AQ review should determine how much additional progress on air quality the EU should aim for, and by when. These issues are linked but for simplicity the questions below deal separately with the time horizon and the extent of progress.

For the time horizon, a longer-term perspective would allow member states and industries to plan investments well in advance and so maximise economic efficiency. On the other hand, setting targets too far in the future (beyond normal policy and investment planning horizons) could delay action without bringing additional economic benefits.

6. Which target year should be the main focus of the revised Thematic Strategy? (Please choose one response) *

- 2025
- 2030
- Other (please comment below in question 8)
- Don't know

6a. If the target year is 2030, should the EU set an interim target for Member States to achieve for 2025 to strengthen the achievement of the 2030 objective? (Please choose one response) *

- Yes, interim targets should be set on an indicative (i.e. voluntary) basis
- Yes, interim targets should be set on a mandatory basis, e.g. via national emissions ceilings
- No, interim targets should not be set
- Don't know

Sub-section 3.2b: Strategic approach and target year of future air pollution policy

The amount of additional progress on air quality the EU should aim for is defined in terms of reducing impacts on both human health and the environment.

The greatest reduction that can be achieved is called the maximum technically feasible reduction (MTFR), which would be the outcome of applying every pollution control measure available in the market, irrespective of cost.

Some such control measures are much more expensive than others; by concentrating efforts on the more affordable ones it is therefore possible to deliver a substantial share of the MTFR at only a fraction of the cost, ensuring that the environmental and health benefits outweigh the costs incurred to reduce emissions.

7. How much additional progress should EU air pollution policy pursue in the revised Thematic Strategy? (Please choose one response)*

- ○ No change: only the level of protection delivered by current legislation
- ○ The level delivered by the forthcoming climate and energy framework for 2030, without additional air pollutant emission reductions
- ○ Substantial progress beyond the climate and energy framework, towards the maximum achievable pollution reduction
- ○ The maximum achievable pollution reduction (MTFR)
- ○ Don't know

8. Please feel free to provide comments on the level of ambition: (maximum 1200 characters)

Sub-section 3.3: Setting Priorities

EU air pollution policy and legislation addresses impacts on both human health and the environment (including both impacts on the natural environment as well as those on crops). While both goals will remain, legislation could set a priority on achieving further reductions.

For further information on the emission control measures that are most effective to improve on either health or environmental impacts, please see Section 4.3 and Annex A of the **explanatory notes accompanying the public consultation**.

9. How should EU air pollution policy give priority to addressing either human health or the environment? (Please choose one response) *

- (○) Equal weight to both
- (○) Give priority to addressing human health impacts
- (○) Give priority to addressing environmental impacts
- (○) Other (Please describe below)
- (○) Don't know

10. Please feel free to provide comments on setting priorities: (maximum 1200 characters)

Sub-section 3.4: Choice of policy instruments

The EU policy framework for air pollution and air quality is articulated across the following instruments, which can be used singly or in combination to take forward the environmental protection objectives set by the proposed strategy:

- International agreements, notably the UNECE Convention on Long-Range Transboundary Air Pollution. Broadening pollutant reduction efforts to include states outside the EU would be a means to address transboundary pollution from those regions.

- EU legislation setting air quality requirements and exposure limits (in particular the Ambient Air Quality Directive). This instrument is mainly effective to trigger action that can be taken at regional level.

- EU legislation establishing national ceilings for emissions of key pollutants (the National Emissions Ceiling Directive). This instrument is mainly effective to trigger action that can be taken at national level, and also provides a means to establish upper limits to the amount of transboundary pollution affecting other member states.

- EU legislation setting direct emission requirements on sources of pollution such as industrial activities, motor vehicles and others. This instrument would ensure that a certain share of the required emission reductions is provided by harmonised measures at EU level, reducing the burden on measures at Member State level.

- Non-legislative methods, including EU funding schemes and programmes to support urban air quality initiatives.

11. Which of the following policy instruments should be given priority to achieve the environmental and health objectives in the period up to 2030? (Please rank as many of the following options as you wish in other of preference from 1 (most preferred) to 6 (least preferred)

a: 1

b: 2

c: 3

d: 4

e: 5

f: 6

	a	b	c	d	e	f
Negotiate new emission reduction commitments for 2030 under the Gothenburg Protocol which are aligned with the ambition level determined for the revised strategy. To be effective, this option would require action to ensure that EU neighbouring countries join and ratify the 2020 emission reduction targets.	○	○	○	○	○	○
In the National Emissions Ceiling Directive, establish emission ceilings for the 2025-2030 period which are aligned with the ambition level determined for the revised strategy.	○	○	○	○	○	○
In the Ambient Air Quality Directive, adapt the AQ limit values for the 2025-2030 period to more stringent levels corresponding to the ambition level determined for the revised strategy.	○	○	○	○	○	○
In EU legislation on emission sources, set more stringent emission requirements for industrial activities, motor vehicles and other air pollution sources, where cost-effective.	○	○	○	○	○	○
Use non-legislative methods, such as existing EU funding schemes, urban air quality programmes, research and innovation actions or awareness raising (please specify in following question).	○	○	○	○	○	○
Other instruments (please provide comments in question 12).	○	○	○	○	○	○

12. Which other instruments should be used? (maximum 1200 characters)

Section 4/6: Revising the Ambient Air Quality Directive

The Ambient Air Quality Directive sets binding limit values for the maximum concentrations in ambient air of eight pollutants: sulphur dioxide (SO_2), nitrogen dioxide (NO_2) and oxides of nitrogen (NOx), particulate matter (PM_{10} and $PM_{2.5}$), lead (Pb), benzene (C_6H_6) and carbon monoxide (CO). The Directive also sets non-binding target values for ground-level ozone (O_3). Limit or target values are expressed as short-term (8-hour or daily) averages, or long-term (annual) averages, and for some pollutants both kinds are set.

Sub-section 4.1a: Aligning with latest scientific and technical knowledge

The World Health organisation (WHO) has identified guidance values for ambient concentrations of major pollutants to protect human health; these are more stringent than the limit values currently set in the AAQD. The reference levels in the table below include EU limit or target levels and WHO air quality guidelines (AQG).

Table of EU limit or target values vs WHO guidelines for air quality (all levels in µg/m^3 except where otherwise indicated, averaging periods also listed).

Pollutant	EU reference value	WHO reference level
$PM_{2.5}$	Year (25)	Year (10)
PM_{10}	Day (50)	Year (20)
O_3	8-hour (120)	8-hour (100)
NO_2	Year (40)	Year (40)
BaP	Year (1ng/m^3)	Year (0.12 ng/m^3)
SO_2	Day (125)	Day (20)
CO	8-hour (10mg/m^3)	8-hour (10mg/m^3)
Pb	Year (0.5)	Year (0.5)
C_6H_6	Year (5)	Year (1.7)

Source: EEA

Particulate matter includes several different components. A specific limit value of 25 µg/m^3 from 2015 is set for fine particles ($PM_{2.5}$), as long-term exposure to this pollutant has been found to have strong health effects. The AAQD calls for a review of this limit value by 2013, with a view to tightening it indicatively to 20µg/m^3 subject to feasibility.

13. Should the indicative limit value for $PM_{2.5}$ of 20 µg/m^3 for 2020 be made mandatory? *

- Yes
- No
- Don't know

14. Should the $PM_{2.5}$ or other limit values in the AAQD be made more stringent to bring them closer to WHO guidance values? (Please choose one response) *

- No change
- Yes, review the limit values and bring them closer to WHO guidance values
- Bring AAQD limit values closer to WHO guidance values only in the future, once the EU has made further emissions reductions
- Don't know

Sub-section 4.1b: Aligning with latest scientific and technical knowledge (black carbon)

Another component of PM, black carbon (BC), has health impacts and is also a short-lived climate pollutant. BC is one of the constituents of total PM mass, but requirements to separately monitor or reduce BC concentrations are not established in current air quality legislation. Such requirements may help further reducing health impacts and at the same time have a positive synergistic effect with climate change mitigation.

15. Should monitoring and regulation be introduced for black carbon/elemental carbon? (Please choose one response) *

- Yes, introduce monitoring requirement
- Yes, introduce non-binding target value (along with a monitoring requirement)
- Yes, introduce binding limit value (along with a monitoring requirement)
- No
- Don't know

16. Should any other components of particulate matter be addressed in the AAQD?

(maximum 1200 characters)

Sub-section 4.1c: Aligning with latest scientific and technical knowledge (ozone)

Ground-level ozone is not directly emitted but is formed in the atmosphere through a number of reactions between ozone precursors, the most important of which are VOCs, NOx, CO, and methane (CH_4). Ozone has impacts on human health and also on ecosystems and crops. The AAQD currently sets non-binding target values for ozone to protect human health and vegetation. Ozone is also an effective greenhouse gas.

17. Which binding limit values (if any) should the AAQD set for ozone? (Please choose one response) *

- ○ Replace the current ozone target values with binding limit values set at the same levels
- ○ Replace the current ozone target values with binding limit values set at more stringent levels
- ○ No change
- ○ Don't know

Sub-section 4.2a: Management framework

The limit values for several pollutants have largely been met across the EU, in particular those for sulphur dioxide (SO_2), carbon monoxide (CO) and lead (Pb).

Certain pollutants, such as PM_{10} and NO_2, are regulated both by annual average and short term (daily or hourly) limit values. There can be a strong correlation in practice between compliance with the short-term NO_2 value whenever the yearly limit value is met, and between compliance with the yearly PM_{10} value whenever the short-term PM_{10} value is met.

Deleting some of the limit values would reduce monitoring and reporting costs; on the other hand, mere correlations may not be sufficient to allow elimination of standards from a health perspective, and keeping limit values provides a safeguard for the future.

18. Should any limit values be removed from the AAQD? If so, which? (maximum 1200 characters)

Sub-section 4.2b: Management framework

Other options to reduce air quality management costs may include revising siting criteria for monitoring stations to focus more on the locations where people are generally exposed to ambient air pollution.

Any reductions in air quality management costs would need to be evaluated against the risk to weaken

environmental and health protection.

19. Should any *other* monitoring and reporting obligations be reduced in the AAQD? If so, which?
(maximum 1200 characters)

Sub-section 4.2c: Management framework

A significant proportion of the EU population still lives in areas, especially cities, where EU limit and target values are exceeded – in particular, for PM, ozone and nitrogen dioxide.

In zones where EU air quality limit values are exceeded, zone-specific action plans for attainment are required. Recent experience indicates that local and regional authorities face substantial difficulties in meeting their responsibilities, as they lack the means to control pollution from outside their regions and from sources, and so must resort to more expensive and less effective local actions. One option to address this is to consolidate zone-specific plans into national action plans, to ensure their coherence. Another option is to focus on transboundary pollution flows that affect the attainment of EU limit values; the AAQD already recommends cooperation between Member States to address air quality problems, but there is little evidence of effective use of the existing provisions.

20. Should zone-specific plans be consolidated into coordinated national plans? (Please choose one response) *

- Yes
- No
- Don't know

21. Should cooperation among Member States be reinforced to better address transboundary pollution flows that affect local air quality problems? (Please choose one response) *

- Yes, the Member States concerned should be legally obliged to prepare joint air quality plans in cases of significant transboundary pollution
- Yes, cooperation should be reinforced, but in other ways (pls specify in following question).
- No
- Don’t know

22. Please feel free to provide comments on the options for the revision of the AAQ Directive:
(maximum 1200 characters)

Section 5/6: Revising the National Emission Ceilings Directive (NECD)

The National Emission Ceilings Directive establishes – for 2010 and beyond – upper ceilings for the emission of four pollutants – sulphur dioxide (SO_2), nitrogen oxides (NOx), ammonia (NH_3) and non-methane volatile organic compounds (NMVOC). The ceilings are set so as to limit the long-range transport of air pollutants and their associated health and environmental burden.

Sub-section 5.1: Aligning with latest scientific and technical knowledge

With the incorporation of the revision of the Gothenburg Protocol into EU law, ceilings will be set for $PM_{2.5}$, a component of primary particulate matter. To ensure coherence with the Gothenburg Protocol, ceilings for $PM_{2.5}$ will need to be established also for a revised NEC Directive. The revised NEC Directive could however go further and set ceilings also for black carbon (another component of particulate matter with both health and climate change impacts), or for other pollutants, provided that appropriate emission inventories are in place.

23. Should national emission ceilings be adopted for black carbon/elemental carbon? (Please choose one response)

- ○ Yes
- ○ No
- ○ Don't know

24. Should national emissions ceilings be introduced for other new pollutants? (Please provide written comments if you would like to propose ceilings for other pollutants) (maximum 1200 characters)

Sub-section 5.2a: Management framework

The 2012 revision of the Gothenburg Protocol introduced the option for countries to propose adjustment of their ceilings or emission inventories for compliance check. Such adjustments would however only be allowed in specific circumstances, where a ceiling may be exceeded solely due to the fact that the inventory methodology (the way in

which total levels of emissions of pollutants are calculated) has been improved to bring it in in line with the latest scientific knowledge.

Inter-annual variability of the main emission drivers, such as economic activity or weather (in turn affecting demand for heating and cooling) may compromise a Member State's ability to meet emission ceilings in the short term. A possible solution would be to allow Member States to demonstrate compliance on a multi-year average basis. This would in practice mean that the ceilings are slightly weakened.

25. Which mechanisms for flexibility should be introduced into the NEC Directive management framework? (Please choose one or more responses)

- [ ] Allowing Member State compliance for the Directive's ceilings to be measured on the basis of a multi-year average
- [ ] Allowing limited adjustments of Member State emission ceilings, under specific circumstances and after approval by the Commission
- [ ] Allowing limited adjustments of Member State emission inventories for compliance check, under specific circumstances and after approval by the Commission
- [ ] Other (please specify below)
- [ ] No flexibility mechanisms should be introduced
- [ ] Don't know

Sub-section 5.2b: Management framework

Competent authorities for local air quality management are often local administrations, whereas compliance with national emission ceilings is managed at national level. Coherence between national emission reduction plans and local air quality plans could be improved by including additional provisions in the NEC Directive that would require the Member States to take explicit account of existing and projected air quality non-compliances when developing emission reduction plans, which could then be optimised to deliver also air quality benefits at the same time.

26. Should coordination be required between the national and local levels in respect of emissions reduction measures and local air quality management? (Please choose one response)

*

- ( ) Yes
- ( ) No
- ( ) Don't know

27. Please feel free to provide comments on the options for the revision of the NEC Directive:

(maximum 1200 characters)

Section 6/6: Addressing major air pollution sources

EU legislation also addresses major air pollution sources, including: road transport, non-road machinery, combustion plants, industry, agriculture and shipping.

The revised Thematic Strategy on Air Pollution could identify measures to address those, among these sources, which offer the most potential to deliver further emission reduction in a cost-effective way.

For further information regarding major air pollution sources, please see Section 5.4 and Annex B of the **explanatory notes accompanying the public consultation**.

Sub-section 6.1: Road transport

The EU has set emission standards for all major classes of vehicles circulating on road, including heavy-duty vehicles (such as trucks and buses), light-duty vehicles such as passenger cars, and L-category vehicles (motorcycles and other small vehicles). The standards cover emissions of carbon monoxide (CO), hydrocarbons, nitrogen oxides (NOx) and particulates (PM).

For heavy-duty vehicles, the most recent Euro VI standard, introduced for new vehicles as of 2012, represents a major reduction in emissions from new vehicles; accordingly, substantial air quality improvements are projected to be delivered with the progressive retirement of obsolete vehicles and substitution by newer ones.

The Commission is currently finalising the process of revising emission standards for L-category vehicles.

For passenger cars and other light-duty vehicles, the Euro 5 standards came into force for the registration and sale of new vehicles in 2011, and the more stringent Euro 6 standards will come into force in 2014-2015. However, despite the progressively tighter restrictions on new vehicle emissions, polluting emissions in particular from diesel light-duty vehicles have not decreased as far as expected, as real-world emissions are higher than the intended levels prescribed by the Euro standards. Moreover, the increasing share of diesel engines in the passenger vehicle fleet has also contributed to these emissions. As a result, road transport continues to contribute to a significant share of air quality problems in the EU. A new test procedure will be introduced along with the Euro 6 standards, to ensure that the divide between type approval limit values and real world emissions is minimised. However, the technical characteristics and time of introduction of the new test procedure are not yet fully defined.

28. Which additional measures should be taken to address air emissions from road transport? (Please rank as many of the following options as you wish in order of preference from 1 (most preferred) to 8 (least preferred))

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a: 1
b: 2
c: 3
d: 4
e: 5
f:  6
g: 7
h: 8
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	a	b	c	d	e	f	g	h
Introduce with minimum delay the new test procedure to ensure that real world emissions of Euro 6 light duty diesel vehicles are as close as possible to the type approval limit values	○	○	○	○	○	○	○	○
Strengthen EU-wide requirements for in-service compliance with emissions standards, to ensure that light-duty vehicles on European roads continue to produce low emissions over their lifetime	○	○	○	○	○	○	○	○
Develop a new, more stringent standard to be mandatory for motor vehicles after 2020	○	○	○	○	○	○	○	○
Develop a supplementary more stringent standard, not mandatory, to be used by national and local governments in a harmonised way wherever air quality exceeds EU standards (e.g. to establish low emission zones), or to establish incentives at MS level to increase penetration of cleaner vehicles	○	○	○	○	○	○	○	○
Introduce standards to retrofit existing heavy duty vehicles (e.g. trucks, buses) to reduce their air pollution emissions	○	○	○	○	○	○	○	○
Introduce a mandatory road charging scheme for heavy duty vehicles that incorporates air pollutant emissions ("eurovignette directive")	○	○	○	○	○	○	○	○
Develop additional test-cycle components specific to the driving patterns of special purpose urban vehicles (e.g. buses and refuse collection vehicles), to ensure that pollution control technologies operate effectively under real urban driving conditions	○	○	○	○	○	○	○	○
Other (please provide comments in question 29)	○	○	○	○	○	○	○	○
No additional measures should be introduced	○	○	○	○	○	○	○	○
Don't know	○	○	○	○	○	○	○	○

29. Please feel free to comment on your answers regarding regulation of road transport emissions:
(maximum 1200 characters)

Sub-section 6.2: Off-road transport and non-road machinery

Non-Road Mobile Machinery such as excavators, bulldozers and compressors also contribute to air pollution by emitting carbon monoxide (CO), hydrocarbons (HC), nitrogen oxides (NOx) and particulate matter. EU policy is progressively reducing these emissions. Currently under discussion are: in the short term, to extend the scope of application of the current regulation (Stage IV) to additional emission sources, such as expanding the range of power classes covered (smaller and larger) and the type of application (to include inland water vessels as well as stationary engines); in the longer term, to develop and introduce a new set of emission requirements to become Stage V standards.

30. Which additional measures should be introduced for non-road machinery? (Please rank as many of the following options as you wish in order of preference from 1 (most preferred) to 5 (least preferred))

a: 1
b: 2
c: 3
d: 4
e: 5

	a	b	c	d	e
Extend the scope of application of current Stage IV NRMM standards to additional power classes and applications, including stationary applications	○	○	○	💬	○
Introduce as soon as possible a more stringent Stage V standard for non-road machinery, aligned with the limit values of the most stringent Euro VI regulation for heavy duty road vehicles, which would further reduce especially PM emissions.	○	○	○	○	💬
Ensure that approval emission tests reflect the machinery's emissions in real world circumstances	○	○	💬	○	○
Ensure that there are incentives for retrofitting and/or replacing older inland waterway vessels' engines by newer and cleaner ones	○	💬	○	○	○
Other (please provide comments in question 31)	💬	○	○	○	○
No additional measures should be introduced	○	○	○	○	○
Don't know	○	○	○	○	○

31. Please feel free to comment on your answers regarding regulation of emissions from off-road transport and non-road machinery: (maximum 1200 characters)

Sub-section 6.3: Agricultural sector

The agricultural sector is the main contributor to emissions of ammonia (NH_3), which causes eutrophication and is a precursor of secondary PM. These emissions can be reduced through improved manure storage, management and spreading techniques, low nitrogen animal feeding techniques, and fertiliser management. Ammonia emissions from agriculture have reduced only rather slowly in the last decade and are not expected to reduce in the future unless further action is taken.

Also, the burning of agricultural waste is emerging as an important source of primary particulate matter (PM) in some areas of the EU. Some Member States have already banned or otherwise restricted open burning of agricultural waste.

32. Which additional measures should be taken to address air emissions from the agricultural sector? (Please rank as many of the following options as you wish in order of preference from 1 (most preferred) to 5 (least preferred))

a: 1

b: 2

c: 3

d: 4

e: 5

	a	b	c	d	e
Set tighter emission ceilings for ammonia for 2020 and 2030 in the NEC Directive, leaving flexibility to Member States on how these ceilings can best be reached	○	○	○	○	○
Where cost effective, introduce new or revise existing EU legislation to establish EU-wide specific rules for e.g. improved manure storage, management and spreading techniques	○	○	○	○	○
Promote good practices in manure management and manure spreading in Member States through support from the Rural Development Fund	○	○	○	○	○
Introduce measures to ban or restrict the burning of agricultural waste	○	○	○	○	○
Other (please provide comments in question 33)	○	○	○	○	○
No additional measures should be introduced	○	○	○	○	○
Don't know	○	○	○	○	○

33. Please feel free to comment on your answers regarding regulation of emissions from the agricultural sector:
(maximum 1200 characters)

Sub-section 6.4: Small/medium combustion sector

EU legislation sets emissions standards for combustion plants of 50MW or more.

Emissions from residential heating, especially related to biomass and solid fuels such as coal, are a source of particulate matter (PM) that is not currently regulated; however the Commission intends to regulate in 2013 emissions from installations up to 400-1000 kW (no decision has yet been made on the capacity threshold) under the Ecodesign Directive (2009/125/EC).

Pollutant emissions from combustion installations of capacity higher than the Ecodesign Directive threshold but lower than 50 MW are currently not regulated at EU level, except in particular cases.

34. Which additional measures should be taken to address air emissions from small and medium combustion installations (below 50 MW)? (Please choose one or more responses)

- ☐ Extend in future the forthcoming harmonised limit values under the Ecodesign Directive (2009/125/EC) to control emissions from installations above the Ecodesign capacity threshold (please elaborate in question 35 up to which capacity level).
- ☐ Develop a supplementary and more stringent standard for installations below the Ecodesign capacity threshold for use in national and local measures such as fiscal incentives to be applied in zones that are in non-compliance with air quality limits
- ☐ Regulate combustion installations above the Ecodesign capacity threshold but below the 50MW threshold set in the Industrial Emissions Directive (IED)
- ☐ No additional measures should be introduced
- ☐ Other (please elaborate below)
- ☐ Don't know

Sub-section 6.4: Small/medium combustion sector (continued)

Installations below 50 MW cover a wide capacity range, and different approaches might be preferred for different capacity classes. A "full" permitting regime would be a permitting procedure including extensive public participation (such as under the IPPC Directive 2008/1/EC), whilst in a "light" permitting regime, such consultation would not be required. In a so-called "registration" regime, the authorities are only notified of the operation of the installation, without having to give consent for that operation in the form of a decision.

The option "EU-wide emission limit values which are only mandatory in zones where air quality issues exist" should be considered in combination to the other measures mentioned, and would primarily serve as an additional measure in combination with one of the first three measures, imposing stricter requirements in the zones with air quality problems.

34a. Which measures should be introduced to control emissions from combustion installations above the Ecodesign threshold but below 50 MW? (Please choose one or more responses)

- [ ] A "full" permitting regime with EU-wide emission limit values
- [ ] A “light” permitting regime or registration regime with EU-wide emission limit values
- [ ] Product standards, applicable for new installations only
- [ ] EU-wide emission limit values or standards which are only mandatory in zones where air quality issues exist
- [ ] Other (please elaborate below)
- [ ] Don’t know

35. Please feel free to comment on your answers regarding regulation of emissions from the small/medium combustion sector: (maximum 1200 characters)

Sub-section 6.5: Shipping sector

Parties to Annex VI of the International Convention on the Prevention of Pollution from Ships (MARPOL) can designate Emission Control Areas (ECAs) where, compared to non-ECAs, more stringent fuel standards for the maximum sulphur content (SECAs) or lower emission values for emissions of nitrogen oxides (NECAs) apply. At present, two SECAs are designated in Europe’s regional seas – the Baltic Sea and the North Sea including the English Channel. So far, no European sea area has been designated as NECA. In order to declare a European regional sea as an ECA, EU Member States bordering such an area, together with non EU Member States concerned, submit an application for approval to the International Maritime Organisation (IMO).

In 2008, parties to MARPOL agreed to stepwise lower the maximum sulphur content of marine fuels, and such provisions provisions have been introduced in the recently adopted amendment of Directive 1999/32/EU on the reduction of the sulphur content of certain fuels. In the amending Directive, Co-legislators ask the Commission to consider the possibility of reducing air pollution from shipping, including in the territorial seas, as part of its air quality review in 2013.

36. Which additional measures should be taken to address air emissions from the shipping sector? (Please choose one or more responses)

- [ ] Promote the extension of the Sulphur Emission Control Areas to additional EU sea areas such as the Irish Sea, the Gulf of Biscay, the Mediterranean and/or the Black Sea provided that such a measure is cost-effective.
- [ ] Promote the designation of NOx Emission Control Areas in EU regional seas where cost-effective (those listed above and/or the Baltic and the North Sea including the English Channel) provided that such a measure is cost-effective.
- [ ] Introduce requirements for PM emission controls in EU regional seas where cost-effective
- [ ] Reduce air pollution and greenhouse gas emissions from ships in EU waters by setting speed restrictions.
- [ ] Aim for a reduction of total NOx emissions from shipping by retrofitting all vessels with NOx abatement equipment.
- [ ] Require continuous monitoring of the emissions of sulphur dioxide, NOx, particulate matter (fine dust) as it is practised on many industrial installations on land.
- [ ] Other (please elaborate below)

37. Please feel free to comment on your answers regarding regulation of emissions from the shipping sector: (maximum 1200 characters)

Final comments

38. Please feel free to provide any further comments related to the revision of the Thematic Strategy on Air Pollution: (maximum 2400 characters)